

Canada Gazette, Part II, Volume 153, Number 13

Registration

SOR/2019-196 June 10, 2019

INDIAN OIL AND GAS ACT

P.C. 2019-755 June 9, 2019

Her Excellency the Governor General in Council, on the recommendation of the Minister of Indian Affairs and Northern Development, pursuant to section 4.1 and subsection 21(1) of the *Indian Oil and Gas Act*, makes the annexed *Indian Oil and Gas Regulations*.

Indian Oil and Gas Regulations

Interpretation

Definitions

1 (1) The following definitions apply in these Regulations.

Act means the *Indian Oil and Gas Act*. (*Loi*)

actual selling price means

- **(a)** in respect of oil, the price at which the oil is sold; and
- **(b)** in respect of gas, the price or consideration payable that is specified in the gas sales contract, free of any fees or deductions other than transmission charges beyond the facility outlet. (*prix de vente réel*)

adjoining, in relation to two spacing units, means touching at a common point, without regard to any road allowances between the spacing units. (*adjacentes*)

bitumen means oil that does not flow to a well unless it is heated or diluted. (*bitume*)

exploration work includes mapping, surveying, examining geological, geophysical or geochemical data, test drilling and any other activities that are carried out by air, land or water and are related to the exploration for oil or gas. (*travaux d'exploration*)

external spacing unit, in relation to a First Nation, means any spacing unit that is not a First Nation spacing unit of that First Nation. (*unité d'espacement externe*)

First Nation spacing unit means a spacing unit in which 50% or more of the lands are First Nation lands of the same First Nation. (*unité d'espacement d'une première nation*)

horizontal section means the portion of a wellbore that has

- **(a)** an angle of at least 80°, measured between the line extending from the initial point of penetration into the target zone to the end point of the wellbore in that zone and the line extending vertically downward from the initial point of penetration into that zone; and
- **(b)** a minimum length of 100 m, measured from the initial point of penetration into the target zone to the end point of the wellbore in that zone. (*tronçon horizontal*)

horizontal well means a well that has been approved as a horizontal well by the provincial authority or a well with a horizontal section that has been approved by the provincial authority. (*puits horizontal*)

offset period means the period established in accordance with subsection 93(4). (*délai de compensation*)

offset well means a well that is located in a First Nation spacing unit adjoining an external spacing unit in which a triggering well is located and that is producing from the same zone as the triggering well. (*puits de limite*)

offset zone means the zone from which a triggering well is producing. (*couche de compensation*)

pool means a natural underground reservoir that contains or appears to contain an accumulation of oil or gas that is separate or appears to be separate from any other such accumulation. (*bassin*)

prescribed means prescribed by the Minister under subsection 5(1) of the Act. (*Version anglaise seulement*)

productive means producing or capable of producing oil or gas in a quantity that would warrant incurring

- **(a)** the costs of completion, in the case of a well that has been drilled but not completed; or
- **(b)** the costs of production, in the case of a well that has been completed. (*productif*)

provincial authority means the office, department or body that is authorized by law to make decisions, grant approvals, receive information or keep records respecting the exploration for, or the exploitation or conservation of, oil and gas in the province in which the relevant First Nation lands are located. (*autorité provinciale*)

service well means a well that is operated for observation or for the injection, storage or disposal of fluids. (*puits de service*)

spacing unit means an area in a zone that is designated as a spacing unit, a spacing area, a drainage unit or other similar unit by the provincial authority. (*unité d'espacement*)

subsurface contract means a permit or subsurface lease granted under the Act. (*contrat relatif au sous-sol*)

surface contract means a surface lease or right-of-way granted under the Act. (*contrat relatif au sol*)

surface rates means the amounts, referred to in subsections 73(2) and (3), that are to be paid by a surface contract holder. (*droits de surface*)

triggering well means a well that is producing from one or more external spacing units adjoining a First Nation spacing unit. (*puits déclencheur*)

unit agreement means an agreement that combines the rights or interests of all the holders of oil and gas rights or interests in all or part of a pool and that provides for the joint exploitation of the oil and gas and the payment of royalties based on an attribution of production rather than actual production, but does not include an agreement that attributes production from a well referred to in subsection 107(1). (*accord de mise en commun*)

well means a well that is used for the exploitation of oil or gas and includes a vertical well, a deviated well and a horizontal well. (*puits*)

zone means a stratum of lands identified as a zone in accordance with the log data set out in Schedule 3 or 4, as the case may be. (*couche*)

Incorporation by reference

(2) A reference to a document that is incorporated by reference into these Regulations is a reference to the document as amended from time to time or, if the document no longer exists, to any successor to it that provides the same information.

General Rules

Notice, document or information

2 (1) Any notice, document or information that is sent or submitted under these Regulations must be in paper or electronic form or published on the website of Petrinex or any successor to Petrinex.

Address for service

(2) A contract holder must, in the prescribed form, provide the Minister with their address for service and send him or her a notice of any change to that address.

Deemed receipt — paper form

(3) Any notice, document or information that the Minister sends to a holder in paper form at their address for service is deemed to have been received by the holder four days after the day on which it is sent.

Deemed receipt — electronic form

(4) Any notice, document or information that the Minister sends to a holder in electronic form at their latest address for service or publishes on the website of Petrinex or any successor to Petrinex is deemed to have been received by the holder on the day on which it is sent or published.

Record search

(5) A person may apply to the Minister for a record search of non-confidential, contractual documentation that is in the Minister's possession and stored in electronic form if the application is in the prescribed form and accompanied by the record search fee set out in Schedule 1.

Information

3 Despite any provision of these Regulations, a person is not obliged to submit information to the Minister that the Minister has stated is in his or her possession or is available to him or her from another source such as Petrinex.

Form not prescribed

4 When an application or other information is required by these Regulations to be submitted in a prescribed form but no form has been prescribed, the application or information may be submitted in any form.

Alternative format

5 When a notice, a document or information is required by these Regulations to be submitted in a specified format, the person required to submit it may use an alternative format if the Minister states that he or she has the capacity to read and use the information in that alternative format.

Eligibility

6 A person is eligible to be granted a contract if

- **(a)** they are a corporation that is authorized by the laws of the relevant province to carry on business in that province or an individual who has reached the age of majority in that province;
- **(b)** they are not in default under subsection 111(5); and
- **(c)** in the case of a corporation, neither it nor any of its directors, officers or agents or mandataries has been convicted of an offence under subsection 18(2) of the Act within two years before the date of the bid, in the case of a grant by public tender, or the date of the application, in the case of a negotiated contract.

Holder's responsibility

7 A contract holder must ensure that any requirement that is related to their contract and is imposed by these Regulations on a person other than the holder is satisfied.

Liability — holders and persons with working interest

8 (1) Every contract holder and person with a working interest in a contract is absolutely liable for any damage to the environment that is caused by operations carried out under the contract.

Liability — operators and licensees

(2) Every operator, well licensee, pipeline licensee and facility licensee is absolutely liable for any damage to the environment that is caused by operations they carry out under the contract.

Insurance required

9 (1) A contract holder must obtain, and maintain during the term of the contract, an insurance policy that is adequate to cover all risks resulting from the operations to be carried out under the contract.

Minimum coverage

(2) The insurance policy must provide the following minimum coverage:

- **(a)** comprehensive general liability insurance that covers the risks of damage caused by operations carried out under the contract with an inclusive bodily injury, death and property damage limit of at least \$5,000,000 per occurrence, including occupier's liability or liability for damage caused by immovables, employer's liability, employer's contingent liability, contractual liability, contractor's protective liability, products liability, completed operations liability and contractor's liability insurance;
- **(b)** automobile liability insurance that covers all vehicles used in operations carried out under the contract with an inclusive bodily injury, death and property damage limit of at least \$5,000,000 per occurrence; and
- **(c)** if aircraft are to be used in operations carried out under the contract, aircraft liability insurance with an inclusive bodily injury, death and property damage limit of at least \$10,000,000 per occurrence.

Subrogation

(3) Every insurance policy obtained by the holder must provide that the insurer's right of subrogation is waived in favour of the Minister.

Notice of cancellation

(4) The holder must send the Minister notice without delay if any coverage under their insurance policy is terminated and at least 30 days before the last day of coverage if the holder intends to cancel any of their coverage.

Maximum deductible

(5) The deductible of every insurance policy must not exceed 5% of the amount of insurance.

Self-insurance

10 A holder may satisfy the requirement imposed by subsection 9(1) by providing the Minister with a letter of self-insurance in the prescribed form in which the holder

- **(a)** acknowledges liability for any damage caused by operations carried out under the contract; and
- **(b)** declares that their financial resources are adequate to cover that liability.

Contractor's insurance

11 A contract holder must ensure that any person that carries out operations under the contract, other than an employee, obtains and maintains an insurance policy that is adequate to cover all risks resulting from those operations.

Contract area boundaries

12 (1) The boundaries of a contract area must correspond to the boundaries of the legal land divisions of the relevant province if the lands in the contract area have been surveyed, or to the anticipated boundaries of those divisions if the lands have not been surveyed.

Unsurveyed lands

(2) If the lands in a contract area are surveyed during the term of the contract, the Minister must, after consulting with the holder and the council, amend the contract so that the description of the contract area complies with subsection (1).

Exception

(3) Subsections (1) and (2) do not apply if the lands in the contract area are First Nation lands whose configuration prevents compliance with those subsections.

Survey plan

13 (1) Every survey plan that is required under these Regulations must be

- **(a)** plotted in accordance with the *Canada Lands Surveys Act*;
- **(b)** approved by the Surveyor General of Canada; and
- **(c)** recorded in the Canada Lands Survey Records.

Exception

(2) Subsection (1) does not apply to

- **(a)** an exploration work survey plan; or
- **(b)** a survey of lands under a treaty land entitlement agreement or a specific claim settlement agreement.

Dispute

14 If a dispute arises regarding the location of a well, facility or boundary referred to in a contract, the Minister may order the contract holder to have a survey carried out as soon as the circumstances permit.

Annual meeting request

15 (1) A council whose First Nation lands are subject to a contract may, no more than once a year, submit a request to the Minister in the prescribed form for a meeting with the contract holder for the purpose of discussing the operations that have been carried out, or are planned to be carried out, in the contract area.

Minister's notice

(2) The Minister must send the holder notice of a meeting request.

Arrangement of meeting

(3) The holder must organize the meeting and ensure that it takes place within 90 days after the day on which the Minister's notice is received. In the case of multiple holders, they may designate one of their number to attend as their representative.

Multiple contracts

(4) If the holder has more than one contract in the First Nation lands, operations carried out under all the contracts may be discussed at the same meeting.

Expenses

(5) Any expense relating to the request for, preparation for or attendance at a meeting must be borne by the party that incurs the expense.

Unforeseen incident

16 An operator must, in the most expeditious manner possible, notify the Minister and the council of any unforeseen incident that occurs during operations carried out under a contract and that results, or could result, in bodily injury or death or in damage to First Nation lands or property. The operator must report the details of the incident, in the prescribed form, as soon as the circumstances permit.

Person accompanying inspector

17 For the purpose of monitoring compliance with the Act and these Regulations, a person may accompany an inspector who is inspecting a contract holder's facilities and operations on First Nation lands if the person is authorized to do so by a written resolution of the council and the person has the certifications, and complies with the occupational health and safety requirements, required or imposed by the holder or by law.

Payment of rent

18 (1) The annual rent that is payable under a contract must be paid on or before the anniversary of the effective date of the contract.

Refund

(2) The rent that is payable for the year in which a contract ends must be paid and is not refundable. However, any rent that has been paid for a subsequent year must be refunded.

Exception

(3) Subsection (1) does not apply to a contract that provides otherwise and was granted before the day on which these Regulations came into force.

Payment to Receiver General

19 (1) All money that is owed to Her Majesty under these Regulations or a contract must be paid to the Receiver General for Canada.

Purpose of payment

(2) The money must be accompanied by a statement, in the prescribed form, indicating the purpose for which it is paid.

Amendments

20 (1) Any amendment to a contract or a bitumen recovery project requires the prior approval of the council and the Minister.

Limits

(2) The Minister must not approve an amendment unless

- **(a)** an additional bonus is paid, if necessary, to reflect the fair value, determined in accordance with section 38, of the rights or interests granted by the amendment; and
- **(b)** additional surface rates are paid, if necessary, in accordance with subsections 73(2) and (3).

Exception

(3) Subsection (1) does not apply to an amendment referred to in subsection 12(2) or to one that reduces the area of lands that are subject to a subsurface contract or a bitumen recovery project.

Well data

21 An operator that carries out operations in connection with a well must submit the following documents and information to the Minister and the council within the following time limits:

- **(a)** before the day on which the well is spudded,

- **(i)** a copy of the provincial licence authorizing the drilling of the well and a copy of the licence application,
 - **(ii)** the drilling and coring plan proposed for the well,
 - **(iii)** the geological prognosis,
 - **(iv)** any proposed horizontal drilling plan, and
 - **(v)** a copy of the surface lease survey plan;
- **(b)** within 30 days after the day on which the well is rig-released,
 - **(i)** all daily drilling reports for the period beginning on the day on which the rig move begins and ending on the day of rig-release,
 - **(ii)** a copy of each wireline log prepared,
 - **(iii)** the results of any drill-stem test conducted,
 - **(iv)** a copy of the final downhole well drilling survey, if one is required by the provincial authority,
 - **(v)** any description, test or analysis resulting from an identification of any well sections that were cored, and
 - **(vi)** a copy of the geological report, if one is required by the provincial authority;
- **(c)** within 30 days after the day on which the well is completed,
 - **(i)** all daily completion reports and the final downhole well schematic,
 - **(ii)** a copy of each wireline log prepared,
 - **(iii)** any core and fluid analyses prepared,
 - **(iv)** any swab reports prepared,
 - **(v)** the results of any pressure or flow tests conducted, including the results of any surface casing vent flow test,
 - **(vi)** a hydraulic fracturing fluid component information disclosure report, and
 - **(vii)** a detailed report of any downhole well intervention or stimulation;
- **(d)** within 30 days after the day on which any recompletion or workover of the well is completed, **(e)** within 30 days after the day on which the well is downhole-abandoned, all daily operation reports relating to the downhole abandonment; and
 - **(i)** all daily recompletion or workover reports,
 - **(ii)** a copy of each wireline log prepared,
 - **(iii)** any core and fluid analyses prepared,
 - **(iv)** any swab reports prepared,
 - **(v)** the results of any pressure or flow tests conducted, including the results of any surface casing vent flow test,
 - **(vi)** a hydraulic fracturing fluid component information disclosure report,
 - **(vii)** a detailed report of any downhole well intervention or stimulation, and

- **(viii)** the final downhole well schematic;
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- **(f)** within 30 days after the day on which the well is surface-abandoned, all daily operations reports of the cut and cap operation and a copy of the final abandonment report submitted to the provincial authority.

Additional information

22 The operator must submit to the Minister and the council any additional technical information about the well that is necessary to determine its productivity.

Confidential information

23 (1) Any information that is submitted to the Minister or a council under the Act must be kept confidential until the end of the period in which such information must be kept confidential under the laws of the relevant province, unless the person that submitted it consents in writing to its disclosure.

Seismic data

(2) Despite subsection (1), seismic data submitted by an exploration licence holder under paragraph 33(3)(a) may be disclosed by the Minister or the council on the earlier of

- **(a)** if the holder also holds a subsurface lease or permit in lands in the licence area, the day on which the lease expires or is continued, the initial term of the permit expires or, in the case of a permit issued under the *Indian Oil and Gas Regulations, 1995*, the permit is converted to one or more leases, and
- **(b)** the fifth anniversary of the day on which the exploration work is completed.

Interpretation

(3) Any interpretation of seismic data, including maps, that is submitted to the Minister or a council under the Act may be disclosed only if the person that submitted it consents in writing to its disclosure.

Disclosure to council

(4) Despite subsections (1) to (3), the Minister may at any time disclose

- **(a)** confidential information to a council if required to do so by the Act, any regulations made under the Act or a contract; and
- **(b)** the results of an environmental review referred to in subsection 29(3), 57(2) or 75(2) to a council or the public.

Incorrect information

24 A person that submits information to the Minister and becomes aware that it is incorrect must submit the correct information to the Minister as soon as the circumstances permit.

Approval of assignment

25 (1) Any assignment of any of the rights or interests conferred by a contract must be approved by the Minister.

Meeting

(2) Before the application for approval is submitted to the Minister, the assignee must meet with the council unless the council waives the meeting. The meeting must be face to face, unless the parties agree to another mode of meeting.

Expenses

(3) Any expense relating to the request for, preparation for or attendance at a meeting must be borne by the party that incurs the expense.

Application for approval

(4) The application for approval must be in the prescribed form and include a statement by the assignee that a meeting with the council took place or that the council waived the meeting. The application must be accompanied by the assignment approval application fee set out in Schedule 1.

Copy to council

(5) The applicant must send the council a copy of the application for approval on or before the day on which the application is submitted to the Minister.

Refusal to approve

(6) The Minister must not approve the assignment if

- **(a)** it is conditional;
- **(b)** it would result in more than five persons having a right or interest in the contract;
- **(c)** it assigns an undivided right or interest in the contract that is less than 1%;
- **(d)** it divides the oil and gas rights or interests conferred by the contract;
- **(e)** the assignee is not eligible under section 6;
- **(f)** the assignment was not signed by the assignor and assignee; or
- **(g)** the assignee fails to establish that they have the financial ability to fulfill the assignor's obligations under the Act with respect to remediation and reclamation.

Minister's decision

(7) If the Minister approves the assignment and signs it, he or she must send a copy to the assignor and assignee and a notice of the approval to the council.

Effective date

(8) The assignment takes effect on the day on which the Minister approves it unless it provides for a different effective day.

Liability

26 (1) If the assignment is approved, the assignor and assignee are jointly and severally, or solidarily, liable for any obligation owing and any liability arising under the contract before the day on which the assignment is approved, even if the contract is subsequently assigned.

Exception

(2) Subsection (1) does not apply to an assignment that is approved before the coming into force of these Regulations.

Terms and Conditions To Be Included in Every Contract

Compliance with laws

27 (1) Every contract granted by the Minister under these Regulations includes the holder's undertaking to comply with

- **(a)** the *Indian Act*, and any orders made under that Act, as amended from time to time;
- **(b)** the Act, and any regulations or orders made under the Act, as amended from time to time; and
- **(c)** the laws of the relevant province, as amended from time to time, that relate to the environment or to the exploration for, or the exploitation, treatment, processing or conservation of, oil and gas, including equitable production, if those laws are not in conflict with the Act or any regulations or orders made under the Act.

Inconsistency — Acts, regulations and orders

(2) The provisions of any Act, regulation or order referred to in subsection (1) prevail over any terms and conditions of the contract, except for any terms and conditions respecting royalties that are the subject of a special agreement under subsection 4(2) of the Act, to the extent of any inconsistency. The provisions of any Act of Parliament, or any regulation or order made under an Act of Parliament, referred to in subsection (1) prevail over the laws of the province referred to in subsection (1), to the extent of any inconsistency.

Inconsistency — interpretation

(3) For the purposes of this section, provisions — whether legislative or contractual — are not inconsistent unless it is impossible for the holder to comply with both.

Exploration

Authorization

Authorization to explore

28 A person may carry out exploration work on First Nation lands if they

- **(a)** hold an exploration licence;
- **(b)** have obtained from the provincial authority any approval that is required to carry out exploration work in the province; and
- **(c)** are in compliance with the terms and conditions of the licence and the approval.

Application for Exploration Licence

Preliminary negotiation

29 (1) Before applying for an exploration licence, an applicant and the council must agree on the location of the proposed seismic lines and on the seismic rates, if those rates have not already been fixed in a related subsurface contract.

Application for exploration licence

(2) The application must be submitted to the Minister in the prescribed form and include

- **(a)** the terms and conditions negotiated with the council;
- **(b)** if the approval of the provincial authority is required to carry out exploration work, a statement that the approval has been received;
- **(c)** a description of the proposed exploration program, including the licence area, the exploration work to be carried out, the equipment to be used, the name of the geophysical contractor to be engaged and the anticipated duration of the work;
- **(d)** the results of an environmental review of the proposed exploration program that has been conducted by a qualified environmental professional who deals with the applicant at arm's length; and
- **(e)** the exploration licence application fee set out in Schedule 1.

Environmental review

(3) The results of the environmental review must be submitted in the prescribed form and include

- **(a)** a site evaluation that is based on the site's topography, soils, vegetation, wildlife, sources of water, existing structures, archeological and cultural resources, traditional ecological knowledge, current land uses and any other feature of the site that could be affected by the proposed exploration program;
- **(b)** a description of the operations to be carried out during the proposed exploration program, the duration of each and its location on the site;
- **(c)** a description of the short-term and long-term effects that each operation could have on the environment of the site and on any surrounding areas;
- **(d)** a description of the proposed mitigation measures, the potential residual effects after mitigation and the significance of those effects; and
- **(e)** a description of the consultations undertaken with the council and the First Nation members.

Environmental protection measures

(4) If the exploration program can be carried out without causing irremediable damage to the First Nation lands, the Minister must send the application to the applicant and the council, along with a letter that sets out the environmental protection measures that must be implemented to permit the licence holder to carry out their exploration program.

Submission of documents

(5) To obtain the exploration licence, the applicant must, within 90 days after the day on which the reviewed application is received, submit to the Minister three copies of the environmental protection measures letter and three original copies of the application signed by the applicant, along with a written resolution of the council approving the licence.

Exploration licence

(6) If the requirements set out in this section are met, the Minister must grant the exploration licence for a period of one year. The terms and conditions of the licence are those set out in the application and the environmental protection measures letter. The licence takes effect on the day on which it is signed by the Minister.

Operations Under Exploration Licence

Exercise of rights conferred by licence

30 An exploration licence holder may exercise the rights conferred by the licence in a subsurface contract area, but in doing so must not interfere with any operations carried out under the subsurface contract.

Priority

31 Every exploration licence is subject to

- **(a)** any surface rights or interests granted under an Act of Parliament; and
- **(b)** any rights or interests related to the exploration or exploitation of minerals other than oil or gas in the licence area.

Maximum drilling depth

32 (1) An exploration licence holder must not drill to a depth of more than 50 m, unless authorized to do so by their licence.

Holder's obligations

(2) The holder must

- **(a)** ensure that all environmental protection measures included in the licence are implemented and complied with;
- **(b)** identify and mark the location of every test hole and shot hole that is drilled under the licence;

- **(c)** repair and recondition any roads or road allowances that are damaged as a result of the exploration work as soon as the circumstances permit after the damage occurs;
- **(d)** as soon as the circumstances permit, plug any hole that is drilled under the licence and that, during or after completion of the exploration work, collapses or emits gas, water or another substance;
- **(e)** within 90 days after the day on which the exploration work is completed, pay compensation for the exploration work that was carried out, based on the rates specified in the licence or a related subsurface contract; and
- **(f)** within 90 days after the day on which the exploration work is completed, submit to the Minister and the council
 - **(i)** a mylar sepia copy and a legible paper copy of a map, on a scale of not less than 1:50 000, that shows the location and ground elevation of every vibrating equipment station, test hole and shot hole,
 - **(ii)** summaries of any geologist's and driller's logs, indicating the depth and thickness of formations bearing water, sand, gravel, coal and other minerals of possible economic value, and
 - **(iii)** all technical information obtained from the drilling of each test hole.

Exploration report

33 (1) An exploration licence holder must submit an exploration report to the Minister within 90 days after the day on which the exploration work is completed.

Content of exploration report

(2) The report must comply with any exploration reporting requirements of the relevant province and must include, in addition to the documents and information referred to in paragraph 32(2)(f),

- **(a)** a copy of every aerial photograph taken during the period of exploration;
- **(b)** two copies of a geological report on the explored area, including stratigraphic data and structural and isopach maps on a scale of not less than 1:50 000; and
- **(c)** a geophysical report on the explored area.

Content of geophysical report

(3) The geophysical report must include

- **(a)** if seismic work has been carried out, **(b)** if a gravity survey has been carried out, two legible copies of a map, on a scale of not less than 1:50 000, that shows the location and ground elevation of each station, the final corrected gravity value at each station and gravity contour lines drawn on that value, with a contour line interval of not more than 2.5 $\mu\text{m/s}^2$; and
 - **(i)** a mylar sepia copy and two legible paper copies of a map, on a scale of not less than 1:50 000, that shows contour lines drawn on the corrected time value at each source point for all significant

reflecting horizons explored, with a contour line interval of not more than 10 m,

- **(ii)** a mylar sepia copy and two prefolded paper copies of each stacked seismic cross-section, including migrated displays if that process has been carried out, with all significant reflecting horizons clearly labelled at both ends on one of the copies, and
- **(iii)** two microfilm copies of all basic recorded data, including survey notes, chaining notes and observer reports;
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- **(c)** if a magnetic survey has been carried out, two legible copies of a map of the explored area, on a scale of not less than 1:50 000, that shows the location of the flight lines or grid stations and magnetic contour lines, with a contour line interval of not more than 5 nT.

Exception

(4) The holder may include maps at contour line intervals or scales other than those specified in subsections (2) and (3) if the alternative intervals or scales would enhance the interpretability of the maps.

Information available to council

(5) The Minister must make the information submitted under subsections (2) to (4) available to the council.

Information to be kept

(6) In addition to the information submitted under this section, the holder must keep any information that was obtained as a result of the exploration work carried out in the contract area, including any printout, or magnetic digital display, of raw seismic data or interpreted seismic data, and must make it available for review by the Minister at the holder's office during business hours after the later of

- **(a)** if the holder also holds a subsurface lease or permit in lands in the licence area, 90 days after the day on which the lease expires or is continued, the initial term of the permit expires or, in the case of a permit issued under the *Indian Oil and Gas Regulations, 1995*, the permit is converted to one or more leases, and
- **(b)** one year after the day on which the exploration work is completed.

Remediation and reclamation

34 When exploration work under an exploration licence is no longer being carried out, whether or not the licence has ended, the licence holder must ensure that all the lands on which the work was carried out are remediated and reclaimed.

Subsurface Rights or Interests

Grants of Subsurface Rights or Interests

General Rules

Subsurface contracts

35 (1) Oil and gas rights or interests in First Nation lands may be granted by the Minister under one of the following subsurface contracts:

- **(a)** an oil and gas permit;
- **(b)** an oil and gas lease.

Process

(2) A subsurface contract must be granted in accordance with the public tender process set out in sections 39 to 42 or the negotiation process set out in sections 44 to 46, as chosen by the council. The negotiation process may be preceded by a call for proposals in accordance with section 43.

No splitting of rights

(3) When granting a subsurface contract, the Minister must grant all the rights to the oil and gas in each zone included in the contract area.

Priority

36 A subsurface contract holder's rights or interests are subject to the right of an exploration licence holder to carry out exploration work in, and the right of any other subsurface contract holder to work through, the subsurface contract area.

Multiple holders

37 (1) A subsurface contract may be granted to no more than five persons, each having an undivided right or interest in the contract of at least 1%. The right or interest must be expressed in decimal form to no more than seven decimal places.

Liability

(2) If two or more persons have an undivided right or interest in a subsurface contract, they are jointly and severally, or solidarily, liable for all obligations under the contract, the Act and these Regulations.

Fair value

38 In determining the fair value of the rights or interests to be granted under a subsurface contract, the Minister must, in consultation with the council, consider the bonuses paid for grants of oil and gas rights or interests in other lands, which may be adjusted to take into account the following factors:

- **(a)** the size of the other lands and their proximity to the First Nation lands;
- **(b)** the time when the rights or interests in the other lands were granted;
- **(c)** current oil and gas prices and the prices when the rights or interests were granted;
- **(d)** the results of recent drilling operations in the vicinity of the other lands;
- **(e)** similarities and differences in the geological features of the other lands and the First Nation lands; and
- **(f)** any other factors that could affect the fair value of the rights or interests.

Public Tender Process

Public tender

39 The Minister may grant the oil and gas rights or interests in First Nation lands by way of public tender only if the council requests or consents to that process.

Minister's duties

40 (1) When oil and gas rights or interests are to be granted by way of public tender, the Minister must, after consulting with the council, prepare a notice of tender.

Notice of tender

(2) The notice of tender must include the following information:

- **(a)** the type of subsurface contract to be granted;
- **(b)** the terms and conditions of the contract, other than those set out in these Regulations, or the address of a website where the terms and conditions are set out, including **(c)** the instructions for submitting a bid, including any information to be provided by bidders, the place where a bid may be submitted and the deadline for submission; and
 - **(i)** a description of the lands to be included in the contract area and the oil and gas rights or interests to be granted,
 - **(ii)** the surface rates and seismic rates,
 - **(iii)** the initial and intermediate terms of the permit or the term of the lease, as the case may be,
 - **(iv)** in the case of a permit, the earning provisions for the initial term, including the drilling commitment and deadline for completion, the target zone or depth to which each earning well must be drilled and a description of the lands to be earned by each, and
 - **(v)** the royalty to be paid, if it differs from the royalty provided for in these Regulations;
- **(d)** a statement indicating that the bidder acknowledges that they have reviewed and understood the terms and conditions of the contract to be granted and will be bound by those terms and conditions if theirs is the winning bid.

Publication of notice of tender

(3) The Minister must submit a copy of the proposed notice of tender to the council before publishing it and, if it is approved, must publish it

- **(a)** in a publication known to the industry, such as the *Daily Oil Bulletin* published by JuneWarren-Nickle's Energy Group; or
- **(b)** on a website on which the Minister publishes information about oil and gas in First Nation lands.

Submission of bids

41 (1) All bids must be submitted in accordance with the instructions set out in the notice of tender, be sealed and include

- **(a)** the subsurface contract application fee set out in Schedule 1;
- **(b)** the rent for the first year of the contract;
- **(c)** the bonus; and
- **(d)** the name and address for service of each proposed contract holder and the percentage share of each.

Certified funds

(2) The fee, rent and bonus must be paid in certified funds unless the notice of tender specifies a different form of payment.

Opening of bids

42 (1) After the tender closes, the Minister must without delay open the bids, exclude any bids that do not meet the requirements of section 41, identify the bid with the highest bonus and send the council notice of that bid.

Presence at opening

(2) The council or a person designated by the council may be present when the Minister opens the bids.

Tied bid

(3) If the highest bonus is included in more than one bid, the Minister must republish the notice of tender.

Council's decision

(4) The council may, within 15 days after the day on which the tender closes, notify the Minister by written resolution that it rejects the bid with the highest bonus. If such a notice is received, all bids must be rejected.

Irrevocable decision

(5) If a council notifies the Minister that it approves the bid with the highest bonus, that bid cannot later be rejected under subsection (4).

Acceptance of highest bid

(6) If a notice rejecting the bid is not received, the Minister must accept it and send the winning bidder a notice of acceptance. The contract takes effect on the day on which the tender closes.

Publication of tender results

(7) The Minister must publish the name of the winner and the winning bonus amount or, if no bid was accepted, a notice to that effect, in the publication or on the website where the notice of tender was published.

Confidentiality

(8) Except for the name of the winning bidder and bonus amount, the information in bids must be kept confidential.

Contract granted

(9) The Minister must prepare the subsurface contract and send a copy to the council and the winning bidder.

Unsuccessful bids

(10) The Minister must return the fee, rent and bonus included in each unsuccessful bid to the person that submitted it.

Call for Proposals Process

Call for proposals

43 For the purpose of soliciting interest in rights or interests in First Nation lands, either the council, or the Minister jointly with the council, may make a call for proposals. The call may be made by public notice or by other means and must include the following information:

- **(a)** the type of subsurface contract to be granted;
- **(b)** a description of the lands to be included in the contract area and the oil and gas rights or interests to be granted;
- **(c)** the terms and conditions of the contract, other than those set out in these Regulations;
- **(d)** the elements that will be considered in evaluating the proposals;
- **(e)** a statement that the proposals that are received will form the basis for negotiations with the council and the Minister; and
- **(f)** a statement that, in addition to the terms and conditions negotiated, the contract will include the terms and conditions set out in these Regulations.

Negotiation Process

Application for subsurface contract

44 (1) A person may apply to the Minister for a subsurface contract that confers oil and gas rights or interests in one or more zones in First Nation lands.

Preliminary negotiation

(2) Before applying for a subsurface contract, an applicant and the council must agree on the following terms and conditions:

- **(a)** the type of subsurface contract to be applied for;
- **(b)** a description of the lands to be included in the contract area and the oil and gas rights or interests to be granted;
- **(c)** the amount of the bonus to be paid;
- **(d)** the initial and intermediate terms of the permit or the term of the lease, as the case may be;
- **(e)** in the case of a permit, the earning provisions for the initial term, including the drilling commitment and deadline for completion, the target zone or depth to which each earning well must be drilled and a description of the lands to be earned by each; and
- **(f)** the royalty to be paid, if it differs from the royalty provided for in these Regulations.

Content of application

(3) The application to the Minister must be in the prescribed form, set out the terms and conditions negotiated by the applicant and the council and be accompanied by the subsurface contract application fee set out in Schedule 1.

Confidentiality

(4) Any information that is disclosed during the negotiations referred to in subsection (2) or in an application referred to in subsection (3) must be kept confidential.

Conditions of approval

45 (1) The Minister must not approve the application unless

- **(a)** the lands and oil and gas rights or interests described in the application have been surrendered or designated under section 38 of the *Indian Act*; and
- **(b)** the proposed bonus reflects the fair value of the rights or interests to be granted, determined in accordance with section 38 of these Regulations.

Approval of application

(2) If the application is approved, the Minister must prepare the subsurface contract and send a copy to the applicant and the council. The Minister must fix and include in the contract the surface rates to be paid under any related surface contract and the seismic rates to be paid under any related exploration licence.

Criteria — rates

(3) The surface rates must be fixed in accordance with subsections 73(2) and (3). The seismic rates must be comparable to seismic rates for exploration on lands, excluding provincial Crown lands, that are similar in size, character and use.

Refusal of application

(4) If the application is not approved, the Minister must send the applicant and the council a notice of refusal that sets out the reasons for the refusal.

Granting of contract

46 (1) The Minister must grant the contract if he or she receives the following within 90 days after the day on which a copy of the contract has been received by both the applicant and the council:

- (a) a written resolution of the council approving the terms and conditions of the contract and stating that the council has chosen to have the rights or interests described in the contract granted by way of negotiation rather than public tender;
- (b) the bonus and first year's rent; and
- (c) two original copies of the contract — as well as an original copy for each future contract holder — all of which are signed by each of them.

Effective date

(2) The contract takes effect on the day on which it is granted, unless it provides otherwise.

Terms and Conditions of Subsurface Contracts

Rights conferred by contract

47 A subsurface contract holder has the exclusive right to exploit the oil and gas in the lands in the contract area, to treat that oil, to process that gas and to dispose of that oil and gas.

Initial term of permit

48 (1) If the lands in a permit area are located in a province set out in column 1 of the table to Schedule 2 and in a region set out in column 2, the initial term of the permit is the term set out in column 3. Otherwise, the initial term is five years.

More than one region

(2) If the lands in a permit area are located in more than one region set out in column 2 of the table to Schedule 2, the initial term is the term for the region in which the greatest portion of the lands is located. If the portion of lands in each region is the same, the initial term is the longer of the terms set out in column 3.

Intermediate term of permit

(3) The intermediate term of a permit is three years.

Term of lease

49 The term of an oil and gas lease is three years.

Term — exception

50 (1) Despite subsections 48(1) and (2) and section 49, with the consent of the applicant and the council, the Minister may fix the initial term of a permit or the term of a lease at a number of years that is greater than the number established by those provisions, to a maximum of five years.

Amended term

(2) With the consent of the holder, the term of a subsurface contract may be amended, in accordance with subsection 20(1), to a maximum of five years.

Annual rent

51 The annual rent for a subsurface contract is \$5 per hectare or \$100, whichever is greater.

Selection of Lands for Intermediate Term of Permit

Lands earned

52 (1) A permit holder earns lands, and may select from those lands for the intermediate term of the permit, if, during the initial term, they have, in accordance with the earning provisions of their permit,

- **(a)** drilled a new well in the permit area; or
- **(b)** re-entered an existing well in the permit area and drilled at least 150 m of new wellbore.

Failure to comply with earning provisions

(2) If a holder fails to meet a deadline set out in an earning provision of their permit, the permit terminates on the day of the deadline with respect to all lands that have not been earned on or before that day.

Selection of lands

(3) A holder that has earned lands may select from those lands down to the base of the deepest zone into which they have drilled, as identified in accordance with Schedule 3.

Constraints on selection

(4) The lands selected under subsection (3) must

- (a) be contiguous, if their configuration permits; and
- (b) include the entire spacing unit in which the earning well is located.

Area less than 75%

53 (1) A permit holder that has drilled a well in a spacing unit whose area is composed of less than 75% First Nation lands may select only lands in the section in which the well is located, down to the base of the deepest zone into which they have drilled.

Reduced earnings — new well

(2) A holder that has drilled a new well, but has not drilled to the extent required by the earning provisions of their permit, may select only lands in the section in which the well is located, down to the base of the deepest zone into which they have drilled.

Reduced earnings — re-entered well

(3) A holder that has re-entered and completed a well, but has not drilled to the extent referred to in paragraph 52(1)(b) and the earning provisions of their permit, may select only lands in the spacing unit in which the well is completed.

Application for approval

54 (1) A holder that wants a grant of oil and gas rights or interests for the intermediate term of their permit must apply to the Minister for approval of their selection of lands before the day on which the initial term of the permit expires or

- (a) if the permit has terminated under subsection 52(2), within 15 days after the day referred to in that subsection; or
- (b) if the deadline for applying has been extended under subsection 62(2), before the extension expires.

Late application

(2) A holder that fails to apply within the relevant deadline referred to in subsection (1) may apply for approval if the application is submitted within 15 days after the deadline and is accompanied by a late application fee of \$5,000.

Content of application

(3) The application must be in the prescribed form and include

- (a) an identification and description of each well that has been drilled and each well that has been re-entered and completed;
- (b) a description of the lands, including the zones, selected for the intermediate term of the permit; and
- (c) the rent for the first year of the intermediate term.

Additional information

(4) Information about a well that is drilled, or re-entered and completed, within 30 days before the relevant deadline may be submitted up to 15 days after that deadline, unless the holder has received an extension under subsection 62(2).

Approval

(5) On receiving an application, the Minister must

- **(a)** approve the selection of lands if the requirements of section 52 are met; and
- **(b)** grant the holder the oil and gas rights or interests in the selected lands for the intermediate term of the permit if the holder has complied with the requirements of the Act, these Regulations and their permit.

Notice to holder and council

(6) If the selection is approved and the oil and gas rights or interests are granted, the Minister must send the holder and the council a notice of the approval and a description of the lands, including the zones, selected for the intermediate term of the permit. If the selection is not approved, the Minister must send the holder a notice of refusal that sets out the reasons for the refusal.

Transitional provision

55 Sections 47 to 54 do not apply to a contract that was granted under the *Indian Oil and Gas Regulations, 1995*.

Bitumen Recovery Project Approval

Application for approval

56 (1) A subsurface contract holder may apply to the Minister for approval of a bitumen recovery project if they have achieved the minimum level of evaluation and have applied to the provincial authority for approval of the project.

Minimum level of evaluation

(2) The minimum level of evaluation is achieved when

- **(a)** one well is drilled on each section of the lands that are subject to the contract — if the section is in the proposed bitumen recovery project area — and at least 25% of those wells are cored; or
- **(b)** one well is drilled on at least 60% of the sections of the lands that are subject to the contract — if the sections are in the proposed bitumen recovery project area — at least 25% of those wells are cored and seismic data are obtained over at least 3.2 km in each undrilled section.

Content of application

57 (1) An application for approval of a bitumen recovery project must be in the prescribed form and include

- **(a)** a description of the lands to be included in the project;
- **(b)** evidence that the minimum level of evaluation has been achieved;
- **(c)** a statement that the subsurface contract holder has applied for or received the provincial authority's approval of the project;
- **(d)** the results of an environmental review of the project that has been conducted by a qualified environmental professional who deals with the holder at arm's length;
- **(e)** the terms and conditions respecting the royalty to be paid for the oil and gas recovered from lands in the project area;
- **(f)** the reporting requirements for the project;
- **(g)** a detailed description of the project, including its location, size and scope, the operations to be carried out, the schedule of pre-construction, construction and start-up operations and the reasons for selecting that schedule;
- **(h)** a map indicating all the rights and interests in the lands in the project area and in any area that is likely to be affected by project operations;
- **(i)** an aerial photographic mosaic of the project area at a scale that is adequate to show the location of the project components, including wells, facilities, tanks, access roads, railways, pipelines, public utility corridors, tailings ponds and waste storage sites;
- **(j)** a detailed description of storage and transportation facilities for the oil and gas, including the size of any pipeline that may be used and the name of the entity that owns it;
- **(k)** the anticipated rate of production of the oil and gas for the period for which approval is sought;
- **(l)** the year and month in which the annual minimum level of production of bitumen will be achieved;
- **(m)** a description of the energy sources to be used and their anticipated quantity and cost, along with a comparison to alternative sources; and
- **(n)** the term of the approval sought, along with the anticipated starting and completion dates of the project.

Environmental review

(2) The results of the environmental review of the bitumen recovery project must be submitted in the prescribed form and include

- **(a)** a site evaluation that is based on the site's topography, soils, vegetation, wildlife, sources of water, existing structures, archeological and cultural resources, traditional ecological knowledge, current land uses and any other feature of the site that could be affected by the project;
- **(b)** a description of the operations to be carried out during the project, the duration of each and its location on the site;
- **(c)** a description of the short-term and long-term effects that each operation could have on the environment of the site and on any surrounding areas;
- **(d)** a description of the proposed mitigation measures, the potential residual effects after mitigation and the significance of those effects; and
- **(e)** a description of the consultations undertaken with the council and the First Nation members.

Environmental protection measures letter

(3) After reviewing the application, the Minister must send the applicant and the council a letter that sets out the environmental protection measures that must be implemented to permit the subsurface contract holder to carry out operations under the project.

Approval

58 (1) The Minister must approve the bitumen recovery project if

- **(a)** the applicant has achieved the minimum level of evaluation of the lands in the project area;
- **(b)** a written resolution of the council approving the project has been submitted;
- **(c)** the application meets the requirements of subsections 57(1) and (2);
- **(d)** the project has been approved by the provincial authority; and
- **(e)** the project can be carried out without causing irremediable damage to the First Nation lands.

Terms and conditions of approval

(2) The approval may include any terms and conditions that are necessary to permit the Minister to verify the progress of operations carried out under the project, payment of the approved royalty and implementation and compliance with the environmental protection measures.

Surface contract required

59 (1) The operations under a bitumen recovery project must not begin until the subsurface contract holder has obtained the surface contracts required by these Regulations.

Compliance with measures

(2) The holder must ensure that all environmental protection measures included in the approval are implemented and complied with.

Minimum level of production

60 (1) The annual minimum level of production of bitumen from the lands that are subject to a bitumen recovery project is equal to an average of 2 400 m³ per section in the project area.

Compensation — bitumen

(2) If the annual minimum level of production of bitumen from the lands that are subject to the bitumen recovery project is not achieved in any year following the month in which that level was to be achieved, the subsurface contract holder must pay compensation equal to 25% of the difference between the value of the minimum level of production and the value of the actual level of production.

Deemed price

(3) For the purpose of calculating the compensation, the price of bitumen is deemed to be the monthly Bitumen Floor Price published by the Alberta provincial authority for the relevant time period.

Exception

(4) This section does not apply if the lands that are subject to the bitumen recovery project are the subject of an authorization under section 42 of the *Indian Oil and Gas Regulations, 1995*.

Additional lands, wells or facilities

61 Once a bitumen recovery project has been approved, the subsurface contract holder must obtain the approval of the Minister and the council before adding lands, wells or facilities to the project.

Drilling Over Expiry

Application for extension

62 (1) A subsurface contract holder may apply to the Minister, in the prescribed form, for an extension of the deadline for applying for approval of a selection of lands under subsection 54(1) or for continuation under section 64 if

- **(a)** the holder has spudded or re-entered a well for the purpose of deepening it or completing a new zone, but cannot finish the operation before the relevant term expires;
- **(b)** the application is submitted before the relevant term expires;
- **(c)** the application identifies the well and indicates when it was spudded or re-entered; and
- **(d)** the application includes the rent for the following year.

Approval of extension

(2) If an application is submitted in accordance with subsection (1), the Minister must extend the deadline for applying for approval of a selection of lands or for continuation to the 30th day after the day on which the spudded or re-entered well is rig-released. The Minister must send the council a notice of the extension.

Rights during extension

(3) During an extension, the holder may continue to produce from any wells in the contract area that are already producing, but must not spud or re-enter any other wells in that area.

Transitional provision

(4) This section applies to a permit or lease granted under the *Indian Oil and Gas Regulations, 1995*.

Continuation of Subsurface Contracts

Qualifying lands

63 (1) A subsurface contract may be continued with respect to the zones, identified in accordance with Schedule 4, that are in a spacing unit

- **(a)** that contains a productive well;
- **(b)** that is subject, in whole or in part, to a unit agreement that includes lands in which a productive well is located, or to an oil or gas storage agreement that has been approved by the provincial authority;
- **(c)** that is subject to a bitumen recovery project that has been approved by the Minister;
- **(d)** that is subject to a project, other than a bitumen recovery project, that has been approved by the provincial authority and includes lands in which a productive well is located;
- **(e)** in respect of which an offset notice has been received in the six months before the day on which the application for continuation is submitted or in respect of which a compensatory royalty is being paid;
- **(f)** that is not producing but is shown by mapping to be capable of producing from the same pool from which a well on an adjoining spacing unit is productive; or
- **(g)** that is potentially productive.

Horizontal and deviated wells

(2) For the purposes of subsection (1), each spacing unit from which a horizontal well or deviated well is productive is deemed to contain a productive well.

Potentially productive

(3) For the purpose of paragraph (1)(g), a spacing unit is potentially productive if

- **(a)** it contains a well that is in a mapped pool, is neither productive nor abandoned and **(b)** it contains an abandoned well and any zone penetrated by the well has remaining oil or gas reserves; or
 - **(i)** was previously producing, or
 - **(ii)** contains evidence of the presence of hydrocarbons whose potential productivity has not been conclusively determined;
- **(c)** it has not been drilled, there is evidence that it may be part of a productive pool and it is within a quarter-section in the case of oil — or a section in the case of gas — that adjoins any spacing unit referred to in paragraphs (1)(a) to (e).

Application for continuation

64 (1) An application for the continuation of a subsurface contract may be made to the Minister before the day on which the lease or the intermediate term of the permit expires.

Content of application

(2) The application must be in the prescribed form and include

- **(a)** a description of the lands, including the zones, with respect to which continuation is sought;
- **(b)** an indication of the basis for continuation under subsection 63(1) along with evidence of that basis; and
- **(c)** the rent for the first year of the continuation.

Determination

65 (1) On receiving an application for continuation, the Minister must determine which lands described in the application are in a spacing unit referred to in any of paragraphs 63(1)(a) to (e) and must continue the contract with respect to those lands.

Offer to continue

(2) If the Minister determines that lands described in the application are in a spacing unit referred to in paragraph 63(1)(f) or (g), he or she must send the holder an offer to continue the contract with respect to those lands.

Continuation

(3) The Minister must continue the contract with respect to lands in a spacing unit referred to in paragraph 63(1)(f) or (g) if, within 30 days after the day on which the offer of continuation is received, the holder pays the Minister a bonus equal to the greater of

- **(a)** \$2,000, and
- **(b)** \$400 for each full or partial legal subdivision or, if the lands have not been divided into legal subdivisions, \$400 for each unit of land equivalent to 16 hectares, rounded up to the nearest whole number of units.

Notice to holder and council

(4) The Minister must send the holder and the council a notice of his or her determination and — if the contract is continued — a description of the lands, including the zones, with respect to which it is continued as well as the basis for continuation.

Rights before determination

(5) Before notice of the Minister's determination is received, the holder may continue to produce from any wells in the contract area that are already producing, but must not spud or re-enter any other wells in that area.

Refund

(6) If the contract is not continued, the Minister must refund the rent submitted with the application. If the contract is continued only in part, the Minister must refund the rent for the lands with respect to which the contract is not continued.

Continuation requested by council

66 (1) The Minister may continue, for a maximum period of five years, a contract in respect of lands for which continuation was not granted under subsection 65(1) or lands for which continuation was granted under subsection 65(3) if

- **(a)** the council requests the Minister to do so in a written resolution sent to the Minister that describes the lands, including the zones, to which the request relates and the requested period of continuation;
- **(b)** a request for continuation under this subsection has not previously been made in respect of those lands;
- **(c)** the written consent of the holder is sent to the Minister;
- **(d)** the resolution and consent are sent **(e)** the holder has paid the rent for the first year of the continuation.
 - **(i)** in the case of a contract in respect of lands for which continuation was not granted under subsection 65(1), within 30 days after the day on which the notice referred to in subsection 65(4) is received, and
 - **(ii)** in the case of a contract in respect of lands for which continuation was granted under subsection 65(3), within 30 days after the day on which the continuation expires; and
-

Additional bonus

(2) If the Minister determines that an additional bonus must be paid to reflect the fair value, determined in accordance with section 38, of the rights or interests to be continued, the Minister must not continue the contract unless that additional bonus is paid.

Failure to apply for continuation

67 (1) If a holder has not applied for continuation before the deadline referred to in subsection 64(1), the Minister must determine, as soon as the circumstances permit and on the basis of the information in his or her possession, whether their contract is eligible for continuation under any of paragraphs 63(1)(a) to (e).

Notice of eligibility

(2) If the contract is eligible for continuation, the Minister must send the holder a notice that includes the following information:

- **(a)** a description of the lands, including the zones, with respect to which the contract is eligible for continuation;
- **(b)** the basis for continuation; and
- **(c)** the requirements for an application for continuation, as well as the deadline for submission.

Application for continuation

(3) A holder that has received a notice of eligibility may, within 30 days after the day on which the notice is received, apply to the Minister, in the prescribed form, for continuation of the contract with respect to any of the lands described in the notice.

Content of application

(4) The application must include a description of the lands, including the zones, with respect to which continuation is sought, the rent for the first year of the continuation and a late application fee of \$5,000.

Continuation to be granted

(5) If the holder pays the required rent and fee, the Minister must continue the contract with respect to the lands described in the application and send the holder and the council a notice of the continuation that describes the lands, including the zones, with respect to which it is continued as well as the basis for continuation.

Indefinite continuation

68 (1) A contract that is continued on the basis of any of paragraphs 63(1)(a) to (e) continues so long as the lands that are subject to the contract continue to be eligible on that basis or until the contract is surrendered or cancelled.

Continuation for one year

(2) A contract that is continued under subsection 65(3) continues for a period of one year after the day on which the contract would have expired had it not been continued.

Non-productivity — oil and gas

69 (1) If a contract that is continued in respect of lands on the basis of paragraph 63(1)(a), (b), (d) or (e) ceases to be eligible for continuation on that basis, the Minister must send the holder a notice of non-productivity that describes those lands and indicates the basis on which the contract has ceased to be eligible.

Non-productivity — expiry

(2) A contract referred to in subsection (1) expires with respect to the lands described in the notice of non-productivity one year after the day on which the notice is received.

Non-productivity — continuation

(3) Before the expiry of a contract with respect to lands described in a non-productivity notice, the holder may apply under section 64 to have the contract continued with respect to those lands on the basis of any of paragraphs 63(1)(a) to (e) other than the basis mentioned in the notice.

Application for continuation

(4) Before the expiry of a contract continued under subsection 65(3) or section 66, the holder may apply under section 64 to have the contract continued on the basis of any of paragraphs 63(1)(a) to (e).

Inadequate productivity — bitumen

70 (1) In the case of a contract continued under paragraph 63(1)(c), if the annual minimum level of production of bitumen from the lands that are subject to the bitumen recovery project is not achieved in any three years, whether or not the years are consecutive, the Minister must send the holder a notice of inadequate productivity with respect to those lands.

Termination and expiry

(2) If the annual minimum level of production of bitumen from the lands that are subject to the bitumen recovery project is not achieved in any year following the day on which the notice of inadequate productivity is received,

- **(a)** the project terminates on the final day of that year; and
- **(b)** the contract expires on the final day of that year, unless it is continued under subsection (3).

Minister's determination

(3) When the Minister becomes aware that the annual minimum level of production of bitumen from the lands that are subject to a bitumen recovery project will not be achieved in a year and the contract may expire under paragraph (2)(b), he or she must determine, as soon as the circumstances permit and on the basis of the information in his or her possession, whether the contract is eligible for continuation under any of paragraphs 63(1)(a), (b), (d) or (e) and, if so, must continue the contract on that basis.

Transitional provision — continuation

71 (1) Sections 63 to 68 apply to the continuation of any subsurface lease that was granted under the *Indian Act* or the Act before these Regulations came into force.

Transitional provision — non-productivity

(2) Section 69 applies to a subsurface lease that was continued under the *Indian Act* or the Act before these Regulations came into force if the lands in the lease area cease to be eligible for continuation on the basis on which the lease was continued.

Transitional provision — inadequate productivity

(3) Section 70 does not apply if the lands that are subject to the bitumen recovery project are the subject of an authorization under section 42 of the *Indian Oil and Gas Regulations, 1995*.

Surface Rights or Interests

Authorization

72 (1) A person may carry out surface operations on First Nation lands for the purpose of exploiting oil and gas if

- **(a)** in the case of operations that require crossing over or going through First Nation lands, they hold a right-of-way in those lands; and
- **(b)** in the case of operations that require the exclusive occupation and use of the surface of First Nation lands, they hold a surface lease in respect of those lands.

Right of entry

(2) A person that intends to apply for a surface contract in respect of First Nation lands to carry out operations referred to in subsection (1) may, with the authorization of the council and any First Nation member in lawful possession of those lands, enter on the lands to determine the location of proposed facilities, conduct surveys and carry out any operation necessary to submit an application under section 75.

Preliminary negotiation

73 (1) Before applying for a surface contract, the applicant must provide the council, and any First Nation member in lawful possession of lands in the proposed contract area, with a survey sketch of that area and must reach an agreement with them on the following:

- **(a)** the lands to be included in the contract area;
- **(b)** the operations that will be carried out on those lands;
- **(c)** the surface rates, if they have not already been fixed by the Minister in a related subsurface contract; and
- **(d)** if a service well is to be drilled or an existing well is to be used as a service well, the permitted uses of the well and the amount of compensation to be paid in respect of the well.

Surface rates — right-of-way

(2) In the case of a right-of-way, the surface rates consist of

- **(a)** a right-of-entry charge of \$1,250 per hectare, subject to a minimum charge of \$500 and a maximum charge of \$5,000; and
- **(b)** initial compensation based on the fair value of lands that are similar in size, character and use.

Surface rates — surface lease

(3) In the case of a surface lease, the surface rates consist of

- **(a)** the right-of-entry charge referred to in paragraph (2)(a);
- **(b)** initial compensation based on the fair value of lands that are similar in size, character and use, the loss of use of the lands, adverse effects and general disturbance; and
- **(c)** the annual rent for subsequent years, based on the loss of use of the lands and adverse effects.

Negotiation breakdown

74 If an agreement cannot be reached on the amount of the initial compensation or annual rent to be paid, the Minister must, at the request of the applicant, the council or a First Nation member in lawful possession of lands in the contract area, determine the amount in accordance with subsection 73(2) or (3).

Application for surface contract

75 (1) The application for a surface contract must be submitted to the Minister in the prescribed form and include

- **(a)** the terms and conditions negotiated with the council and any First Nation member in lawful possession of lands in the contract area;
- **(b)** a survey plan of the lands to be included in the contract area;
- **(c)** the results of an environmental review of the operations to be carried out in the contract area that has been conducted by a qualified environmental professional who deals with the applicant at arm's length; and
- **(d)** the surface lease or right-of-way application fee set out in Schedule 1.

Environmental review

(2) The results of the environmental review must be submitted in the prescribed form and include

- **(a)** a site evaluation that is based on the site's topography, soils, vegetation, wildlife, sources of water, existing structures, archeological and cultural resources, traditional ecological knowledge, current land uses and any other feature of the site that could be affected by the proposed uses of the lands in the contract area;
- **(b)** a description of the operations to be carried out on the lands, the duration of each and its location on the site;
- **(c)** a description of the short-term and long-term effects that each operation could have on the environment of the site and on any surrounding areas;
- **(d)** a description of the proposed mitigation measures, the potential residual effects after mitigation and the significance of those effects; and
- **(e)** a description of the consultations undertaken with the council and the First Nation members.

Environmental protection measures

(3) If the application meets the requirements of subsection (1) and the proposed operations can be carried out without causing irreparable damage to the First Nation lands, the Minister must send the applicant and the First Nation a copy of the contract that includes

- **(a)** the terms and conditions negotiated with the council and any First Nation member in lawful possession of lands in the contract area; and
- **(b)** the environmental protection measures that must be implemented to permit the holder to carry out operations under the contract.

Granting of contract

(4) The Minister must grant the contract if he or she receives the following:

- **(a)** four original copies of the contract, signed by the applicant;
- **(b)** a written resolution of the council approving the contract and the written consent of any First Nation member in lawful possession of lands in the contract area; and
- **(c)** the right-of-entry charge and initial compensation owed under the contract.

Compliance with measures

(5) The holder must ensure that all environmental protection measures included in the contract are implemented and complied with.

Term

76 A surface contract ends on the day on which its surrender has been approved by the Minister, unless the contract provides otherwise.

Renegotiation of rent

77 (1) Unless a surface lease provides otherwise, the holder must renegotiate the amount of the rent with the Minister, the council and any First Nation member in lawful possession of lands in the lease area at the end of the shorter of

- **(a)** every five-year period, and
- **(b)** any period fixed by the laws of the relevant province for the renegotiation of surface leases in lands that are not First Nation lands.

Amendment of lease

(2) The Minister must amend the lease to reflect the rent renegotiated under subsection (1) if

- **(a)** a written resolution of the council approving the renegotiated rent is submitted along with the written consent of any First Nation member in lawful possession of lands in the lease area; and
- **(b)** the Minister determines that the renegotiated rent is fair on the basis of the criteria referred to in paragraph 73(3)(c).

Renegotiation breakdown

(3) If an agreement cannot be reached in renegotiating the rent, the Minister must, at the request of the holder, the council or any First Nation member in lawful possession of lands in the lease area, determine the rent on the basis of the criteria referred to in paragraph 73(3)(c) and amend the lease accordingly.

Abandonment, remediation and reclamation

78 If the lands in a surface contract area are no longer used for the uses for which the contract was granted, the holder must abandon any well and facilities in the area and remediate and reclaim those lands.

Royalties

Payment of royalty

79 (1) Except as otherwise provided in a special agreement entered into under subsection 4(2) of the Act, a subsurface contract holder must pay a royalty, in an amount calculated in accordance with Schedule 5, on the oil and gas recovered from, or attributed to, lands in the subsurface contract area.

Index price or actual selling price

(2) If a special agreement entered into under subsection 4(2) of the Act provides that the royalty on oil or gas is to be calculated using a monthly index price or corporate pool price rather than the actual selling price, the holder must, in the prescribed form, provide the Minister with the index price or corporate pool price for each month in which the oil or gas is produced.

Deadline for payment

80 The royalty must be paid on or before the 25th day of the third month after the month in which the oil or gas is produced.

Royalty — every sale

81 (1) Subject to subsection (2), every sale of oil or gas that is recovered from, or attributed to, lands in a subsurface contract area must include the sale, on behalf of Her Majesty in right of Canada, of any oil or gas that constitutes the royalty payable under the Act.

Payment in kind

(2) After giving the contract holder notice, and having regard to any obligations that the holder may have in respect of the sale of oil or gas, the Minister may, with the prior approval of the council, direct the holder to pay all or part of the royalty in kind for a specified period or until the Minister directs otherwise.

Keeping of information

82 (1) Any person that produces, sells, acquires or stores oil or gas that has been recovered from First Nation lands, or acquires a right to such oil or gas, must keep, for a period of 10 years, all information that may be used to calculate the royalty owing in respect of that oil and gas, including any information required by this section.

Information — royalties

(2) Any person referred to in subsection (1) must submit the following information to the Minister in the prescribed form as soon as it becomes available:

- **(a)** the volume and quality of the oil or gas produced, sold, acquired or stored, or to which a right was acquired, by that person during the month in which the oil or gas was produced;

- **(b)** the value for which the oil or gas, or a right to the oil or gas, was sold or acquired;
- **(c)** any costs and allowances to be taken into account in determining the royalty payable on the oil or gas; and
- **(d)** any other information that is required to calculate or verify the royalty payable.

Information — related parties

(3) The Minister may require a person referred to in subsection (1) to submit information for the purpose of determining whether the parties to a transaction are related parties.

Related parties

(4) For the purpose of subsection (3), persons are related parties if they are *related persons*, *affiliated persons* or associated corporations within the meaning of subsection 251(2), section 251.1 and subsection 256(1), respectively, of the *Income Tax Act*.

Order to submit plan or diagram

83 (1) For the purpose of verifying the royalty payable under a contract, the Minister may order an operator to submit a plan or diagram, drawn to a specified scale, of any facility that is used by the operator in exploiting oil or gas.

Deadline

(2) An operator that receives an order must submit the requested plan or diagram within 30 days after the day on which the order is received.

Notice to submit documents

84 (1) For the purpose of verifying the royalty payable under a contract, the Minister may send a notice requiring any person that has sold, purchased or swapped oil or gas recovered from First Nation lands to provide any of the following documents:

- **(a)** a signed copy of any written sales contract or, if the contract was unwritten, a document that sets out its terms and conditions;
- **(b)** a transaction statement, invoice or other document that sets out the details of the transaction;
- **(c)** any agreement between persons respecting the costs and allowances to be taken into account in determining the royalty payable on the oil or gas.

Deadline

(2) A person that receives a notice sent under subsection (1) must submit the requested documents within 14 days after the day on which the notice is received.

First Nation Audits and Examinations

General Rules

Agreement required

85 (1) A First Nation may conduct an audit or examination for the purpose of verifying the royalties payable on oil or gas recovered from its lands if

- **(a)** its council has entered into an audit or examination agreement with the Minister; and
- **(b)** the audit or examination is conducted in accordance with the agreement and these Regulations.

Procedure to obtain agreement

(2) A council that has obtained preliminary approval of an audit or examination under section 89 may request that the Minister enter into an audit or examination agreement under section 90.

Qualifications

86 (1) A person who conducts an audit or examination under the Act must have the credentials and experience required to carry out their role in the audit or examination in accordance with generally accepted auditing standards.

Requirements

(2) A person who conducts an audit or examination under the Act, or accompanies an auditor or examiner,

- **(a)** must not be employed by, be affiliated with or represent the oil or gas company that is the subject of the audit or examination;
- **(b)** must have the certifications and comply with the occupational health and safety requirements required or imposed by the contract holder or by law; and
- **(c)** must keep confidential any documents or information they obtain in connection with the audit or examination and must comply with the security requirements imposed by the contract holder or by law.

Confidentiality — First Nation

87 (1) A First Nation that conducts an audit or examination must keep confidential any documents or information it obtains in connection with the audit or examination and must comply with the security requirements imposed by the contract holder or by law.

Exception

(2) Despite subsection (1), the council must provide the Minister with a copy of all audit or examination reports and working papers within 30 days after the day on which the audit or examination is completed.

Preliminary Approval

Application for preliminary approval

88 To obtain preliminary approval of an audit or examination, a council must apply to the Minister in the prescribed form. The application must include

- **(a)** the name of the person whose documents and information are to be audited or examined;
- **(b)** the name and location of each facility in which the audit or examination will be conducted and the name of the facility's operator;
- **(c)** the type of audit or examination to be conducted;
- **(d)** the period to be covered by the audit or examination;
- **(e)** the anticipated dates for starting and completing the audit or examination;
- **(f)** the reasons that the council believes that the audit or examination is necessary; and
- **(g)** a statement indicating whether the council is prepared to cover the costs of the audit or examination.

Decision

89 (1) The Minister must give preliminary approval if the requirements of section 88 are met, except in the following circumstances:

- **(a)** the reasons provided by the council for conducting the audit or examination do not establish the existence of a risk that warrants an audit or examination;
- **(b)** within the three years before the date of the application, the requested type of audit or examination has been conducted under the Act in respect of the same contract for the same period and the holder was found to be in compliance with the contract, these Regulations and the Act;
- **(c)** the audit or examination is not on the Minister's list of priority audits or examinations and the council is not prepared to cover its costs; or
- **(d)** the Minister and the council do not agree on the type of audit or examination to be conducted, the period to be covered or the dates for starting and completion.

Notice of decision

(2) The Minister must send the council notice of his or her decision and, if preliminary approval is refused, the reasons for the refusal.

Request for Agreement

Request for agreement

90 A council's request for an audit or examination agreement must be made to the Minister in the prescribed form within 180 days after the day on which the notice of preliminary approval is received and must include

- **(a)** the name of the proposed auditor or examiner;
- **(b)** a detailed audit or examination plan;
- **(c)** the dates for starting and completing the audit or examination;
- **(d)** the name of any person who will accompany the proposed auditor or examiner and a description of their role in the audit or examination; and
- **(e)** evidence that the proposed auditor or examiner has the credentials and experience referred to in subsection 86(1).

Refusal

91 The Minister may refuse the request only if

- **(a)** the information required by section 90 has not been provided;
- **(b)** a requirement referred to in section 86 has not been complied with; or
- **(c)** one or more circumstances that justified the preliminary approval of the audit or examination have changed.

Agreement

92 If the request is approved, the Minister must enter into an agreement with the council that includes the information referred to in paragraphs 88(a) to (d) and 90(a) to (d).

Equitable Production of Oil and Gas

Holder's Obligations

Compensatory royalty

93 (1) A subsurface contract holder is obliged to pay Her Majesty in right of Canada, in trust for the relevant First Nation, a compensatory royalty in respect of each triggering well located in an external spacing unit that adjoins a First Nation spacing unit that is in their contract area.

Royalty for each spacing unit

(2) A compensatory royalty must be paid in respect of each First Nation spacing unit in the contract area that adjoins the spacing unit in which the triggering well is located.

Beginning of obligation

(3) The obligation to pay the compensatory royalty begins on the first day of the month that follows the day on which the offset period ends.

Offset period

(4) The offset period begins on the day on which an offset notice is received and ends on the 180th day after that day or

- **(a)** if the offset notice is not sent until after confidential information about the well is made public, the 90th day after that day; or
- **(b)** if the offset period has been extended under paragraph 5(1)(d) of the Act, the day on which the extension expires.

Offset Notice

Offset notice

94 (1) If the Minister becomes aware of the existence of a triggering well, the Minister must send an offset notice to every subsurface contract holder that is obliged to pay a compensatory royalty under section 93.

Absence of contract

(2) If any lands in a First Nation spacing unit that adjoins a spacing unit in which a triggering well is located are not subject to a subsurface contract, the Minister must

- **(a)** send the council a notice of the existence of the triggering well;
- **(b)** send an offset notice to any person that becomes a subsurface lease holder in respect of those lands; and
- **(c)** send an offset notice to any person that becomes a permit holder in respect of those lands one year after the effective date of the permit.

Confidential information

(3) If, on the day on which an offset notice is required to be sent, any information about a triggering well is confidential under the laws of the relevant province, the Minister

- **(a)** must send, to every contract holder to which the offset notice will be sent, a notice of the existence of the triggering well and the information set out in paragraphs 95(1)(a) and (c) in respect of that well; and
- **(b)** must not send the offset notice until the Minister becomes aware that the confidential information has been made public.

Information included in notice

95 (1) The offset notice must include the following information:

- **(a)** the name of the subsurface contract holder, the contract number and the holder's percentage share in the contract;
- **(b)** a description of the lands in the contract area that are subject to the notice;
- **(c)** the unique well identifier of the triggering well;
- **(d)** the area of the First Nation lands in the spacing unit in which the triggering well is located, expressed as a percentage of the area of that spacing unit;
- **(e)** a description of the external spacing unit in which the triggering well is located and the offset zone;
- **(f)** in the case of a horizontal or multilateral triggering well, the total length of the well, the total length of the horizontal section of the well and the length of the section of the well that is producing from the external spacing unit;
- **(g)** in the case of a deviated well that is producing from more than one spacing unit, the total length of the well and the length of the section of the well that is producing from the external spacing unit;
- **(h)** the offset period; and
- **(i)** statements indicating that
 - **(i)** the spacing unit in which the triggering well is located adjoins the First Nation spacing unit in the contract area described in paragraph (b),

- **(ii)** the obligation to pay a compensatory royalty begins on the first day of the month that follows the day on which the offset period ends,
- **(iii)** the compensatory royalty must be paid on or before the 25th day of the third month after the month in which the obligation to pay it begins and, subsequently, on or before the 25th day of each subsequent month, and
- **(iv)** the obligation to pay the compensatory royalty ends in any of the circumstances set out in subsection 100(1).

Notice to council

(2) The Minister must send the council a copy of the offset notice and, when the offset period ends, a notice indicating that the holder's obligation to pay a compensatory royalty has begun.

No obligation

96 (1) The obligation to pay a compensatory royalty does not begin if, during the offset period, the subsurface contract holder submits to the Minister information that establishes any of the following circumstances:

- **(a)** the triggering well is not draining from the offset zone referred to in the offset notice;
- **(b)** the offset zone of the triggering well has been abandoned, as shown in the records of the provincial authority;
- **(c)** an offset well is producing from the offset zone;
- **(d)** the spacing unit in which the triggering well is located no longer adjoins the First Nation spacing unit referred to in the offset notice;
- **(e)** the offset zone in the First Nation spacing unit is subject to a unit agreement under which oil or gas is being or is deemed to be produced;
- **(f)** the triggering well is subject to a storage agreement that has been approved by the provincial authority.

Notice to holder

(2) After determining whether a circumstance set out in subsection (1) has been established, the Minister must send the holder a notice of his or her determination.

Surrender

(3) A holder is not obliged to pay a compensatory royalty if, during the offset period, they surrender their rights or interests down to the base of the offset zone in the spacing unit to which the offset notice applies, except for any rights or interests in a zone from which a well is productive or that is subject to a unit agreement or to a storage agreement that has been approved by the provincial authority.

Notice to council

(4) If the holder has established a circumstance set out in subsection (1) or has surrendered their rights or interests under subsection (3), the Minister must send the council a notice indicating that the holder's obligation to pay a compensatory royalty is relieved and the reasons that it is relieved.

Calculation and Payment of Compensatory Royalty

Compensatory royalty

97 (1) The monthly compensatory royalty that is payable by a subsurface contract holder is

- **(a)** in the case of a vertical triggering well or deviated triggering well that is producing from a single spacing unit, an amount equal to the amount that would have been payable by the holder as a royalty for that month if the triggering well were producing from the adjoining First Nation spacing unit that is in their contract area; and
- **(b)** in the case of a horizontal triggering well, multilateral triggering well or deviated triggering well that is producing from more than one spacing unit, an amount equal to the percentage, calculated in accordance with the following formula, of the amount referred to in paragraph (a):

$$(L/T) \times 100$$

where

- **L** is the length of the section of the triggering well that is located in the adjoining external spacing unit and is capable of producing oil or gas from the offset zone, and
- **T** is the total length of the section of the well that is capable of producing oil or gas.

Prorated amount

(2) If the triggering well is located in an external spacing unit that contains First Nation lands, the monthly compensatory royalty that is payable is an amount calculated in accordance with the formula

$$C \times (100 - I)/100$$

where

- **C** is the amount of the compensatory royalty that is payable under subsection (1); and
- **I** is the area of the First Nation lands in the spacing unit, expressed as a percentage of the area of that spacing unit.

Calculation of compensatory royalty

(3) For the purpose of calculating the monthly compensatory royalty,

- **(a)** the volume of oil, gas or condensate to be used in the royalty formula is the volume of oil, raw gas or condensate that was produced in the month by the triggering well, as shown by the records of the provincial authority; and

- **(b)** the price to be used, in respect of that month, is
 - **(i)** in the case of oil, in Saskatchewan, the price indicated in the *Monthly Crude Oil Royalty/Tax Factor History*, published by the Ministry of Energy and Resources, and, in the other provinces, the monthly par price for light, medium, heavy or ultra heavy oil, as the case may be, published by Alberta's Department of Energy,
 - **(ii)** in the case of gas, in Saskatchewan, the price indicated in the *Monthly Natural Gas Royalty/Tax Factor History*, published by the Ministry of Energy and Resources, and, in the other provinces, the Gas Reference Price in the monthly information letter *Natural Gas Royalty Prices and Allowances*, published by Alberta's Department of Energy, and
 - **(iii)** in the case of condensate, the Pentanes Plus Reference Price in the monthly information letter *Natural Gas Royalty Prices and Allowances*, published by Alberta's Department of Energy.

Compensatory royalty — confidential well

(4) In the case of an offset notice sent under paragraph 94(3)(b), the month referred to in paragraph (3)(a) for the first monthly compensatory royalty is the month whose first day follows the period that begins on the day on which the information sent under paragraph 94(3)(a) is received and ends on the 180th day after that day. For each subsequent monthly compensatory royalty, the month is each subsequent month.

Heating value

(5) If the royalty calculation requires the conversion of a price in dollars per gigajoule (GJ) into a price in dollars per 1000 m³, the heating value is 37.7 GJ/1000 m³.

No deduction

(6) No deduction for costs or allowances is to be made in the calculation of the compensatory royalty.

Transitional provision

(7) This section does not apply to a compensatory royalty owing under the *Indian Oil and Gas Regulations, 1995*.

Calculation and payment of compensatory royalty

98 On or before the 25th day of the third month after the month in which the obligation to pay the compensatory royalty begins, and on or before the 25th day of each subsequent month, the subsurface contract holder must pay the Minister the monthly compensatory royalty and, in the prescribed form, provide the information that is required to verify its calculation.

Amended spacing unit

99 The obligation to pay a compensatory royalty continues despite any change in the size of the First Nation spacing unit or the external spacing unit in which the triggering well is located if the two spacing units remain adjoined.

End of obligation to pay

100 (1) The obligation to pay a compensatory royalty ends if the subsurface contract holder

- **(a)** establishes any of the circumstances set out in subsection 96(1); or
- **(b)** surrenders their rights or interests down to the base of the offset zone in the spacing unit to which the offset notice applies, except for any rights or interests in a zone from which a well is productive or that is subject to a unit agreement or to a storage agreement that has been approved by the provincial authority.

Notice to holder

(2) After determining whether a circumstance set out in subsection 96(1) has been established, the Minister must send the holder a notice informing them of his or her determination and, if the obligation ends, the day on which it ends.

Final day of obligation

(3) The obligation to pay a compensatory royalty ends

- **(a)** if the holder sends the Minister a notice establishing a circumstance set out in subsection 96(1), on the first day of the month in which the Minister receives the notice; or
- **(b)** if the holder has surrendered their rights or interests, on the first day of the month that follows the month in which the Minister receives a notice of the surrender.

Notice to council

(4) If the obligation to pay a compensatory royalty ends, the Minister must send the council a notice indicating that it has ended and the reasons that it has ended.

Exception

101 Subject to subsection 97(7), sections 93 to 100 and 111 apply to any subsurface contract that was granted under the *Indian Act* or the Act.

Offset Wells

Failure to produce

102 (1) If an offset well fails to produce any oil or gas for three consecutive months after the offset period has ended, the subsurface contract holder must pay a compensatory royalty in respect of the triggering well whose production was to be offset.

Beginning of compensatory royalty obligation

(2) The obligation to pay the compensatory royalty begins on the first day of the month that follows the three-month period.

Notice to council

(3) The Minister must send the council a notice indicating that the holder's obligation to pay a compensatory royalty has begun.

Service Wells

Prior approval

103 (1) A well must not be used as a service well without the prior approval of the Minister.

Application for approval

(2) The application for approval must be in the prescribed form, be accompanied by a copy of the provincial authority's approval of the service well and include the following information:

- (a) a description of the well;
- (b) a detailed description of the proposed uses of the well and the proposed uses of any related facilities; and
- (c) the bonus and the annual compensation to be paid for any disposal rights.

Approval

(3) The Minister must approve the proposed uses of the service well if

- (a) the application is made in accordance with subsection (2);
- (b) the approval of the council has been obtained; and
- (c) the approval will benefit the relevant First Nation.

Notice to Minister

(4) The contract holder must send the Minister notice of any changes in the provincial authority's approval referred to in subsection (2).

Exception

104 Section 103 does not apply to a service well that is part of a project that has been approved by the provincial authority or a bitumen recovery project that has been approved by the Minister.

Exception

105 Section 103 does not apply to a disposal rights agreement that was entered into before these Regulations came into force.

Pooling, Production Allocation and Unit Agreements

Single spacing unit production

106 (1) If a well is producing from First Nation lands, the Minister must determine the percentage of production from the well to be allocated to each contract in the spacing unit from which the well is producing, based on the area of the First Nation lands that are subject to each contract, in proportion to the area of the spacing unit.

Notice to holder and council

(2) The Minister must send each holder and the council a notice indicating the percentage of the production that is allocated to each contract.

Multiple spacing unit production

107 (1) If a well is producing from more than one spacing unit and the lands from which it is producing are not entirely First Nation lands or are not subject to a single contract, the Minister must determine the percentage of production from the well to be allocated to the First Nation lands and to each contract, based on the criteria used by the provincial authority in making such allocations.

Notice to holder and council

(2) The Minister must send each holder and the council a notice indicating the percentage of the production that is allocated to the First Nation lands and to each contract.

Unit agreement

108 (1) The Minister may, with the prior approval of the council, enter into a unit agreement.

Allocation of production

(2) The calculation of royalties payable under a contract that is subject to a unit agreement must be based on the production allocated to each tract as specified in the agreement.

Surrender, Default and Cancellation

Surrender of subsurface rights or interests

109 (1) A subsurface contract holder may surrender their rights or interests under the contract, in whole or in part, by sending the Minister a notice of surrender in the prescribed form.

Partial surrender of subsurface rights or interests

(2) In a partial surrender of subsurface rights or interests,

- **(a)** all the rights and interests in a spacing unit must be surrendered; and

- **(b)** the rent for subsequent years is reduced in proportion to the reduction of the lands that are subject to the contract, to a minimum of \$100.

Notice to council

(3) When rights or interests under a subsurface contract are surrendered, the Minister must send the council a copy of the notice of surrender and, in the case of a partial surrender, a copy of the amended contract.

Surrender of surface rights or interests

110 (1) A surface contract holder may surrender their rights or interests under the contract, in whole or in part, by applying in the prescribed form for the Minister's approval.

Copy to council

(2) The Minister must send the council a copy of the application.

Approval

(3) The Minister must approve the surrender if

- **(a)** the holder is not in default under the contract, these Regulations or an order given under the Act;
- **(b)** the Minister and the council have inspected the contract area to be surrendered and the Minister has confirmed that the remediation and reclamation of the surface in that area are satisfactory; and
- **(c)** in the case of a partial surrender, the boundaries of the remaining contract area continue to meet the requirements of these Regulations and the partial surrender approval application fee set out in Schedule 1 has been paid.

Adjusted rent

(4) If the surrender of rights or interests under a surface contract is partial, the rent for subsequent years is reduced in proportion to the reduction of the lands that are subject to the contract. However, the rent must be no less than the rent payable for 1.6 hectares.

Notice to council

(5) If the surrender of rights or interests under a surface contract is approved, the Minister must send the council a notice to that effect and, in the case of a partial surrender, a copy of the amended contract.

Non-compliance notice

111 (1) If a holder fails to comply with their contract, the Act or these Regulations, the Minister may send them a notice that identifies the non-compliance and warns that the contract will be cancelled if the holder is in default.

Response to notice

(2) Within 30 days after the day on which the notice is received, the holder must remedy the non-compliance identified in the notice or, if the non-compliance does not relate to money owed under the Act, submit to the Minister a plan that shows how and when it will be remedied and why the proposed deadline is justified in the circumstances. Subsequently, the holder must remedy the non-compliance in accordance with the plan.

Deficient plan

(3) If the plan does not meet the requirements of subsection (2), the Minister must send the holder a notice to that effect that identifies its deficiencies.

Amended plan

(4) A holder that receives a notice sent under subsection (3) must

- (a) within 30 days after the day on which the notice is received, submit to the Minister an amended plan that corrects the deficiencies identified in the notice; and
- (b) remedy the non-compliance identified in the notice sent under subsection (1) in accordance with that plan.

Default

(5) A holder that receives a notice sent under subsection (1) is in default if they do not comply with the requirements of subsection (2) or, if applicable, subsection (4).

Cancellation for default

(6) The Minister must cancel the contract of a holder that is in default.

Non-payment of compensatory royalty

(7) If a contract is to be cancelled for non-payment of a compensatory royalty, the Minister must cancel the rights or interests conferred by the contract down to the base of the offset zone in the spacing unit to which the offset notice applies, except for any rights or interests in a spacing unit referred to in any of paragraphs 63(1)(a) to (e).

Cancellation notice

(8) When a contract is cancelled, the Minister must send the holder a notice indicating that their contract is cancelled, the reason for the cancellation and its effective date.

Notice to council

(9) The Minister must send the council a copy of every notice sent under this section.

Continuing liability

112 When a contract ends, any liabilities for outstanding amounts that are owed under the contract, any liabilities for damages caused by operations carried out under the contract and any obligations respecting abandonment, remediation or reclamation survive the end of the contract.

Administrative Monetary Penalties

Designated provisions

113 The provisions set out in Schedule 6 are designated as provisions whose contravention is a violation that may be proceeded with under sections 22 to 28 of the Act.

Transitional Provisions

Executive Director

114 The powers, duties and functions of the Executive Director under the *Indian Oil and Gas Regulations, 1995* are to be exercised or performed by the Minister and any reference to the Executive Director in a contract granted under those Regulations is deemed to be a reference to the Minister.

Permits

115 Sections 15, 16 and 18 to 21 of the *Indian Oil and Gas Regulations, 1995* continue to apply to permits granted under those Regulations.

Repeal

116 The *Indian Oil and Gas Regulations, 1995* are repealed.

Coming into Force

S.C. 2009, c. 7

117 These Regulations come into force on the day on which *An Act to amend the Indian Oil and Gas Act* comes into force, but if they are registered after that day, they come into force on the day on which they are registered.

SCHEDULE 1

(Subsections 2(5) and 25(4), paragraphs 29(2)(e) and 41(1)(a), subsection 44(3) and paragraphs 75(1)(d) and 110(3)(c))

Fees

| Item | Column 1 Service | Column 2 Fee (\$) |
|-------------|---------------------------------|------------------------------|
| 1 | Subsurface contract application | 250 |

| | | |
|---|--|----|
| 2 | Surface lease application | 50 |
| 3 | Right-of-way application | 50 |
| 4 | Exploration licence application | 25 |
| 5 | Assignment approval application | 50 |
| 6 | Partial surrender approval application | 25 |
| 7 | Record search | 25 |

SCHEDULE 2

(Subsections 48(1) and (2))

Initial Term of Permits

Definitions

1 The following definitions apply in this Schedule.

Area 1 means the lands in Area 1 as set out in Schedule 2 to the *Petroleum and Natural Gas Drilling Licence and Lease Regulation*, B.C. Reg. 10/82. (*Zone 1*)

Area 2 means the lands in Area 2 as set out in Schedule 2 to the *Petroleum and Natural Gas Drilling Licence and Lease Regulation*, B.C. Reg. 10/82. (*Zone 2*)

Area 3 means the lands in Area 3 as set out in Schedule 2 to the *Petroleum and Natural Gas Drilling Licence and Lease Regulation*, B.C. Reg. 10/82. (*Zone 3*)

Foothills Region means the lands in the Foothills Region as set out in Schedule 1 to the *Petroleum and Natural Gas Tenure Regulation*, AR 263/1997. (*région des contreforts*)

Northern Region means the lands in the Northern Region as set out in Schedule 1 to the *Petroleum and Natural Gas Tenure Regulation*, AR 263/1997. (*région du Nord*)

Plains Region means the lands in the Plains Region as set out in Schedule 1 to the *Petroleum and Natural Gas Tenure Regulation*, AR 263/1997. (*région des plaines*)

township means a township laid out in accordance with sections 55 to 61 of *The Land Surveys Regulations*, R.S.S. c. L-4.1 Reg 1. (*canton*)

TABLE

| | Column 1 | Column 2 | Column 3 |
|------|-------------|---------------------|----------------------|
| Item | Province | Region | Initial Term (Years) |
| 1 | Nova Scotia | The entire province | 3 |

| | | | |
|---|------------------|---|---|
| 2 | New Brunswick | The entire province | 3 |
| 3 | Manitoba | The entire province | 3 |
| 4 | British Columbia | (a) Area 1 | 3 |
| | | (b) Area 2 | 4 |
| | | (c) Area 3 | 5 |
| 5 | Saskatchewan | (a) Lands located south of Township 55 | 2 |
| | | (b) Lands located north of Township 54 but south of Township 66 | 3 |
| | | (c) Lands located north of Township 65 | 4 |
| 6 | Alberta | (a) Plains Region | 2 |
| | | (b) Northern Region | 4 |
| | | (c) Foothills Region | 5 |

SCHEDULE 3

(Subsections 1(1) and 52(3))

Zones — Intermediate Term

Definitions

1 The following definitions apply in this Schedule.

ILND means the internal limit of a zone, whether upper or lower, that is not defined. (*LIND*)

KB means kelly bushing, which serves as the point on the rotary drilling table from which downhole well log depths are measured. (*FE*)

NDE means not deep enough and, in relation to a reference well, means that the well was not drilled to a depth that was sufficient to penetrate the upper or lower limit of a particular zone. (*FI*)

NP means not present and, in relation to a zone, means that the zone is not present at the location where the reference well was drilled. (*NP*)

TVD means true vertical depth. (*PVR*)

Zones

2 (1) For each of the First Nation lands set out in this Schedule, the lands that may be selected are the zones set out in column 1 of the table that correspond to the well log data set out in column 2 that match the well log data for the well that was drilled or re-entered by the subsurface contract holder.

Multiple logs

(2) If there is more than one set of well log data set out in column 2 for a zone, the set derived from the reference well that is nearest to the earning well must be used to determine the zones.

Unidentified zone

3 If a well is drilled into a zone that is not identified in a table to this Schedule, the Minister must determine the upper and lower limits of the deepest zone penetrated by the well, based on a review of the well log data that relate to other wells in the vicinity and on any well log data that are available and relate to lands in the vicinity.

Alexander 134

| Item | Column 1 Zone | Column 2 Well Log Data | | |
|------|---|--|---|--|
| | | 00/11-11-56-27W4 Electric Log (ft. KB) | 02/6-15-56-27W4 Induction Log (mKB) | 00/8-1-56-27W4 Density Log (mKB) |
| | | 1 | Edmonton, Belly River and Lea Park | |
| 2 | Wapiabi and Second White Specks | | 615.0 to 939.0 | |
| 3 | Viking | 3090 to 3250 | 939.0 to 989.0 | 934.5 to 979.5 |
| 4 | Joli Fou | 3250 to 3293 | 989.0 to 997.0 | 979.5 to 992.0 |
| 5 | Mannville, including Upper Mannville, Glauconite, Ostracod, Basal Quartz "A" and Lower Basal Quartz | 3293 to 4112 | 997.0 to NDE | 992.0 to 1218.0 |
| 6 | Wabamun | 4112 to NDE | NDE | 1218.0 to 1384.5 |
| 7 | Calmar | NDE | NDE | 1384.5 to 1393.5 |
| 8 | Nisku | NDE | NDE | 1393.5 to NDE |
| 9 | Ireton | NDE | NDE | NDE |
| 10 | Cooking Lake | NDE | NDE | NDE |

Alexander 134A

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data | |
|----|--|--|---|
| | | 00/13-22-61-17W5 Neutron-density Log (mKB TVD) | 00/3-32-63-22W5 Neutron-density Log (mKB) |
| 1 | Edmonton, Belly River and Lea Park | Surface to 1147.7 | |
| 2 | Wapiabi, Cardium and Second White Specks | 1147.7 to 1663.7 | |
| 3 | Viking and Joli Fou | 1663.7 to 1688.3 | |
| 4 | Mannville | 1688.3 to 1948.1 | |
| 5 | Fernie and Nordegg | 1948.1 to 2024.3 | |
| 6 | Montney | 2024.3 to 2048.3 | |
| 7 | Belloy | 2048.3 to 2064.5 | |
| 8 | Shunda | 2064.5 to 2124.4 | |
| 9 | Pekisko | 2124.4 to 2170.0 | |
| 10 | Banff and Exshaw | 2170.0 to NDE | 2472.0 to 2668.0 |
| 11 | Wabamun | | 2668.0 to 2893.0 |
| 12 | Graminia and Blue Ridge | | 2893.0 to 2946.0 |
| 13 | Nisku | | 2946.0 to 3100.0 |
| 14 | Ireton | | 3100.0 to 3273.0 |
| 15 | Duvernay | | 3273.0 to 3334.8 |
| 16 | Cooking Lake and Beaverhill Lake | | 3334.8 to 3385.0 |
| 17 | Swan Hills | | 3385.0 to 3422.0 |
| 18 | Watt Mountain | | 3422.0 to NDE |

Alexis 133

| Item | Column 1 | Column 2 |
|------|------------------------------------|--|
| | Zone | Well Log Data 00/10-23-55-4W5 Acoustic Log (mKB) |
| 1 | Edmonton, Belly River and Lea Park | Surface to 760.0 |

| | | |
|---|---------------------------------|------------------|
| 2 | Wapiabi and Second White Specks | 760.0 to 1125.0 |
| 3 | Viking and Joli Fou | 1125.0 to 1170.0 |
| 4 | Mannville | 1170.0 to 1328.5 |
| 5 | Banff and Exshaw | 1328.5 to 1480.5 |
| 6 | Wabamun | 1480.5 to 1661.0 |
| 7 | Winterburn | 1661.0 to 1707.5 |
| 8 | Ireton | 1707.5 to NDE |

Alexis Whitecourt 232

| Item | Column 1 | Column 2 |
|------|------------------------------------|---------------------------------------|
| | Zone | Well Log Data |
| | | 00/2-31-60-12W5 Acoustic Log (mKB) |
| 1 | Edmonton, Belly River and Lea Park | Surface to 936.5 |
| 2 | Wapiabi and Second White Specks | 936.5 to 1381.3 |
| 3 | Viking and Joli Fou | 1381.3 to 1415.0 |
| 4 | Mannville | 1415.0 to 1655.0 |
| 5 | Nordegg | 1655.0 to 1691.0 |
| 6 | Shunda and Pekisko | 1691.0 to 1737.0 |
| 7 | Banff and Exshaw | 1737.0 to 1920.5 |
| 8 | Wabamun | 1920.5 to 2137.0 |
| 9 | Winterburn | 2137.0 to 2234.0 |
| 10 | Ireton and Duvernay | 2234.0 to 2575.5 |
| 11 | Swan Hills | 2575.5 to 2711.0 |
| 12 | Watt Mountain | 2711.0 to NDE |

Amber River 211, Hay Lake 209 and Zama Lake 210

| Item | Column 1 | Column 2 | | |
|------|----------|--|---|---|
| | Zone | Well Log Data | | |
| | | Amber River 00/11-20-114-6W6 Sonic Log (mKB) | Hay Lake 00/4-1-112-5W6 Neutron-density Log (mKB) | Hay Lake 00/6-28-112-5W6 Density Log (ft. KB) |
| 1 | Wilrich | Surface to 249.0 | Surface to 242.0 | Surface to 279.0 |

| | | | | | |
|----|--|------------------|----------------|--------------|------------------|
| 2 | Bluesky and Gething | 249.0 to 261.0 | 242.0 to 261.5 | | 279.0 to 296.0 |
| 3 | Banff | 261.0 to 344.0 | 261.5 to 318.7 | | 296.0 to 441.0 |
| 4 | Wabamun | 344.0 to 548.0 | 318.7 to NDE | ILND to 1712 | 441.0 to 633.0 |
| 5 | Trout River, Kakisa, Redknife and Jean Marie | 548.0 to 710.0 | | 1712 to 2220 | 633.0 to 797.0 |
| 6 | Fort Simpson | 710.0 to 1232.7 | | 2220 to 3842 | 797.0 to 1305.5 |
| 7 | Muskwa and Waterways | 1232.7 to 1310.7 | | 3842 to 4192 | 1305.5 to 1394.0 |
| 8 | Slave Point | 1310.7 to 1387.0 | | 4192 to 4396 | 1394.0 to 1478.0 |
| 9 | Watt Mountain and Sulphur Point | 1387.0 to 1422.0 | | 4396 to 4525 | 1478.0 to 1524.0 |
| 10 | Muskeg and Keg River | 1422.0 to 1680.0 | | 4525 to 5468 | 1524.0 to 1780.0 |
| 11 | Chinchaga | 1680.0 to NDE | | 5468 to NDE | 1780.0 to NDE |

Beaver 152

| Item | Column 1 | Column 2 |
|------|---------------------------|--|
| | Zone | Well Log Data |
| | | 00/4-6-82-3W6 Neutron-density Log (mKB) |
| 1 | Shaftesbury | Surface to 508.0 |
| 2 | Paddy, Cadotte and Harmon | 508.0 to 580.0 |
| 3 | Notikewin and Falher | 580.0 to 920.0 |
| 4 | Bluesky and Gething | 920.0 to 996.0 |
| 5 | Fernie and Nordegg | 996.0 to 1085.0 |
| 6 | Montney | 1085.0 to 1307.8 |
| 7 | Belloy | 1307.8 to 1358.0 |
| 8 | Taylor Flat | 1358.0 to 1395.0 |
| 9 | Kiskatinaw | 1395.0 to 1406.0 |
| 10 | Golata | 1406.0 to 1435.0 |
| 11 | Debolt | 1435.0 to NDE |

Beaver Lake 131

| Item | Column 1 | Column 2 | | |
|------|---------------------|---------------------------------------|---|------------------------------------|
| | Zone | Well Log Data | | |
| | | 00/7-3-66-13W4 Induction Log (mKB) | 00/12-35-66-12W4 Induction Log (mKB) | 00/6-20-66-13W4 Sonic Log (mKB) |
| 1 | Colorado Shale | Surface to 294.5 | Surface to 308.0 | |
| 2 | Viking and Joli Fou | 294.5 to 335.0 | 308.0 to 348.3 | |
| 3 | Mannville | 335.0 to NDE | 348.3 to 542.0 | 318.0 to 486.0 |
| 4 | Grosmont | NDE | 542.0 to NDE | 486.0 to 542.0 |

Big Island Lake Cree Territory

| Item | Column 1 | Column 2 | |
|------|------------------------|--|---|
| | Zone | Well Log Data | |
| | | 31/7-26-62-25W3 Neutron-density Log (mKB) | 01/10-20-63-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | 138.3 to 192.0 |
| 2 | St. Walburg and Viking | ILND to 286.0 | 192.0 to 272.4 |
| 3 | Mannville | 286.0 to NDE | 272.4 to 502.0 |
| 4 | Souris River | | 502.0 to NDE |

Birdtail Creek 57

| Item | Column 1 | Column 2 | |
|------|------------------------|---|---------------------------------------|
| | Zone | Well Log Data | |
| | | 00/12-10-15-27W1 Neutron-density Log (mKB) | 00/3-21-15-27W1 Sonic Log (ft. KB) |
| 1 | Second White Specks | 244.0 to 369.0 | 800 to 1200 |
| 2 | Swan River (Mannville) | 369.0 to 408.5 | 1200 to 1340 |
| 3 | Jurassic | 408.5 to 479.0 | 1340 to 1554 |
| 4 | Lodgepole | 479.0 to 538.3 | 1554 to 1734 |
| 5 | Bakken | 538.3 to 540.3 | 1734 to 1742 |
| 6 | Torquay | 540.3 to 570.3 | 1742 to NDE |
| 7 | Birdbear | 570.3 to NDE | NDE |

| | | | |
|---|---------|-----|-----|
| 8 | Duperow | NDE | NDE |
|---|---------|-----|-----|

Blood 148

| Item | Column 1 Zone | Column 2 | | |
|---|--------------------------------|--|---|--|
| | | Well Log Data | | |
| | | 00/6-35-5-25W4 Neutron-density Log (mKB) | 00/12-28-7-23W4 Neutron-density Log (mKB) | 00/6-24-8-23W4 Neutron-density Log (mKB) |
| 1 | Belly River and Pakowki | Surface to 1177.0 | Surface to 859.8 | Surface to 662.0 |
| 2 | Milk River | 1177.0 to 1278.3 | 859.8 to 975.3 | 662.0 to 783.0 |
| 3 | Colorado Shale | 1278.3 to 1629.0 | 975.3 to 1289.5 | 783.0 to 1086.5 |
| 4 | Second White Specks and Barons | 1629.0 to 1761.0 | 1289.5 to 1385.5 | 1086.5 to 1186.0 |
| 5 | Bow Island | 1761.0 to 1883.0 | 1385.5 to 1529.3 | 1186.0 to 1333.0 |
| 6 | Mannville | 1883.0 to 2090.0 | 1529.3 to 1727.5 | 1333.0 to NDE |
| 7 | Rierdon | 2090.0 to 2187.5 | 1727.5 to 1807.8 | NDE |
| 8 | Livingstone ^a | 2187.5 to 2435.5 | 1807.8 to 1994.3 | NDE |
| 9 | Banff and Exshaw ^b | 2435.5 to 2550.0 | 1994.3 to 2157.5 | NDE |
| 10 | Big Valley and Stettler | 2550.0 to 2720.5 | 2157.5 to 2309.0 | NDE |
| 11 | Winterburn | 2720.5 to NDE | 2309.0 to NDE | NDE |
| 12 | Woodbend | NDE | NDE | NDE |
| a Formation equivalence of Livingstone is Rundle | | | | |
| b Formation equivalence of Exshaw is Bakken | | | | |

Buck Lake 133C

| Item | Column 1 | Column 2 |
|------|--------------------------|--|
| | Zone | Well Log Data |
| | | 00/6-20-45-5W5 Induction Log (ft. KB) |
| 1 | Belly River and Lea Park | Surface to 4650 |
| 2 | Wapiabi | 4650 to 5167 |
| 3 | Cardium and Blackstone | 5167 to 5590 |
| 4 | Second White Specks | 5590 to 6173 |
| 5 | Viking and Joli Fou | 6173 to 6316 |
| 6 | Mannville | 6316 to 6855 |
| 7 | Nordegg | 6855 to 6922 |
| 8 | Pekisko | 6922 to 6982 |
| 9 | Banff | 6982 to NDE |

Carry The Kettle Nakoda First Nation 76-33

| Item | Column 1 | Column 2 |
|------|------------|---|
| | Zone | Well Log Data |
| | | 31/14-29-21-19W3 Induction Log (mKB) |
| 1 | Lea Park | Surface to 219.0 |
| 2 | Milk River | 219.0 to 397.6 |
| 3 | Colorado | 397.6 to NDE |

Cold Lake 149, 149A and 149B

| Item | Column 1 | Column 2 | |
|------|---------------------|---|--|
| | Zone | Well Log Data | |
| | | Cold Lake 149 00/2-13-61-3W4 Induction Log (mKB) | Cold Lake 149A and 149B 00/6-7-64-2W4 Induction Log (mKB) |
| 1 | Viking and Joli Fou | 265.0 to 304.0 | |
| 2 | Mannville | 304.0 to 495.3 | 305.0 to NDE |

| | | | |
|---|-----------------|--------------|-----|
| 3 | Beaverhill Lake | 495.3 to NDE | NDE |
|---|-----------------|--------------|-----|

Drift Pile River 150

| Item | Column 1 | Column 2 | |
|------|--------------------------------|--|--------------------------------------|
| | Zone | Well Log Data | |
| | | 00/10-6-74-12W5 Neutron-density Log (mKB) | 00/7-25-73-12W5 Density Log (mKB) |
| 1 | Second White Specks | 219.5 to 310.0 | |
| 2 | Shaftesbury | 310.0 to 418.0 | 222.5 to 420.5 |
| 3 | Peace River and Harmon | 418.0 to 450.4 | 420.5 to 451.3 |
| 4 | Spirit River | 450.4 to 707.5 | 451.3 to 739.0 |
| 5 | Bluesky and Gething | 707.5 to 764.0 | 739.0 to 788.0 |
| 6 | Shunda | 764.0 to 830.0 | 788.0 to 799.0 |
| 7 | Pekisko | 830.0 to NDE | 799.0 to 856.0 |
| 8 | Banff | NDE | 856.0 to 1081.5 |
| 9 | Wabamun | NDE | 1081.5 to 1350.0 |
| 10 | Winterburn | NDE | 1350.0 to 1483.0 |
| 11 | Ireton | NDE | 1483.0 to 1680.0 |
| 12 | Leduc | NDE | 1680.0 to 1805.0 |
| 13 | Beaverhill Lake | NDE | 1805.0 to 1926.5 |
| 14 | Slave Point and Fort Vermilion | NDE | 1926.5 to 1960.5 |
| 15 | Watt Mountain and Gilwood | NDE | 1960.5 to 1973.0 |
| 16 | Muskeg | NDE | 1973.0 to NDE |

Enoch Cree Nation 135

| Item | Column 1 | Column 2 |
|------|------------------------------------|--|
| | Zone | Well Log Data |
| | | 03/13-3-52-26W4 Induction Log (mKB) |
| 1 | Edmonton, Belly River and Lea Park | Surface to 691.0 |
| 2 | Wapiabi and Second White Specks | 691.0 to 1029.0 |
| 3 | Viking and Joli Fou | 1029.0 to 1076.0 |
| 4 | Mannville | 1076.0 to 1332.0 |
| 5 | Wabamun | 1332.0 to 1421.0 |
| 6 | Graminia, Calmar and Nisku | 1421.0 to 1502.0 |

| | | |
|---|--------------------------------|---------------|
| 7 | Ireton, Leduc and Cooking Lake | 1502.0 to NDE |
|---|--------------------------------|---------------|

Halfway River 168

| Item | Column 1 | Column 2 |
|------|-----------------------|---|
| | Zone | Well Log Data |
| | | 00/1-34-86-25W6 Sonic Log (mKB TVD) |
| 1 | Wilrich | Surface to 710.0 |
| 2 | Bluesky and Gething | 710.0 to 840.5 |
| 3 | Cadomin | 840.5 to 889.0 |
| 4 | Nikanassin | 889.0 to 994.0 |
| 5 | Fernie and Nordegg | 994.0 to 1112.0 |
| 6 | Pardonet and Baldonne | 1112.0 to 1150.0 |
| 7 | Charlie Lake | 1150.0 to 1466.5 |
| 8 | Halfway | 1466.5 to 1517.0 |
| 9 | Doig | 1517.0 to 1651.5 |
| 10 | Montney | 1651.5 to 1960.0 |
| 11 | Belloy | 1960.0 to NDE |

Heart Lake 167

| Item | Column 1 | Column 2 |
|------|---------------------|--|
| | Zone | Well Log Data |
| | | 00/13-18-70-10W4 Induction Log (mKB) |
| 1 | Viking and Joli Fou | 268.0 to 306.0 |
| 2 | Mannville | 306.0 to 502.0 |
| 3 | Woodbend | 502.0 to NDE |

Horse Lakes 152B

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data |
|----|--|------------------------------------|
| | | 00/8-27-73-12W6 Sonic Log (mKB) |
| 1 | Puskwaskau, Badheart, Cardium and Kaskapau | Surface to 928.0 |
| 2 | Doe Creek | 928.0 to 976.0 |
| 3 | Dunvegan | 976.0 to 1140.0 |
| 4 | Shaftesbury | 1140.0 to 1468.0 |
| 5 | Paddy | 1468.0 to 1496.0 |
| 6 | Cadotte and Harmon | 1496.0 to 1553.0 |
| 7 | Notikewin | 1553.0 to 1625.0 |
| 8 | Falher and Wilrich | 1625.0 to 1879.0 |
| 9 | Bluesky and Gething | 1879.0 to 2021.5 |
| 10 | Cadomin | 2021.5 to 2050.5 |
| 11 | Nikanassin | 2050.5 to 2157.5 |
| 12 | Fernie | 2157.5 to 2248.0 |
| 13 | Nordegg | 2248.0 to 2275.0 |
| 14 | Charlie Lake | 2275.0 to 2477.5 |
| 15 | Halfway | 2477.5 to 2504.0 |
| 16 | Doig | 2504.0 to 2553.0 |
| 17 | Montney | 2553.0 to NDE |

Kehewin 123

| Item | Column 1 | Column 2 | |
|------------------------------|---------------------|---|---|
| | Zone | Well Log Data | |
| | | 00/7-10-59-6W4 Induction Log (ft. KB) | 00/10-9-59-6W4 ^a Induction Log (mKB) |
| 1 | Viking and Joli Fou | 1053 to 1189 | |
| 2 | Mannville | 1189 to 1858 | 359.0 to NDE |
| 3 | Woodbend | 1858 to NDE | NDE |
| a Colony Channel Type Log | | | |

Little Pine 116 and Poundmaker 114

| Item | Column 1 | Column 2 | | |
|------------------------------|---------------------|--|---|---|
| | Zone | Well Log Data | | |
| | | 21/6-7-46-21W3 Induction Log (mKB) | 21/15-29-44-23W3 ^a Neutron-density Log (mKB) | 11/2-33-44-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | | 458.3 to 543.0 |
| 2 | Viking and Joli Fou | | | 543.0 to 585.0 |
| 3 | Mannville | 437.5 to 601.0 | 532.0 to ILND | 585.0 to 736.5 |
| 4 | Duperow | 601.0 to NDE | | 736.5 to NDE |
| a Colony Channel Type Log | | | | |

Loon Lake 235 and Swampy Lake 236

| Item | Column 1 | Column 2 |
|------|--------------------------------|---|
| | Zone | Well Log Data |
| | | 00/1-20-86-9W5 Neutron-density Log (mKB) |
| 1 | Clearwater | 315.0 to 373.0 |
| 2 | Banff | 373.0 to 494.0 |
| 3 | Wabamun | 494.0 to 777.0 |
| 4 | Winterburn | 777.0 to 963.0 |
| 5 | Ireton | 963.0 to 1233.0 |
| 6 | Beaverhill Lake | 1233.0 to 1343.7 |
| 7 | Slave Point and Fort Vermilion | 1343.7 to 1377.5 |
| 8 | Watt Mountain | 1377.5 to 1382.7 |
| 9 | Muskeg | 1382.7 to 1452.0 |
| 10 | Granite Wash | 1452.0 to 1487.0 |
| 11 | Precambrian | 1487.0 to NDE |

Makaoo 120, Onion Lake 119-1 and 119-2 and Seekaskootch 119

| Item | Column 1 | Column 2 |
|------|----------|----------|
| | | |

| | Zone | Well Log Data | | |
|---|----------------------|---|---|--|
| | | 11/14-8-56-27W3 Neutron-density Log (mKB TVD) | 00/11-23-54-1W4 Neutron-density Log (mKB) | 41/6-4-55-25W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | Surface to 322.0 | 346.0 to 428.0 |
| 2 | St. Walburg/La Biche | ILND to 433.5 | 322.0 to 365.0 | 428.0 to 478.8 |
| 3 | Viking | 433.5 to 474.4 | 365.0 to 402.0 | 478.8 to 515.4 |
| 4 | Mannville | 474.4 to 648.0 | 402.0 to 536.0 | 515.4 to ILND |
| 5 | Duperow | 648.0 to NDE | 536.0 to NDE | |

Ministikwan 161 and Makwa Lake 129

| Item | Column 1 Zone | Column 2 | |
|------|--|---|---|
| | | Well Log Data | |
| | | 41/8-25-58-25W3 Neutron-density Log (mKB) | 31/8-34-58-25W3 Neutron-density Log (mKB) |
| 1 | Second White Specks, St. Walburg and Viking | 219.0 to 346.5 | 254.6 to 387.6 |
| 2 | Mannville | 346.5 to NDE | 387.6 to 627.0 |
| 3 | Duperow | NDE | 627.0 to NDE |

Nekaneet Cree Nation

| Item | Column 1 Zone | Column 2 |
|------|-----------------------------|--|
| | | Well Log Data |
| | | 21/8-32-7-28W3 Neutron-density Log (mKB) |
| 1 | Belly River | Surface to 625.4 |
| 2 | Lea Park and Ribstone Creek | 625.4 to 807.0 |
| 3 | Milk River | 807.0 to 946.3 |
| 4 | Medicine Hat | 946.3 to 1107.0 |
| 5 | Second White Specks | 1107.0 to 1272.0 |
| 6 | Viking and Joli Fou | 1272.0 to 1390.3 |
| 7 | Mannville | 1390.3 to 1479.3 |
| 8 | Vanguard | 1479.3 to 1523.0 |

| | | |
|----|---------------------------|------------------|
| 9 | Shaunavon and Gravelbourg | 1523.0 to 1574.5 |
| 10 | Mission Canyon | 1574.5 to NDE |

Ocean Man 69, 69A, 69B, 69C, 69D, 69E, 69F, 69G, 69H and 69I, Ocean Man Indian Reserve No. 69X, Ocean Man No. 69N, Ocean Man No. 69S, Ocean Man No. 69U and Flying Dust First Nation 105H, 105I, 105L and 105O

| Item | Column 1 | Column 2 | |
|------|-------------------|--|-----------------------------------|
| | Zone | Well Log Data | |
| | | 31/11-11-10-8W2 Neutron-density Log (mKB) | 01/9-30-10-7W2 Sonic Log (mKB) |
| 1 | Gravelbourg | | ILND to 1102.0 |
| 2 | Watrous | | 1102.0 to 1184.4 |
| 3 | Alida and Tilston | | 1184.4 to NDE |
| 4 | Souris Valley | ILND to 1433.5 | NDE |
| 5 | Bakken | 1433.5 to 1451.0 | NDE |
| 6 | Torquay | 1451.0 to NDE | NDE |

Pigeon Lake 138A^a

| Item | Column 1 | Column 2 | | | |
|------|------------------------------------|--|---|--|---|
| | Zone | Well Log Data | | | |
| | | 00/12-36-46-28W4 Gamma Ray-neutron Log (ft. KB) | 04/15-24-46-28W4 Neutron-density Log (mKB) | 00/9-18-46-27W4 Electric Log (ft. KB) | 00/12-20-47-27W4 Electric Log (ft. KB) |
| 1 | Edmonton, Belly River and Lea Park | | Surface to 1036.0 | | |
| 2 | Wapiabi | | 1036.0 to 1197.0 | | |
| 3 | Cardium and Blackstone | | 1197.0 to 1281.3 | 3850 to 4020 ^b | |
| 4 | Second White Specks | | 1281.3 to 1423.7 | | |
| 5 | Viking and Joli Fou | | 1423.7 to 1472.0 | | |

| | | | | | |
|----|------------------|--------------|------------------|--|---------------------------|
| 6 | Upper Mannville | | 1472.0 to 1610.3 | | |
| 7 | Lower Mannville | | 1610.3 to NDE | | |
| 8 | Wabamun | 5591 to 6295 | | | |
| 9 | Calmar and Nisku | 6295 to 6492 | | | |
| 10 | Ireton | 6492 to 6670 | | | |
| 11 | Leduc | 6670 to NDE | | | 6434 to 7210 ^c |

a

The First Nation lands are located at the Banff subcrop limit. Any Banff and Exshaw zone remnants will be earned with the Lower Mannville zone.

b

Bonnie Glen Cardium Unit No. 1: definition of unitized zone

c

Bonnie Glen D-3A Gas Cap Unit: definition of unitized zone

Puskiakiwenin 122 and Unipouheos 121

| Item | Column 1 Zone | Column 2 Well Log Data | | | |
|-----------------------------------|----------------------|--|--|---|--|
| | | 00/11-21-56-3W4 Induction Log (mKB) | 00/6-16-57-3W4 ^a Induction Log (mKB) | 00/12-26-57-4W4 ^a Induction Log (mKB TVD) | 00/8-16-58-3W4 Induction Log (mKB) |
| | | 1 | Viking and Joli Fou | 371.0 to 411.5 | |
| 2 | Mannville | 411.5 to 546.5 | 409.5 to NDE | 416.5 to NDE | 403.0 to 575.0 |
| 3 | Woodbend | 546.5 to NDE | NDE | NDE | 575.0 to NDE |
| a McLaren Channel Type Log | | | | | |

Red Pheasant 108

| Item | Column 1 | Column 2 | | |
|------|---------------------|---|--|--|
| | | Well Log Data | | |
| | Zone | 11/15-14-61-26W3 Neutron-density Log (mKB) | 11/11-5-60-23W3 Neutron-density Log (mKB) | 41/7-15-59-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | 160.8 to 239.7 | 176.0 to 253.0 |
| 2 | St. Walburg | | 239.7 to 279.0 | 253.0 to 300.0 |
| 3 | Viking | | 279.0 to 324.0 | 300.0 to 339.5 |
| 4 | Mannville | 292.3 to ILND | 324.0 to 586.0 | 339.5 to 576.0 |
| 5 | Souris River | | 586.0 to NDE | 576.0 to NDE |

Saddle Lake 125

| Item | Column 1 | Column 2 | |
|--|---------------------|--|---|
| | | Well Log Data | |
| | Zone | 00/11-32-57-11W4 Induction Log (ft. KB) | 02/6-29-57-13W4 ^a Induction Log (mKB) |
| 1 | Second White Specks | | 393.0 to 491.0 |
| 2 | Viking and Joli Fou | 1412 to 1542 | 491.0 to 528.3 |
| 3 | Mannville | 1542 to 2132 | 528.3 to 710.7 |
| 4 | Ireton | 2132 to NDE | 710.7 to 872.3 |
| 5 | Cooking Lake | NDE | 872.3 to 934.0 |
| 6 | Beaverhill Lake | NDE | 934.0 to NDE |
| a Mitsue Gilwood Sand Unit No. 1: definition of unitized zone | | | |

Samson 137 and 137A, Louis Bull 138B, Ermineskin 138 and Montana 139

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data | | | |
|----|------------------------------------|---------------------------|-------------------------------|---------------------------|------------------------------|
| | | 00/6-17-46-24W4 | 00/9-35-44-25W4 | 00/14-32-44-25W4 | 00/10-13-44-23W4 |
| | | Neutron-density Log (mKB) | Neutron-density Log (mKB TVD) | Neutron-density Log (mKB) | Neutron-density Log (ft. KB) |
| 1 | Edmonton, Belly River and Lea Park | Surface to 831.0 | Surface to 944.0 | Surface to 925.0 | Surface to 2707 |
| 2 | Wapiabi | 831.0 to 1067.0 | 944.0 to 1183.3 | 925.0 to 1166.0 | 2707 to 3466 |
| 3 | Second White Specks | 1067.0 to 1199.0 | 1183.3 to 1311.0 | 1166.0 to 1295.3 | 3466 to 3866 |
| 4 | Viking and Joli Fou | 1199.0 to 1251.5 | 1311.0 to 1363.6 | 1295.3 to 1350.7 | 3866 to 4040 |
| 5 | Mannville | 1251.5 to 1439.3 | 1363.6 to 1558.2 | 1350.7 to 1530.0 | 4040 to 4815 |
| 6 | Banff | 1439.3 to 1451.0 | NP | 1530.0 to 1543.0 | NP |
| 7 | Wabamun | 1451.0 to 1613.7 | 1558.2 to 1772.6 | 1543.0 to 1763.0 | 4815 to NDE |
| 8 | Calmar and Nisku | 1613.7 to 1665.5 | 1772.6 to NDE | 1763.0 to 1818.3 | NDE |
| 9 | Ireton | 1665.5 to 1904.0 | NDE | 1818.3 to NDE | NDE |
| 10 | Cooking Lake | 1904.0 to NDE | NDE | NDE | NDE |

Sawridge 150G

| Item | Column 1 Zone | Column 2 | |
|------|----------------------|-------------------------------------|---|
| | | Well Log Data | |
| | | 00/2-6-73-5W5 Sonic Log (ft. KB) | 00/4-19-71-4W5 ^a Induction Log (ft. KB) |
| 1 | Colorado | Surface to 1248 | |
| 2 | Viking | 1248 to 1334 | |
| 3 | Mannville | 1334 to 2240 | |
| 4 | Banff and Exshaw | 2240 to 2440 | |
| 5 | Wabamun | 2440 to 3336 | |

| | | | |
|---|-----------------|--------------|---------------------------|
| 6 | Winterburn | 3336 to 3647 | |
| 7 | Ireton | 3647 to 4888 | |
| 8 | Waterways | 4888 to 5450 | |
| 9 | Slave Point | 5450 to 5496 | |
| 10 | Watt Mountain | 5496 to 5578 | |
| 11 | Gilwood | 5578 to 5860 | 6112 to 6146 ^a |
| 12 | Muskeg | 5860 to 5920 | |
| 13 | Keg River | 5920 to 6321 | |
| 14 | Lower Elk Point | 6321 to NDE | |
| a | | | |
| Mitsue Gilwood Sand Unit No. 1: definition of unitized zone | | | |

Sharphead 141

| Item | Column 1 | Column 2 | |
|------|---------------------------------|---------------------|------------------|
| | | Well Log Data | |
| | | 00/6-1-43-26W4 | 00/14-2-43-26W4 |
| | Zone | Induction Log (mKB) | Sonic Log (mKB) |
| 1 | Horseshoe Canyon | | Surface to 552.0 |
| 2 | Belly River and Lea Park | | 552.0 to 1016.0 |
| 3 | Wapiabi, Cardium and Blackstone | | 1016.0 to 1270.0 |
| 4 | Second White Specks | ILND to 1384.5 | 1270.0 to 1405.0 |
| 5 | Viking and Joli Fou | 1384.5 to 1436.0 | 1405.0 to NDE |
| 6 | Mannville | 1436.0 to 1625.0 | NDE |
| 7 | Banff and Exshaw | 1625.0 to 1652.5 | NDE |
| 8 | Wabamun | 1652.5 to NDE | NDE |

Siksika 146

| Item | Column 1 | Column 2 | | | | |
|------|--|---------------------------|---------------------------|---------------------------|------------------|------------------|
| | | Well Log Data | | | | |
| | | 00/14-3-23-23W4 | 00/5-19-22-23W4 | 00/4-4-21-20W4 | 00/2-29-20-20W4 | 00/6-20-20-19W4 |
| Zone | Sonic Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Sonic Log (mKB) | |
| 1 | Edmonton, Belly River and Pakowki | Surface to 854.5 | Surface to 810.0 | Surface to 593.0 | Surface to 630.0 | Surface to 656.0 |
| 2 | Milk River | 854.5 to 937.5 | 810.0 to 892.0 | 593.0 to 686.0 | 630.0 to 722.5 | 656.0 to 738.5 |
| 3 | Upper Colorado, including Medicine Hat | 937.5 to 1242.0 | 892.0 to 1200.0 | 686.0 to 977.5 | 722.5 to 1018.6 | 738.5 to 1026.6 |

| | | | | | | |
|----|---------------------|------------------|------------------|------------------|------------------|------------------|
| 4 | Second White Specks | 1242.0 to 1370.7 | 1200.0 to 1330.0 | 977.5 to 1095.4 | 1018.6 to 1144.0 | 1026.6 to 1147.7 |
| 5 | Viking | 1370.7 to 1475.0 | 1330.0 to 1441.5 | 1095.4 to 1203.7 | 1144.0 to 1248.5 | 1147.7 to 1250.0 |
| 6 | Mannville | 1475.0 to 1647.0 | 1441.5 to 1595.5 | 1203.7 to 1350.0 | 1248.5 to 1431.3 | 1250.0 to 1413.7 |
| 7 | Pekisko | 1647.0 to 1752.0 | 1595.5 to NDE | 1350.0 to NDE | 1431.3 to 1477.3 | 1413.7 to 1476.3 |
| 8 | Banff and Exshaw | 1752.0 to 1896.0 | NDE | NDE | 1477.3 to 1617.0 | 1476.3 to 1630.0 |
| 9 | Wabamun | 1896.0 to 2065.7 | NDE | NDE | 1617.0 to 1753.0 | 1630.0 to 1755.0 |
| 10 | Calmar and Nisku | 2065.7 to 2096.0 | NDE | NDE | 1753.0 to 1796.5 | 1755.0 to 1793.7 |
| 11 | Ireton and Leduc | 2096.0 to 2312.0 | NDE | NDE | 1796.5 to NDE | 1793.7 to NDE |

| | | | | | | |
|----|-----------------|------------------|-----|-----|-----|-----|
| 12 | Cooking Lake | 2312.0 to 2365.0 | NDE | NDE | NDE | NDE |
| 13 | Beaverhill Lake | 2365.0 to 2514.5 | NDE | NDE | NDE | NDE |
| 14 | Elk Point | 2514.5 to NDE | NDE | NDE | NDE | NDE |

Stoney 142-143-144 and Tsuut'ina Nation 145

| Item | Column 1 | Column 2 | | | |
|------|------------------------|----------------------|-------------------------------|------------------------------------|-----------------------------|
| | | Well Log Data | | | |
| | | 00/8-13-27-3W5 | 00/2-33-25-6W5 ^a | 00/10-34-24-6W5(5-34) ^b | 00/5-24-27-6W5 ^c |
| Zone | Induction Log (mKB) | Neutron Log (ft. KB) | Sonic Log (ft. KB) | Sonic Log (ft. KB) | |
| 1 | Belly River | Surface to 1743.0 | | | |
| 2 | Wapiabi | 1743.0 to 2121.0 | | | |
| 3 | Cardium and Blackstone | 2121.0 to 2418.0 | | | |
| 4 | Viking and Joli Fou | 2418.0 to 2498.0 | | | |
| 5 | Blairmore ^d | 2498.0 to 2729.0 | | | |
| 6 | Mount Head | NP | | | |
| 7 | Turner Valley | 2729.0 to 2775.0 | 11,154 to 11,485 ^a | 11,920 to 12,280 ^b | 9978 to 10,198 ^c |
| 8 | Shunda | 2775.0 to 2828.0 | | | |
| 9 | Pekisko | 2828.0 to 2929.0 | | | |

| | | | | | |
|----|--|------------------|--|--|--|
| 10 | Banff and Exshaw | 2929.0 to 3079.0 | | | |
| 11 | Wabamun | 3079.0 to 3318.0 | | | |
| 12 | Winterburn | 3318.0 to 3356.0 | | | |
| 13 | Ireton | 3356.0 to 3368.0 | | | |
| 14 | Leduc | 3368.0 to 3599.0 | | | |
| 15 | Cooking Lake | 3599.0 to NDE | | | |
| a | Jumping Pound West Unit No. 1: definition of unitized zone | | | | |
| b | Jumping Pound West Unit No. 2: definition of unitized zone | | | | |
| c | Wildcat Hills Unit: definition of unitized zone | | | | |
| d | Includes any Jurassic zone remnant: Fernie, Nordegg | | | | |

Sturgeon Lake 154

| Item | Column 1 | Column 2 | |
|------|--------------------------------|--------------------|--------------------|
| | | Well Log Data | |
| | | 00/9-18-70-23W5 | 00/4-25-70-23W5 |
| | Zone | Sonic Log (ft. KB) | Sonic Log (ft. KB) |
| 1 | Wapiabi, Badheart and Kaskapau | Surface to 2721 | Surface to 2605 |
| 2 | Dunvegan and Shaftesbury | 2721 to 3467 | 2605 to 3327 |
| 3 | Peace River and Harmon | 3467 to 3623 | 3327 to 3482 |
| 4 | Spirit River | 3623 to 4573 | 3482 to 4440 |
| 5 | Bluesky and Gething | 4573 to 4805 | 4440 to 4586 |
| 6 | Cadomin | 4805 to 4890 | 4586 to 4658 |
| 7 | Fernie and Nordegg | 4890 to 5092 | 4658 to 4949 |
| 8 | Montney | 5092 to 5459 | 4949 to 5288 |

| | | | |
|----|--------------------------|--------------|--------------|
| 9 | Belloy | 5459 to 5590 | 5288 to 5373 |
| 10 | Debolt | 5590 to 6186 | 5373 to 5997 |
| 11 | Shunda | 6186 to 6473 | 5997 to 6290 |
| 12 | Pekisko | 6473 to 6674 | 6290 to 6486 |
| 13 | Banff and Exshaw | 6674 to 7397 | 6486 to 7228 |
| 14 | Wabamun | 7397 to 8184 | 7228 to 8021 |
| 15 | Winterburn | 8184 to 8496 | 8021 to 8422 |
| 16 | Ireton and Leduc | 8496 to NDE | 8422 to 9316 |
| 17 | Beaverhill Lake | NDE | 9316 to 9610 |
| 18 | Slave Point | NDE | 9610 to 9660 |
| 19 | Gilwood and Granite Wash | NDE | 9660 to 9730 |
| 20 | Precambrian | NDE | 9730 to NDE |

Sucker Creek 150A

| Item | Column 1 | Column 2 |
|------|---------------------------------|-------------------------------------|
| | | Well Log Data |
| | Zone | 00/16-36-74-15W5 Sonic Log (mKB) |
| 1 | Shaftesbury | Surface to 428 |
| 2 | Paddy, Cadotte and Harmon | 428 to 463 |
| 3 | Spirit River | 463 to 737 |
| 4 | Bluesky and Gething | 737 to 768 |
| 5 | Debolt | 768 to 863 |
| 6 | Shunda | 863 to 976 |
| 7 | Pekisko | 976 to 1031 |
| 8 | Banff | 1031 to 1265 |
| 9 | Wabamun | 1265 to 1535 |
| 10 | Winterburn | 1535 to 1657 |
| 11 | Woodbend | 1657 to 1956 |
| 12 | Beaverhill Lake and Slave Point | 1956 to 2084 |
| 13 | Gilwood and Watt Mountain | 2084 to 2113 |
| 14 | Granite Wash | 2113 to 2152 |
| 15 | Precambrian | 2152 to NDE |

Sunchild 202 and O'Chiese 203

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data | | |
|----|-----------------------------------|---------------------------|---------------------------|---------------------------|
| | | 00/4-11-44-10W5 | 00/10-15-43-10W5 | 00/6-30-42-9W5 |
| | | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) |
| 1 | Edmonton and Belly River | Surface to 1765.0 | Surface to 1742.0 | Surface to 1700.0 |
| 2 | Upper Colorado | 1765.0 to 2120.0 | 1742.0 to 2126.0 | 1700.0 to 2062.0 |
| 3 | Cardium | 2120.0 to 2186.0 | 2126.0 to 2197.7 | 2062.0 to 2134.7 |
| 4 | Lower Colorado | 2186.0 to 2522.5 | 2197.7 to 2499.0 | 2134.7 to 2451.9 |
| 5 | Viking | 2522.5 to 2550.0 | 2499.0 to 2526.0 | 2451.9 to 2478.6 |
| 6 | Upper Mannville | 2550.0 to 2720.0 | 2526.0 to 2678.0 | 2478.6 to 2627.0 |
| 7 | Lower Mannville | 2720.0 to 2791.4 | 2678.0 to 2757.0 | 2627.0 to 2702.5 |
| 8 | Fernie, Rock Creek and Poker Chip | 2791.4 to 2833.0 | 2757.0 to 2794.8 | 2702.5 to 2741.8 |
| 9 | Nordegg | 2833.0 to 2861.0 | 2794.8 to 2824.0 | 2741.8 to 2771.0 |
| 10 | Shunda | 2861.0 to 2892.2 | 2824.0 to 2854.8 | 2771.0 to 2804.2 |
| 11 | Pekisko | 2892.2 to 2926.0 | 2854.8 to 2905.0 | 2804.2 to 2839.0 |
| 12 | Banff and Exshaw | 2926.0 to NDE | 2905.0 to NDE | 2839.0 to 3021.3 |
| 13 | Wabamun | NDE | NDE | 3021.3 to NDE |

Thunderchild 115K and Thunderchild First Nation 115B, 115C, 115D, 115E, 115F, 115G, 115H, 115I, 115J, 115L, 115M, 115N, 115Q, 115R, 115S, 115T, 115U, 115V, 115W, 115X and 115Z

| Item | Column 1 | Column 2 | |
|------|-------------------------------|---------------------------|-----------------|
| | | Well Log Data | |
| | | 91/5-25-59-23W3 | 21/16-3-52-20W3 |
| Zone | Neutron-density Log (mKB TVD) | Neutron-density Log (mKB) | |
| 1 | St. Walburg and Viking | 231.6 to 320.8 | |
| 2 | Mannville | 320.8 to NDE | 454.0 to 672.0 |
| 3 | Devonian | NDE | 672.0 to NDE |

Utikoomak Lake 155

| Item | Column 1 | Column 2 | | |
|------|-----------------|-----------------------|-----------------------|-------------|
| | | Well Log Data | | |
| | | 00/6-30-80-9W5 | 12-28-80-9W5 | 2-21-79-8W5 |
| Zone | Sonic Log (mKB) | Electric Log (ft. KB) | Electric Log (ft. KB) | |

| | | | | |
|----|--|------------------|---------------------------|---------------------------|
| 1 | Peace River and Spirit River | 315.5 to 558.7 | | |
| 2 | Shunda and Pekisko | 558.7 to 607.0 | | |
| 3 | Banff and Exshaw | 607.0 to 884.0 | | |
| 4 | Wabamun | 884.0 to 1125.0 | | |
| 5 | Winterburn | 1125.0 to 1267.0 | | |
| 6 | Ireton | 1267.0 to 1568.0 | | |
| 7 | Beaverhill Lake | 1568.0 to 1686.0 | | |
| 8 | Slave Point and Fort Vermilion | 1686.0 to 1718.0 | | |
| 9 | Watt Mountain and Gilwood | 1718.0 to 1724.0 | 5552 to 5576 ^a | 5689 to 5771 ^b |
| 10 | Muskeg, Keg River and Granite Wash | 1724.0 to 1755.0 | | |
| 11 | Precambrian | 1755.0 to NDE | | |
| a | West Nipisi Unit No. 1: definition of unitized zone | | | |
| b | Nipisi Gilwood Unit No. 1: definition of unitized zone | | | |

Wabamun 133A

| Item | Column 1 | Column 2 |
|------|----------------------------|------------------|
| | | Well Log Data |
| | | Zone |
| 1 | Belly River | Surface to 710.0 |
| 2 | Lea Park | 710.0 to 865.0 |
| 3 | Wapiabi | 865.0 to 1016.0 |
| 4 | Cardium and Lower Colorado | 1016.0 to 1245.0 |
| 5 | Viking and Joli Fou | 1245.0 to 1295.5 |
| 6 | Mannville | 1295.5 to 1474.0 |
| 7 | Banff and Exshaw | 1474.0 to 1631.0 |

| | | |
|----|--|------------------|
| 8 | Wabamun | 1631.0 to 1790.0 |
| 9 | Graminia, Blue Ridge, Calmar and Nisku | 1790.0 to 1877.0 |
| 10 | Ireton | 1877.0 to NDE |

Wabasca 166, 166A, 166B, 166C and 166D

| Item | Column 1 | Column 2 |
|------|----------------------|-----------------------------------|
| | | Well Log Data 00/11-10-81-25W4 |
| | Zone | Induction Log (ft. KB) |
| 1 | Pelican and Joli Fou | 720 to 824 |
| 2 | Mannville | 824 to 1608 |
| 3 | Wabamun | 1608 to 1677 |
| 4 | Winterburn | 1677 to NDE |

White Bear 70

| Item | Column 1 | Column 2 |
|------|---------------------------|---------------------------------|
| | | Well Log Data 01/5-15-10-2W2 |
| | Zone | Neutron Log (ft. KB) |
| 1 | Viking | 2670 to 2843 |
| 2 | Mannville | 2843 to 3200 |
| 3 | Gravelbourg and Watrous | 3200 to 3902 |
| 4 | Tilston and Souris Valley | 3902 to 4380 |
| 5 | Bakken | 4380 to 4420 |
| 6 | Torquay | 4420 to 4590 |
| 7 | Birdbear | 4590 to 4690 |
| 8 | Duperow | 4690 to 5214 |
| 9 | Souris River | 5214 to 5593 |
| 10 | Dawson Bay | 5593 to 5780 |
| 11 | Prairie Evaporite | 5780 to NDE |

White Fish Lake 128

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data | |
|---|-----------------------------|-------------------------------|-------------------------------|
| | | 00/14-11-62-13W4 ^a | 00/10-16-62-12W4 ^b |
| | | Induction Log (mKB) | Induction Log (mKB) |
| 1 | Viking and Joli Fou | 347.6 to 386.0 | 347.0 to 383.5 |
| 2 | Mannville | 386.0 to NDE | 383.5 to 539.5 |
| 3 | Woodbend | | 539.5 to NDE |
| a | Colony Channel Type Log | | |
| b | Non-Colony Channel Type Log | | |

Woodland Cree 226, 227 and 228

| Item | Column 1 | Column 2 | | |
|------|----------------------------|------------------|---------------------------|-----------------------------|
| | | Well Log Data | | |
| | | 00/6-18-87-18W5 | 00/7-24-86-14W5 | 00/9-34-86-17W5 |
| Zone | Sonic Log (mKB) | Sonic Log (mKB) | Neutron-density Log (mKB) | |
| 1 | Bullhead | Surface to 494.0 | Surface to 475.0 | Surface to 498.0 |
| 2 | Debolt, Shunda and Pekisko | 494.0 to 753.0 | 475.0 to 518.5 | 498.0 to 504.0 ^a |
| 3 | Banff and Exshaw | 753.0 to 1051.0 | 518.5 to 823.0 | |
| 4 | Wabamun | 1051.0 to 1312.0 | 823.0 to 1078.0 | |
| 5 | Winterburn | 1312.0 to 1397.0 | 1078.0 to 1205.5 | |
| 6 | Ireton | 1397.0 to 1662.0 | 1205.5 to 1509.0 | |
| 7 | Beaverhill Lake | 1662.0 to 1700.0 | 1509.0 to 1566.0 | |
| 8 | Slave Point | 1700.0 to NDE | 1566.0 to 1613.5 | |
| 9 | Granite Wash | | 1613.5 to 1614.0 | |
| 10 | Precambrian | | 1614.0 to NDE | |
| a | | | | |

SCHEDULE 4

(Subsections 1(1) and 63(1))

Zones — Continuation

Definitions

1 The following definitions apply in this Schedule.

- **ILND** means the internal limit of a zone, whether upper or lower, that is not defined. (*LIND*)
- **KB** means kelly bushing, which serves as the point on the rotary drilling table from which downhole well log depths are measured. (*FE*)
- **NDE** means not deep enough and, in relation to a reference well, means that the well was not drilled to a depth that was sufficient to penetrate the upper or lower limit of a particular zone. (*FI*)
- **NP** means not present and, in relation to a zone, means that the zone is not present at the location where the reference well was drilled. (*NP*)
- **TVD** means true vertical depth. (*PVR*)

Zones

2 (1) In the case of a contract that is continued on the basis of any of paragraphs 63(1)(a) to (g) or under section 66 of these Regulations, for each of the First Nation lands set out in this Schedule, the zones with respect to which continuation may be sought are the zones set out in column 1 of the table that correspond to the well log data set out in column 2.

Multiple logs

(2) If there is more than one set of well log data set out in column 2 for a zone, the set derived from the reference well that is nearest to the relevant spacing unit must be used to determine the zones that may be continued.

Unidentified zone

3 If the zone with respect to which the contract may be continued is not identified in a table to this Schedule, the Minister must determine the upper and lower limits of the relevant zone, based on a review of well log data that relate to wells in the vicinity of the relevant spacing unit and on any other well log data that are available and relate to lands in the vicinity.

Alexander 134

| Item | Column 1 | Column 2 Well Log Data |
|------|----------|---------------------------|
|------|----------|---------------------------|

| | | 00/11-11-56-27W4 ^a | 02/6-15-56-27W4 | 00/8-1-56-27W4 |
|---|---|-------------------------------|---------------------|-------------------|
| | Zone | Electric Log (ft. KB) | Induction Log (mKB) | Density Log (mKB) |
| 1 | Edmonton and Belly River | | Surface to 485.0 | |
| 2 | Lea Park | | 485.0 to 615.0 | |
| 3 | Wapiabi | | 615.0 to 805.5 | |
| 4 | Second White Specks | | 805.5 to 939.0 | |
| 5 | Viking | 3090 to 3250 | 939.0 to 989.0 | 934.5 to 979.5 |
| 6 | Joli Fou | 3250 to 3293 | 989.0 to 997.0 | 979.5 to 992.0 |
| 7 | Mannville, including Upper Mannville and Glauconite | 3293 to 3790 | 997.0 to 1150.5 | 992.0 to 1141.5 |
| 8 | Ostracod | 3790 to 3836 | 1150.5 to 1163.5 | 1141.5 to 1155.0 |
| 9 | Basal Quartz "A" | 3836 to 3852 ^a | 1163.5 to 1172.0 | 1155.0 to 1161.0 |
| 10 | Lower Basal Quartz | 3852 to 4112 | 1172.0 to NDE | 1161.0 to 1218.0 |
| 11 | Wabamun | 4112 to NDE | NDE | 1218.0 to 1384.5 |
| 12 | Calmar and Nisku | NDE | NDE | 1384.5 to 1393.5 |
| 13 | Ireton | NDE | NDE | NDE |
| 14 | Cooking Lake | NDE | NDE | NDE |
| a | | | | |
| Alexander Basal Quartz Gas Unit (Basal Quartz "A" gas): definition of unitized zone | | | | |

Alexander 134A

| Item | Column 1 | Column 2 | |
|------|--------------------------|---|--|
| | | Well Log Data | |
| | Zone | 00/13-22-61-17W5 Neutron-density Log (mKB TVD) | 00/3-32-63-22W5 Neutron-density Log (mKB) |
| 1 | Edmonton and Belly River | Surface to 1055.6 | |
| 2 | Lea Park | 1055.6 to 1147.7 | |
| 3 | Wapiabi and Cardium | 1147.7 to 1406.5 | |

| | | | |
|----|----------------------------------|------------------|------------------|
| 4 | Second White Specks | 1406.5 to 1663.7 | |
| 5 | Viking | 1663.7 to 1682.0 | |
| 6 | Joli Fou | 1682.0 to 1688.3 | |
| 7 | Upper Mannville | 1688.3 to 1904.2 | |
| 8 | Bluesky | 1904.2 to 1921.9 | |
| 9 | Gething | 1921.9 to 1948.1 | |
| 10 | Fernie and Nordegg | 1948.1 to 2024.3 | |
| 11 | Montney | 2024.3 to 2048.3 | |
| 12 | Belloy | 2048.3 to 2064.5 | |
| 13 | Shunda | 2064.5 to 2124.4 | |
| 14 | Pekisko | 2124.4 to 2170.0 | |
| 15 | Banff and Exshaw | 2170.0 to NDE | 2472.0 to 2668.0 |
| 16 | Wabamun | | 2668.0 to 2893.0 |
| 17 | Graminia and Blue Ridge | | 2893.0 to 2946.0 |
| 18 | Nisku | | 2946.0 to 3100.0 |
| 19 | Ireton | | 3100.0 to 3273.0 |
| 20 | Duvernay | | 3273.0 to 3334.8 |
| 21 | Cooking Lake and Beaverhill Lake | | 3334.8 to 3385.0 |
| 22 | Swan Hills | | 3385.0 to 3422.0 |
| 23 | Watt Mountain | | 3422.0 to NDE |

Alexis 133

| Item | Column 1 | Column 2 |
|------|--------------------------|------------------|
| | | Well Log Data |
| | | Zone |
| 1 | Edmonton and Belly River | Surface to 617.0 |
| 2 | Lea Park | 617.0 to 760.0 |

| | | |
|----|---------------------|------------------|
| 3 | Wapiabi | 760.0 to 960.5 |
| 4 | Second White Specks | 960.5 to 1125.0 |
| 5 | Viking | 1125.0 to 1158.5 |
| 6 | Joli Fou | 1158.5 to 1170.0 |
| 7 | Upper Mannville | 1170.0 to 1319.0 |
| 8 | Lower Mannville | 1319.0 to 1328.5 |
| 9 | Banff | 1328.5 to 1478.0 |
| 10 | Exshaw | 1478.0 to 1480.5 |
| 11 | Wabamun | 1480.5 to 1661.0 |
| 12 | Winterburn | 1661.0 to 1707.5 |
| 13 | Ireton | 1707.5 to NDE |
| 14 | Cooking Lake | NDE |

Alexis Whitecourt 232

| Item | Column 1 | Column 2 |
|------|--------------------------|---------------------------------------|
| | | Well Log Data |
| | Zone | 00/2-31-60-12W5 Acoustic Log (mKB) |
| 1 | Edmonton and Belly River | Surface to 837.0 |
| 2 | Lea Park | 837.0 to 936.5 |
| 3 | Wapiabi | 936.5 to 1169.0 |
| 4 | Second White Specks | 1169.0 to 1381.3 |
| 5 | Viking | 1381.3 to 1409.0 |
| 6 | Joli Fou | 1409.0 to 1415.0 |
| 7 | Upper Mannville | 1415.0 to 1606.0 |
| 8 | Lower Mannville | 1606.0 to 1655.0 |
| 9 | Nordegg | 1655.0 to 1691.0 |
| 10 | Shunda | 1691.0 to 1704.0 |
| 11 | Pekisko | 1704.0 to 1737.0 |
| 12 | Banff | 1737.0 to 1917.9 |
| 13 | Exshaw | 1917.9 to 1920.5 |
| 14 | Wabamun | 1920.5 to 2137.0 |
| 15 | Winterburn | 2137.0 to 2234.0 |
| 16 | Ireton | 2234.0 to 2535.0 |
| 17 | Duvernay | 2535.0 to 2575.5 |
| 18 | Swan Hills | 2575.5 to 2711.0 |
| 19 | Watt Mountain | 2711.0 to NDE |

Amber River 211, Hay Lake 209 and Zama Lake 210

| Item | Column 1 | Column 2 | | | |
|------|----------------------------------|---------------------------|----------------------|---------------------|------------------|
| | | Well Log Data | | | |
| | | Amber River | Hay Lake | Hay Lake | Zama Lake |
| Zone | 00/11-20-114-6W6 | 00/4-1-112-5W6 | 00/6-28-112-5W6 | 00/2-12-112-8W6 | |
| | Sonic Log (mKB) | Neutron-density Log (mKB) | Density Log (ft. KB) | Induction Log (mKB) | |
| 1 | Wilrich | Surface to 249.0 | Surface to 242.0 | | Surface to 279.0 |
| 2 | Bluesky and Gething | 249.0 to 261.0 | 242.0 to 261.5 | | 279.0 to 296.0 |
| 3 | Banff | 261.0 to 344.0 | 261.5 to 318.7 | | 296.0 to 441.0 |
| 4 | Wabamun | 344.0 to 548.0 | 318.7 to NDE | ILND to 1712 | 441.0 to 633.0 |
| 5 | Trout River, Kakisa and Redknife | 548.0 to 697.0 | | 1712 to 2177 | 633.0 to 785.5 |
| 6 | Jean Marie | 697.0 to 710.0 | | 2177 to 2220 | 785.5 to 797.0 |
| 7 | Fort Simpson | 710.0 to 1232.7 | | 2220 to 3842 | 797.0 to 1305.5 |
| 8 | Muskwa and Waterways | 1232.7 to 1310.7 | | 3842 to 4192 | 1305.5 to 1394.0 |
| 9 | Slave Point | 1310.7 to 1387.0 | | 4192 to 4396 | 1394.0 to 1478.0 |
| 10 | Watt Mountain | 1387.0 to 1389.0 | | 4396 to 4422 | 1478.0 to 1481.0 |
| 11 | Sulphur Point | 1389.0 to 1422.0 | | 4422 to 4525 | 1481.0 to 1524.0 |
| 12 | Muskeg and Keg River | 1422.0 to 1680.0 | | 4525 to 5468 | 1524.0 to 1780.0 |
| 13 | Chinchaga | 1680.0 to NDE | | 5468 to NDE | 1780.0 to NDE |

Beaver 152

| Item | Column 1 | Column 2 |
|------|----------|---------------|
| | | Well Log Data |

| | | 00/4-6-82-3W6 |
|----|---------------------------|----------------------------------|
| | Zone | Neutron-density Log (mKB) |
| 1 | Shaftesbury | Surface to 508.0 |
| 2 | Paddy, Cadotte and Harmon | 508.0 to 580.0 |
| 3 | Notikewin and Falher | 580.0 to 920.0 |
| 4 | Bluesky and Gething | 920.0 to 996.0 |
| 5 | Fernie and Nordegg | 996.0 to 1085.0 |
| 6 | Montney | 1085.0 to 1307.8 |
| 7 | Belloy | 1307.8 to 1358.0 |
| 8 | Taylor Flat | 1358.0 to 1395.0 |
| 9 | Kiskatinaw | 1395.0 to 1406.0 |
| 10 | Golata | 1406.0 to 1435.0 |
| 11 | Debolt | 1435.0 to NDE |

Beaver Lake 131

| Item | Column 1 | Column 2 | | |
|------|-----------------------|---------------------|---------------------|-----------------|
| | | Well Log Data | | |
| | | 00/7-3-66-13W4 | 00/12-35-66-12W4 | 00/6-20-66-13W4 |
| | Zone | Induction Log (mKB) | Induction Log (mKB) | Sonic Log (mKB) |
| 1 | Colorado Shale | Surface to 294.5 | Surface to 308.0 | |
| 2 | Viking and Joli Fou | 294.5 to 335.0 | 308.0 to 348.3 | |
| 3 | Colony | 335.0 to 344.5 | 348.3 to 358.6 | 318.0 to 486.0 |
| 4 | Upper Grand Rapids 2A | 344.5 to 365.0 | 358.6 to 383.0 | |
| 5 | Upper Grand Rapids 2B | 365.0 to 383.3 | 383.0 to 402.0 | |
| 6 | Lower Grand Rapids 1 | 383.3 to 398.0 | 402.0 to 418.0 | |
| 7 | Lower Grand Rapids 2 | 398.0 to 421.0 | 418.0 to 445.3 | |
| 8 | Upper Clearwater | 421.0 to 449.5 | 445.3 to 470.6 | |
| 9 | Lower Clearwater | 449.5 to 483.5 | 470.6 to 500.3 | |
| 10 | McMurray | 483.5 to NDE | 500.3 to 542.0 | |
| 11 | Grosmont | NDE | 542.0 to NDE | 486.0 to 542.0 |

| Item | Column 1 | Column 2 | |
|---|---------------------------------|--|---|
| | | Well Log Data | |
| | Zone | 31/7-26-62-25W3 Neutron-density Log (mKB) | 01/10-20-63-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | 138.3 to 192.0 |
| 2 | St. Walburg | | 192.0 to 221.0 |
| 3 | Viking | ILND to 286.0 | 221.0 to 272.4 |
| 4 | Colony and McLaren ^a | 286.0 to 316.0 | 272.4 to 300.8 |
| 5 | Waseca | 316.0 to 333.0 | 300.8 to ILND |
| 6 | Lower Mannville | 333.0 to ILND | |
| 7 | Souris River | | 502.0 to NDE |
| <p>a</p> <p>Beacon Hill Mannville Voluntary Gas Unit: definition of unitized zone</p> | | | |

Birdtail Creek 57

| Item | Column 1 | Column 2 | |
|------|------------------------|---|---------------------------------------|
| | | Well Log Data | |
| | Zone | 00/12-10-15-27W1 Neutron-density Log (mKB) | 00/3-21-15-27W1 Sonic Log (ft. KB) |
| 1 | Second White Specks | 244.0 to 369.0 | 800 to 1200 |
| 2 | Swan River (Mannville) | 369.0 to 408.5 | 1200 to 1340 |
| 3 | Jurassic | 408.5 to 479.0 | 1340 to 1554 |
| 4 | Lodgepole | 479.0 to 538.3 | 1554 to 1734 |
| 5 | Bakken | 538.3 to 540.3 | 1734 to 1742 |
| 6 | Torquay | 540.3 to 570.3 | 1742 to NDE |
| 7 | Birdbear | 570.3 to NDE | NDE |
| 8 | Duperow | NDE | NDE |

Blood 148

| Item | Column 1 | Column 2 | | |
|------|----------|----------------|-----------------|----------------|
| | | Well Log Data | | |
| | | 00/6-35-5-25W4 | 00/12-28-7-23W4 | 00/6-24-8-23W4 |

| | Zone | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) |
|----|--|----------------------------------|----------------------------------|----------------------------------|
| 1 | Belly River | Surface to 1129.5 | Surface to 798.5 | Surface to 619.5 |
| 2 | Pakowki | 1129.5 to 1177.0 | 798.5 to 859.8 | 619.5 to 662.0 |
| 3 | Milk River | 1177.0 to 1278.3 | 859.8 to 975.3 | 662.0 to 783.0 |
| 4 | Colorado Shale | 1278.3 to 1629.0 | 975.3 to 1289.5 | 783.0 to 1086.5 |
| 5 | Second White Specks | 1629.0 to 1761.0 | 1289.5 to 1385.5 | 1086.5 to 1165.5 |
| 6 | Barons | NP | NP | 1165.5 to 1186.0 |
| 7 | Bow Island | 1761.0 to 1883.0 | 1385.5 to 1529.3 | 1186.0 to 1333.0 |
| 8 | Mannville | 1883.0 to 2090.0 | 1529.3 to 1727.5 | 1333.0 to NDE |
| 9 | Rierdon | 2090.0 to 2187.5 | 1727.5 to 1807.8 | NDE |
| 10 | Livingstone ^a | 2187.5 to 2435.5 | 1807.8 to 1994.3 | NDE |
| 11 | Banff | 2435.5 to 2546.0 | 1994.3 to 2153.3 | NDE |
| 12 | Exshaw ^b | 2546.0 to 2550.0 | 2153.3 to 2157.5 | NDE |
| 13 | Big Valley and Stettler | 2550.0 to 2720.5 | 2157.5 to 2309.0 | NDE |
| 14 | Winterburn | 2720.5 to NDE | 2309.0 to NDE | NDE |
| 15 | Woodbend | NDE | NDE | NDE |
| a | Formation equivalence of Livingstone is Rundle | | | |
| b | Formation equivalence of Exshaw is Bakken | | | |

Buck Lake 133C

| Item | Column 1 | Column 2 |
|-------------|---------------------|--|
| | | Well Log Data |
| | Zone | 00/6-20-45-5W5 Induction Log (ft. KB) |
| 1 | Belly River | Surface to 4193 |
| 2 | Lea Park | 4193 to 4650 |
| 3 | Wapiabi | 4650 to 5167 |
| 4 | Cardium | 5167 to 5302 |
| 5 | Blackstone | 5302 to 5590 |
| 6 | Second White Specks | 5590 to 6173 |
| 7 | Viking | 6173 to 6270 |
| 8 | Joli Fou | 6270 to 6316 |

| | | |
|----|-----------|--------------|
| 9 | Mannville | 6316 to 6855 |
| 10 | Nordegg | 6855 to 6922 |
| 11 | Pekisko | 6922 to 6982 |
| 12 | Banff | 6982 to NDE |

Carry The Kettle Nakoda First Nation 76-33

| Item | Column 1 | Column 2 |
|------|------------|------------------|
| | | Well Log Data |
| | | Zone |
| 1 | Lea Park | Surface to 219.0 |
| 2 | Milk River | 219.0 to 397.6 |
| 3 | Colorado | 397.6 to NDE |

Cold Lake 149, 149A and 149B

| Item | Column 1 | Column 2 | |
|------|---------------------|---------------------------------|--|
| | | Well Log Data | |
| | | Cold Lake 149 00/2-13-61-3W4 | Cold Lake 149A and 149B 00/6-7-64-2W4 |
| | Zone | Induction Log (mKB) | Induction Log (mKB) |
| 1 | Viking and Joli Fou | 265.0 to 304.0 | |
| 2 | Colony | 304.0 to 319.0 | 305.0 to 324.3 |
| 3 | McLaren | 319.0 to 329.5 | 324.3 to 334.0 |
| 4 | Waseca | 329.5 to 346.0 | 334.0 to 350.0 |
| 5 | Sparky | 346.0 to 363.0 | 350.0 to 366.5 |
| 6 | General Petroleum | 363.0 to 373.0 | 366.5 to 378.0 |
| 7 | Rex | 373.0 to 411.5 | 378.0 to 408.0 |
| 8 | Lloydminster | 411.5 to 453.0 | 408.0 to 452.0 |
| 9 | Cummings | 453.0 to 495.3 | 452.0 to NDE |
| 10 | Beaverhill Lake | 495.3 to NDE | NDE |

Drift Pile River 150

| Item | Column 1 | Column 2 |
|------|----------|----------|
|------|----------|----------|

| | Zone | Well Log Data | |
|----|---------------------------|---------------------------|-------------------|
| | | 00/10-6-74-12W5 | 00/7-25-73-12W5 |
| | | Neutron-density Log (mKB) | Density Log (mKB) |
| 1 | Second White Specks | 219.5 to 310.0 | |
| 2 | Shaftesbury | 310.0 to 418.0 | 222.5 to 420.5 |
| 3 | Peace River and Harmon | 418.0 to 450.4 | 420.5 to 451.3 |
| 4 | Spirit River | 450.4 to 707.5 | 451.3 to 739.0 |
| 5 | Bluesky | 707.5 to 739.0 | 739.0 to 763.0 |
| 6 | Gething | 739.0 to 764.0 | 763.0 to 788.0 |
| 7 | Shunda | 764.0 to 830.0 | 788.0 to 799.0 |
| 8 | Pekisko | 830.0 to NDE | 799.0 to 856.0 |
| 9 | Banff | NDE | 856.0 to 1081.5 |
| 10 | Wabamun | NDE | 1081.5 to 1350.0 |
| 11 | Winterburn | NDE | 1350.0 to 1483.0 |
| 12 | Ireton | NDE | 1483.0 to 1680.0 |
| 13 | Leduc | NDE | 1680.0 to 1805.0 |
| 14 | Beaverhill Lake | NDE | 1805.0 to 1926.5 |
| 15 | Slave Point | NDE | 1926.5 to 1950.0 |
| 16 | Fort Vermilion | NDE | 1950.0 to 1960.5 |
| 17 | Watt Mountain and Gilwood | NDE | 1960.5 to 1973.0 |
| 18 | Muskeg | NDE | 1973.0 to NDE |

Enoch Cree Nation 135

| Item | Column 1 | Column 2 | |
|------|--------------------------|--------------------|-----------------|
| | | Well Log Data | |
| | | 03/13-3-52-26W4 | 00/14-3-52-26W4 |
| Zone | Induction Log (mKB) | Electric Log (mKB) | |
| 1 | Edmonton and Belly River | Surface to 529.0 | |
| 2 | Lea Park | 529.0 to 691.0 | |
| 3 | Wapiabi | 691.0 to 890.0 | |
| 4 | Second White Specks | 890.0 to 1029.0 | |
| 5 | Viking and Joli Fou | 1029.0 to 1076.0 | |
| 6 | Mannville | 1076.0 to 1332.0 | |

| | | | |
|--|-----------------------------------|------------------|----------------------------|
| 7 | Wabamun | 1332.0 to 1421.0 | |
| 8 | Graminia, Calmar and Nisku | 1421.0 to 1502.0 | |
| 9 | Ireton, Leduc and Cooking Lake | 1502.0 to NDE | 1573.4 to NDE ^a |
| a Leduc and Cooking Lake zones only | | | |

Halfway River 168

| Item | Column 1 | Column 2 |
|------|------------------------|----------------------------------|
| | | Well Log Data 00/1-34-86-25W6 |
| | Zone | Sonic Log (mKB TVD) |
| 1 | Wilrich | Surface to 710.0 |
| 2 | Bluesky and Gething | 710.0 to 840.5 |
| 3 | Cadomin | 840.5 to 889.0 |
| 4 | Nikanassin | 889.0 to 994.0 |
| 5 | Fernie and Nordegg | 994.0 to 1112.0 |
| 6 | Pardonet and Baldonnel | 1112.0 to 1150.0 |
| 7 | Charlie Lake | 1150.0 to 1466.5 |
| 8 | Halfway | 1466.5 to 1517.0 |
| 9 | Doig | 1517.0 to 1651.5 |
| 10 | Montney | 1651.5 to 1960.0 |
| 11 | Belloy | 1960.0 to NDE |

Heart Lake 167

| Item | Column 1 | Column 2 |
|------|---------------------|-----------------------------------|
| | | Well Log Data 00/13-18-70-10W4 |
| | Zone | Induction Log (mKB) |
| 1 | Viking and Joli Fou | 268.0 to 306.0 |
| 2 | Colony | 306.0 to 330.5 |
| 3 | Upper Grand Rapids | 330.5 to 363.0 |
| 4 | Lower Grand Rapids | 363.0 to 409.5 |
| 5 | Clearwater | 409.5 to 461.5 |

| | | |
|---|----------|----------------|
| 6 | McMurray | 461.5 to 502.0 |
| 7 | Woodbend | 502.0 to NDE |

Horse Lakes 152B

| Item | Column 1 | Column 2 |
|------|--------------|------------------|
| | | Well Log Data |
| | Zone | Sonic Log (mKB) |
| 1 | Puskwaskau | Surface to 402.5 |
| 2 | Badheart | 402.5 to 446.0 |
| 3 | Cardium | 446.0 to 483.0 |
| 4 | Kaskapau | 483.0 to 928.0 |
| 5 | Doe Creek | 928.0 to 976.0 |
| 6 | Dunvegan | 976.0 to 1140.0 |
| 7 | Shaftesbury | 1140.0 to 1468.0 |
| 8 | Paddy | 1468.0 to 1496.0 |
| 9 | Cadotte | 1496.0 to 1521.0 |
| 10 | Harmon | 1521.0 to 1553.0 |
| 11 | Notikewin | 1553.0 to 1625.0 |
| 12 | Falher | 1625.0 to 1812.5 |
| 13 | Wilrich | 1812.5 to 1879.0 |
| 14 | Bluesky | 1879.0 to 1921.5 |
| 15 | Gething | 1921.5 to 2021.5 |
| 16 | Cadomin | 2021.5 to 2050.5 |
| 17 | Nikanassin | 2050.5 to 2157.5 |
| 18 | Fernie | 2157.5 to 2248.0 |
| 19 | Nordegg | 2248.0 to 2275.0 |
| 20 | Charlie Lake | 2275.0 to 2477.5 |
| 21 | Halfway | 2477.5 to 2504.0 |
| 22 | Doig | 2504.0 to 2553.0 |
| 23 | Montney | 2553.0 to NDE |

Kehewin 123

| Item | Column 1 | Column 2 | |
|------|----------|----------------|-----------------------------|
| | | Well Log Data | |
| | | 00/7-10-59-6W4 | 00/10-9-59-6W4 ^a |

| | Zone | Induction Log (ft. KB) | Induction Log (mKB) |
|-------------------------|---------------------|-------------------------------|----------------------------|
| 1 | Viking and Joli Fou | 1053 to 1189 | |
| 2 | Colony | 1189 to 1218 | 359.0 to 386.0 |
| 3 | McLaren | 1218 to 1261 | NP |
| 4 | Waseca | 1261 to 1315 | 386.0 to 401.0 |
| 5 | Sparky | 1315 to 1381 | 401.0 to 421.0 |
| 6 | General Petroleum | 1381 to 1490 | 421.0 to 457.0 |
| 7 | Rex-Lloydminster | 1490 to 1644 | 457.0 to 499.0 |
| 8 | Cummings | 1644 to 1858 | 499.0 to NDE |
| 9 | Woodbend | 1858 to NDE | NDE |
| a | | | |
| Colony Channel Type Log | | | |

Little Pine 116 and Poundmaker 114

| Item | Column 1 | Column 2 | | |
|-------------------------|---------------------|---------------------------------------|--|--|
| | | Well Log Data | | |
| | Zone | 21/6-7-46-21W3 Induction Log (mKB) | 21/15-29-44-23W3 ^a Neutron-density Log (mKB) | 11/2-33-44-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | | 458.3 to 543.0 |
| 2 | Viking and Joli Fou | | | 543.0 to 585.0 |
| 3 | Colony | 437.5 to 459.0 | 532.0 to 554.0 | 585.0 to 600.8 |
| 4 | McLaren | 459.0 to 469.0 | 554.0 to 569.0 | 600.8 to 611.5 |
| 5 | Waseca | 469.0 to 485.5 | 569.0 to 588.0 | 611.5 to 634.7 |
| 6 | Sparky | 485.5 to 501.0 | 588.0 to 611.0 | 634.7 to 646.0 |
| 7 | General Petroleum | 501.0 to 518.3 | 611.0 to ILND | 646.0 to 656.5 |
| 8 | Rex | 518.3 to 531.0 | | 656.5 to 668.7 |
| 9 | Lloydminster | 531.0 to 543.3 | | 668.7 to 683.4 |
| 10 | Cummings | 543.3 to 573.3 | | 683.4 to 702.0 |
| 11 | Dina | 573.3 to 601.0 | | 702.0 to 736.5 |
| 12 | Duperow | 601.0 to NDE | | 736.5 to NDE |
| a | | | | |
| Colony Channel Type Log | | | | |

Loon Lake 235 and Swampy Lake 236

| Item | Column 1 | Column 2 |
|------|-----------------|---|
| | | Well Log Data |
| | Zone | 00/1-20-86-9W5 Neutron-density Log (mKB) |
| 1 | Clearwater | 315.0 to 373.0 |
| 2 | Banff | 373.0 to 494.0 |
| 3 | Wabamun | 494.0 to 777.0 |
| 4 | Winterburn | 777.0 to 963.0 |
| 5 | Ireton | 963.0 to 1233.0 |
| 6 | Beaverhill Lake | 1233.0 to 1343.7 |
| 7 | Slave Point | 1343.7 to 1361.0 |
| 8 | Fort Vermilion | 1361.0 to 1377.5 |
| 9 | Watt Mountain | 1377.5 to 1382.7 |
| 10 | Muskeg | 1382.7 to 1452.0 |
| 11 | Granite Wash | 1452.0 to 1487.0 |
| 12 | Precambrian | 1487.0 to NDE |

Makao 120, Onion Lake 119-1 and 119-2 and Seekaskootch 119

| Item | Column 1 | Column 2 | | |
|------|----------------------|--|--|---|
| | | Well Log Data | | |
| | Zone | 11/14-8-56-27W3 Neutron-density Log (mKB TVD) | 00/11-23-54-1W4 Neutron-density Log (mKB) | 41/6-4-55-25W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | Surface to 322.0 | 346.0 to 428.0 |
| 2 | St. Walburg/La Biche | ILND to 433.5 | 322.0 to 365.0 | 428.0 to 478.8 |
| 3 | Viking | 433.5 to 474.4 | 365.0 to 402.0 | 478.8 to 515.4 |
| 4 | Colony | 474.4 to 488.9 | 402.0 to 415.0 | 515.4 to ILND |
| 5 | McLaren | 488.9 to 500.3 | 415.0 to 429.5 | |
| 6 | Waseca | 500.3 to 517.9 | 429.5 to 441.0 | |
| 7 | Sparky | 517.9 to 534.0 | 441.0 to 464.0 | |
| 8 | General Petroleum | 534.0 to 548.9 | 464.0 to 476.0 | |

| | | | | |
|----|-------------------|----------------|----------------|--|
| 9 | Rex | 548.9 to 582.0 | 476.0 to 499.0 | |
| 10 | Lloydminster | 582.0 to 602.6 | 499.0 to 515.0 | |
| 11 | Cummings and Dina | 602.6 to 648.0 | 515.0 to 536.0 | |
| 12 | Duperow | 648.0 to NDE | 536.0 to NDE | |

Ministikwan 161 and Makwa Lake 129

| Item | Column 1 | Column 2 | |
|------|---|--|--|
| | | Well Log Data | |
| | Zone | 41/8-25-58-25W3 Neutron-density Log (mKB) | 31/8-34-58-25W3 Neutron-density Log (mKB) |
| 1 | Second White Specks, St. Walburg and Viking | 219.0 to 346.5 | 254.6 to 387.6 |
| 2 | Colony | 346.5 to 371.0 | 387.6 to 408.0 |
| 3 | McLaren | 371.0 to 383.0 | 408.0 to 421.0 |
| 4 | Waseca | 383.0 to 407.0 | 421.0 to 440.0 |
| 5 | Sparky | 407.0 to 422.3 | 440.0 to 460.0 |
| 6 | General Petroleum | 422.3 to 433.0 | 460.0 to 471.2 |
| 7 | Rex, Lloydminster, Cummings and Dina | 433.0 to NDE | 471.2 to 627.0 |
| 8 | Duperow | NDE | 627.0 to NDE |

Nekaneet Cree Nation

| Item | Column 1 | Column 2 |
|------|---------------------|---|
| | | Well Log Data |
| | Zone | 21/8-32-7-28W3 Neutron-density Log (mKB) |
| 1 | Belly River | Surface to 625.4 |
| 2 | Lea Park | 625.4 to 658.4 |
| 3 | Ribstone Creek | 658.4 to 807.0 |
| 4 | Milk River | 807.0 to 946.3 |
| 5 | Medicine Hat | 946.3 to 1107.0 |
| 6 | Second White Specks | 1107.0 to 1272.0 |

| | | |
|----|---------------------|------------------|
| 7 | Viking and Joli Fou | 1272.0 to 1390.3 |
| 8 | Mannville | 1390.3 to 1479.3 |
| 9 | Vanguard | 1479.3 to 1523.0 |
| 10 | Shaunavon | 1523.0 to 1562.0 |
| 11 | Gravelbourg | 1562.0 to 1574.5 |
| 12 | Mission Canyon | 1574.5 to NDE |

Ocean Man 69, 69A, 69B, 69C, 69D, 69E, 69F, 69G, 69H and 69I, Ocean Man Indian Reserve No. 69X, Ocean Man No. 69N, Ocean Man No. 69S, Ocean Man No. 69U and Flying Dust First Nation 105H, 105I, 105L and 105O

| Item | Column 1 | Column 2 | |
|------|-------------------|--|-----------------------------------|
| | | Well Log Data | |
| | Zone | 31/11-11-10-8W2 Neutron-density Log (mKB) | 01/9-30-10-7W2 Sonic Log (mKB) |
| 1 | Gravelbourg | | ILND to 1102.0 |
| 2 | Watrous | | 1102.0 to 1184.4 |
| 3 | Alida and Tilston | | 1184.4 to NDE |
| 4 | Souris Valley | ILND to 1433.5 | NDE |
| 5 | Bakken | 1433.5 to 1451.0 | NDE |
| 6 | Torquay | 1451.0 to NDE | NDE |

Pigeon Lake 138A^a

| Item | Column 1 | Column 2 | | | |
|------|------------------------------------|--|---|--|---|
| | | Well Log Data | | | |
| | Zone | 00/12-36-46-28W4 Gamma Ray-neutron Log (ft. KB) | 04/15-24-46-28W4 Neutron-density Log (mKB) | 00/9-18-46-27W4 Electric Log (ft. KB) | 00/12-20-47-27W4 Electric Log (ft. KB) |
| 1 | Edmonton, Belly River and Lea Park | | Surface to 1036.0 | | |
| 2 | Wapiabi | | 1036.0 to 1197.0 | | |
| 3 | Cardium and Blackstone | | 1197.0 to 1281.3 | 3850 to 4020 ^b | |

| | | | | | |
|----|---------------------|--------------|------------------|--|---------------------------|
| 4 | Second White Specks | | 1281.3 to 1423.7 | | |
| 5 | Viking and Joli Fou | | 1423.7 to 1472.0 | | |
| 6 | Upper Mannville | | 1472.0 to 1610.3 | | |
| 7 | Lower Mannville | | 1610.3 to NDE | | |
| 8 | Wabamun | 5591 to 6295 | | | |
| 9 | Calmar and Nisku | 6295 to 6492 | | | |
| 10 | Ireton | 6492 to 6670 | | | |
| 11 | Leduc | 6670 to NDE | | | 6434 to 7210 ^c |

| | | | | | |
|---|--|--|--|--|--|
| a | <p>The First Nation lands are located at the Banff subcrop limit. A contract in respect of any Banff and Exshaw zone remnants will be continued with the Lower Mannville zone.</p> | | | | |
| b | <p>Bonnie Glen Cardium Unit No. 1: definition of unitized zone</p> | | | | |
| c | <p>Bonnie Glen D-3A Gas Cap Unit: definition of unitized zone</p> | | | | |

Puskiakiwenin 122 and Unipouheos 121

| Item | Column 1 | Column 2 | | | |
|------|---------------------|---------------------|-----------------------------|------------------------------|----------------|
| | | Well Log Data | | | |
| | | 00/11-21-56-3W4 | 00/6-16-57-3W4 ^a | 00/12-26-57-4W4 ^a | 00/8-16-58-3W4 |
| Zone | Induction Log (mKB) | Induction Log (mKB) | Induction Log (mKB TVD) | Induction Log (mKB) | |
| 1 | Viking and Joli Fou | 371.0 to 411.5 | | | |
| 2 | Colony | 411.5 to 427.5 | 409.5 to 420.0 | 416.5 to 427.5 | 403.0 to 420.0 |
| 3 | McLaren | 427.5 to 436.5 | 420.0 to 441.0 | 427.5 to 444.3 | 420.0 to 428.6 |
| 4 | Waseca | 436.5 to 449.5 | 441.0 to 456.0 | 444.3 to 462.7 | 428.6 to 447.0 |
| 5 | Sparky | 449.5 to 472.0 | 456.0 to 475.0 | 462.7 to 484.3 | 447.0 to 460.5 |
| 6 | General Petroleum | 472.0 to 485.0 | 475.0 to 488.5 | 484.3 to 498.0 | 460.5 to 475.6 |

| | | | | | |
|--------------------------|--------------|----------------|----------------|----------------|----------------|
| 7 | Rex | 485.0 to 491.0 | 488.5 to 498.5 | 498.0 to 509.2 | 475.6 to 487.5 |
| 8 | Lloydminster | 491.0 to 528.0 | 498.5 to 537.0 | 509.2 to FI | 487.5 to 533.0 |
| 9 | Cummings | 528.0 to 546.5 | 537.0 to NDE | NDE | 533.0 to 575.0 |
| 10 | Woodbend | 546.5 to NDE | NDE | NDE | 575.0 to NDE |
| a | | | | | |
| McLaren Channel Type Log | | | | | |

Red Pheasant 108

| Item | Column 1 | Column 2 | | |
|------|---------------------|---|--|--|
| | | Well Log Data | | |
| | Zone | 11/15-14-61-26W3 Neutron-density Log (mKB) | 11/11-5-60-23W3 Neutron-density Log (mKB) | 41/7-15-59-24W3 Neutron-density Log (mKB) |
| 1 | Second White Specks | | 160.8 to 239.7 | 176.0 to 253.0 |
| 2 | St. Walburg | | 239.7 to 279.0 | 253.0 to 300.0 |
| 3 | Viking | | 279.0 to 324.0 | 300.0 to 339.5 |
| 4 | Mannville | 292.3 to ILND | 324.0 to 586.0 | 339.5 to 576.0 |
| 5 | Souris River | | 586.0 to NDE | 576.0 to NDE |

Saddle Lake 125

| Item | Column 1 | Column 2 | |
|------|---------------------|--|---|
| | | Well Log Data | |
| | Zone | 00/11-32-57-11W4 Induction Log (ft. KB) | 02/6-29-57-13W4 ^a Induction Log (mKB) |
| 1 | Second White Specks | | 393.0 to 491.0 |
| 2 | Viking and Joli Fou | 1412 to 1542 | 491.0 to 528.3 |
| 3 | Colony | 1542 to 1582 | 528.3 to ILND |
| 4 | Upper Grand Rapids | 1582 to 1710 | |
| 5 | Lower Grand Rapids | 1710 to 1844 | |
| 6 | Clearwater | 1844 to 2025 | |

| | | | |
|---|-----------------|--------------|----------------|
| 7 | McMurray | 2025 to 2132 | ILND to 710.7 |
| 8 | Ireton | 2132 to NDE | 710.7 to 872.3 |
| 9 | Cooking Lake | NDE | 872.3 to 934.0 |
| 10 | Beaverhill Lake | NDE | 934.0 to NDE |
| a | | | |
| Mitsue Gilwood Sand Unit No. 1: definition of unitized zone | | | |

Samson 137 and 137A, Louis Bull 138B, Ermineskin 138 and Montana 139

| Item | Column 1 | Column 2 | | | |
|------|--------------------------|---------------------------|-------------------------------|---------------------------|------------------------------|
| | | Well Log Data | | | |
| | Zone | 00/6-17-46-24W4 | 00/9-35-44-25W4 | 00/14-32-44-25W4 | 00/10-13-44-23W4 |
| | | Neutron-density Log (mKB) | Neutron-density Log (mKB TVD) | Neutron-density Log (mKB) | Neutron-density Log (ft. KB) |
| 1 | Edmonton and Belly River | Surface to 702.0 | Surface to 817.5 | Surface to 793.0 | Surface to 2230 |
| 2 | Lea Park | 702.0 to 831.0 | 817.5 to 944.0 | 793.0 to 925.0 | 2230 to 2707 |
| 3 | Wapiabi | 831.0 to 1067.0 | 944.0 to 1183.3 | 925.0 to 1166.0 | 2707 to 3466 |
| 4 | Second White Specks | 1067.0 to 1199.0 | 1183.3 to 1311.0 | 1166.0 to 1295.3 | 3466 to 3866 |
| 5 | Viking | 1199.0 to 1229.7 | 1311.0 to 1342.0 | 1295.3 to 1330.0 | 3866 to 3970 |
| 6 | Joli Fou | 1229.7 to 1251.5 | 1342.0 to 1363.6 | 1330.0 to 1350.7 | 3970 to 4040 |
| 7 | Mannville | 1251.5 to 1439.3 | 1363.6 to 1558.2 | 1350.7 to 1530.0 | 4040 to 4815 |
| 8 | Banff | 1439.3 to 1451.0 | NP | 1530.0 to 1543.0 | NP |
| 9 | Wabamun | 1451.0 to 1613.7 | 1558.2 to 1772.6 | 1543.0 to 1763.0 | 4815 to NDE |
| 10 | Calmar and Nisku | 1613.7 to 1665.5 | 1772.6 to NDE | 1763.0 to 1818.3 | NDE |
| 11 | Ireton | 1665.5 to 1904.0 | NDE | 1818.3 to NDE | NDE |
| 12 | Cooking Lake | 1904.0 to NDE | NDE | NDE | NDE |

Sawridge 150G

| Item | Column 1 | Column 2 | |
|--|------------------|-------------------------------------|---|
| | | Well Log Data | |
| | Zone | 00/2-6-73-5W5 Sonic Log (ft. KB) | 00/4-19-71-4W5 ^a Induction Log (ft. KB) |
| 1 | Colorado | Surface to 1248 | |
| 2 | Viking | 1248 to 1334 | |
| 3 | Mannville | 1334 to 2240 | |
| 4 | Banff and Exshaw | 2240 to 2440 | |
| 5 | Wabamun | 2440 to 3336 | |
| 6 | Winterburn | 3336 to 3647 | |
| 7 | Ireton | 3647 to 4888 | |
| 8 | Waterways | 4888 to 5450 | |
| 9 | Slave Point | 5450 to 5496 | |
| 10 | Watt Mountain | 5496 to 5578 | |
| 11 | Gilwood | 5578 to 5860 | 6112 to 6146 ^a |
| 12 | Muskeg | 5860 to 5920 | |
| 13 | Keg River | 5920 to 6321 | |
| 14 | Lower Elk Point | 6321 to NDE | |
| a Mitsue Gilwood Sand Unit No. 1: definition of unitized zone | | | |

Sharphead 141

| Item | Column 1 | Column 2 | |
|------|------------------|---------------------------------------|------------------------------------|
| | | Well Log Data | |
| | Zone | 00/6-1-43-26W4 Induction Log (mKB) | 00/14-2-43-26W4 Sonic Log (mKB) |
| 1 | Horseshoe Canyon | | Surface to 552.0 |

| | | | |
|---|---------------------------------|------------------|------------------|
| 2 | Belly River and Lea Park | | 552.0 to 1016.0 |
| 3 | Wapiabi, Cardium and Blackstone | | 1016.0 to 1270.0 |
| 4 | Second White Specks | ILND to 1384.5 | 1270.0 to 1405.0 |
| 5 | Viking and Joli Fou | 1384.5 to 1436.0 | 1405.0 to NDE |
| 6 | Mannville | 1436.0 to 1625.0 | NDE |
| 7 | Banff and Exshaw | 1625.0 to 1652.5 | NDE |
| 8 | Wabamun | 1652.5 to NDE | NDE |

Siksika 146

| Item | Column 1 | Column 2 | | | | |
|------|--|---------------------------|---------------------------|---------------------------|------------------|------------------|
| | | Well Log Data | | | | |
| | | 00/14-3-23-23W4 | 00/5-19-22-23W4 | 00/4-4-21-20W4 | 00/2-29-20-20W4 | 00/6-20-20-19W4 |
| Zone | Sonic Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Neutron-density Log (mKB) | Sonic Log (mKB) | |
| 1 | Edmonton and Belly River | Surface to 812.0 | Surface to 763.5 | Surface to 548.5 | Surface to 585.0 | Surface to 603.5 |
| 2 | Pakowki | 812.0 to 854.5 | 763.5 to 810.0 | 548.5 to 593.0 | 585.0 to 630.0 | 603.5 to 656.0 |
| 3 | Milk River | 854.5 to 937.5 | 810.0 to 892.0 | 593.0 to 686.0 | 630.0 to 722.5 | 656.0 to 738.5 |
| 4 | Upper Colorado, including Medicine Hat | 937.5 to 1242.0 | 892.0 to 1200.0 | 686.0 to 977.5 | 722.5 to 1018.6 | 738.5 to 1026.6 |
| 5 | Second White Specks | 1242.0 to 1370.7 | 1200.0 to 1330.0 | 977.5 to 1095.4 | 1018.6 to 1144.0 | 1026.6 to 1147.7 |
| 6 | Viking Lag Sand | NP | 1330.0 to 1333.0 | 1095.4 to 1101.0 | NP | NP |
| 7 | Viking (Bow Island) | 1370.7 to 1475.0 | 1333.0 to 1441.5 | 1101.0 to 1203.7 | 1144.0 to 1248.5 | 1147.7 to 1250.0 |
| 8 | Mannville | 1475.0 | 1441.5 to | 1203.7 to | 1248.5 to | 1250.0 to |

| | | | | | | |
|----|---------------------|------------------------|------------------|------------------|---------------------|---------------------|
| | | to 1647.0 | 1595.5 | 1350.0 | 1431.3 | 1413.7 |
| 9 | Pekisko | 1647.0 to 1752.0 | 1595.5 to NDE | 1350.0 to NDE | 1431.3 to 1477.3 | 1413.7 to 1476.3 |
| 10 | Banff and Exshaw | 1752.0 to 1896.0 | NDE | NDE | 1477.3 to 1617.0 | 1476.3 to 1630.0 |
| 11 | Wabamun | 1896.0 to 2065.7 | NDE | NDE | 1617.0 to 1753.0 | 1630.0 to 1755.0 |
| 12 | Calmar and Nisku | 2065.7 to 2096.0 | NDE | NDE | 1753.0 to 1796.5 | 1755.0 to 1793.7 |
| 13 | Ireton and Leduc | 2096.0 to 2312.0 | NDE | NDE | 1796.5 to NDE | 1793.7 to NDE |
| 14 | Cooking Lake | 2312.0 to 2365.0 | NDE | NDE | NDE | NDE |
| 15 | Beaverhill Lake | 2365.0 to 2514.5 | NDE | NDE | NDE | NDE |
| 16 | Elk Point | 2514.5 to NDE | NDE | NDE | NDE | NDE |

Sturgeon Lake 154

| Item | Column 1 | Column 2 | |
|------|---------------------|--------------------|--------------------|
| | | Well Log Data | |
| | | 00/9-18-70-23W5 | 00/4-25-70-23W5 |
| | Zone | Sonic Log (ft. KB) | Sonic Log (ft. KB) |
| 1 | Wapiabi | Surface to 1844 | Surface to 1755 |
| 2 | Badheart | 1844 to 1897 | 1755 to 1795 |
| 3 | Kaskapau | 1897 to 2721 | 1795 to 2605 |
| 4 | Dunvegan | 2721 to 2960 | 2605 to 2835 |
| 5 | Shaftesbury | 2960 to 3467 | 2835 to 3327 |
| 6 | Peace River | 3467 to 3540 | 3327 to 3395 |
| 7 | Harmon | 3540 to 3623 | 3395 to 3482 |
| 8 | Spirit River | 3623 to 4573 | 3482 to 4440 |
| 9 | Bluesky and Gething | 4573 to 4805 | 4440 to 4586 |
| 10 | Cadomin | 4805 to 4890 | 4586 to 4658 |
| 11 | Fernie and Nordegg | 4890 to 5092 | 4658 to 4949 |

| | | | |
|----|--------------------------|--------------|--------------|
| 12 | Montney | 5092 to 5459 | 4949 to 5288 |
| 13 | Belloy | 5459 to 5590 | 5288 to 5373 |
| 14 | Debolt | 5590 to 6186 | 5373 to 5997 |
| 15 | Shunda | 6186 to 6473 | 5997 to 6290 |
| 16 | Pekisko | 6473 to 6674 | 6290 to 6486 |
| 17 | Banff | 6674 to 7378 | 6486 to 7208 |
| 18 | Exshaw | 7378 to 7397 | 7208 to 7228 |
| 19 | Wabamun | 7397 to 8184 | 7228 to 8021 |
| 20 | Winterburn | 8184 to 8496 | 8021 to 8422 |
| 21 | Ireton | 8496 to 8637 | 8422 to 9316 |
| 22 | Leduc | 8637 to NDE | NP |
| 23 | Beaverhill Lake | NDE | 9316 to 9610 |
| 24 | Slave Point | NDE | 9610 to 9660 |
| 25 | Gilwood and Granite Wash | NDE | 9660 to 9730 |
| 26 | Precambrian | NDE | 9730 to NDE |

Sucker Creek 150A

| Item | Column 1 | Column 2 |
|------|---------------------------------|-----------------|
| | | Well Log Data |
| | Zone | Sonic Log (mKB) |
| 1 | Shaftesbury | Surface to 428 |
| 2 | Paddy, Cadotte and Harmon | 428 to 463 |
| 3 | Spirit River | 463 to 737 |
| 4 | Bluesky and Gething | 737 to 768 |
| 5 | Debolt | 768 to 863 |
| 6 | Shunda | 863 to 976 |
| 7 | Pekisko | 976 to 1031 |
| 8 | Banff | 1031 to 1265 |
| 9 | Wabamun | 1265 to 1535 |
| 10 | Winterburn | 1535 to 1657 |
| 11 | Woodbend | 1657 to 1956 |
| 12 | Beaverhill Lake and Slave Point | 1956 to 2084 |
| 13 | Gilwood and Watt Mountain | 2084 to 2113 |
| 14 | Granite Wash | 2113 to 2152 |
| 15 | Precambrian | 2152 to NDE |

Sunchild 202 and O'Chiese 203

| Item | Column 1 | Column 2 | | |
|------|-----------------------------------|--|---|---|
| | | Well Log Data | | |
| | Zone | 00/4-11-44-10W5 Neutron-density Log (mKB) | 00/10-15-43-10W5 Neutron-density Log (mKB) | 00/6-30-42-9W5 Neutron-density Log (mKB) |
| 1 | Edmonton and Belly River | Surface to 1765.0 | Surface to 1742.0 | Surface to 1700.0 |
| 2 | Upper Colorado | 1765.0 to 2120.0 | 1742.0 to 2126.0 | 1700.0 to 2062.0 |
| 3 | Cardium | 2120.0 to 2186.0 | 2126.0 to 2197.7 | 2062.0 to 2134.7 |
| 4 | Lower Colorado | 2186.0 to 2522.5 | 2197.7 to 2499.0 | 2134.7 to 2451.9 |
| 5 | Viking | 2522.5 to 2550.0 | 2499.0 to 2526.0 | 2451.9 to 2478.6 |
| 6 | Upper Mannville | 2550.0 to 2720.0 | 2526.0 to 2678.0 | 2478.6 to 2627.0 |
| 7 | Lower Mannville | 2720.0 to 2791.4 | 2678.0 to 2757.0 | 2627.0 to 2702.5 |
| 8 | Fernie, Rock Creek and Poker Chip | 2791.4 to 2833.0 | 2757.0 to 2794.8 | 2702.5 to 2741.8 |
| 9 | Nordegg | 2833.0 to 2861.0 | 2794.8 to 2824.0 | 2741.8 to 2771.0 |
| 10 | Shunda | 2861.0 to 2892.2 | 2824.0 to 2854.8 | 2771.0 to 2804.2 |
| 11 | Pekisko | 2892.2 to 2926.0 | 2854.8 to 2905.0 | 2804.2 to 2839.0 |
| 12 | Banff and Exshaw | 2926.0 to NDE | 2905.0 to NDE | 2839.0 to 3021.3 |
| 13 | Wabamun | NDE | NDE | 3021.3 to NDE |

Thunderchild 115K and Thunderchild First Nation 115B, 115C, 115D, 115E, 115F, 115G, 115H, 115I, 115J, 115L, 115M, 115N, 115Q, 115R, 115S, 115T, 115U, 115V, 115W, 115X and 115Z

| Item | Column 1 | Column 2 |
|------|----------|---------------|
| | | Well Log Data |

| | Zone | 91/5-25-59-23W3 | 21/16-3-52-20W3 |
|----|-------------------|-------------------------------|---------------------------|
| | | Neutron-density Log (mKB TVD) | Neutron-density Log (mKB) |
| 1 | St. Walburg | 231.6 to 274.4 | |
| 2 | Viking | 274.4 to 320.8 | |
| 3 | Colony | 320.8 to 340.0 | 454.0 to 478.0 |
| 4 | McLaren | 340.0 to 352.0 | 478.0 to 489.0 |
| 5 | Waseca | 352.0 to ILND | 489.0 to 516.0 |
| 6 | Sparky | | 516.0 to 546.0 |
| 7 | General Petroleum | | 546.0 to 575.0 |
| 8 | Rex | | 575.0 to 608.0 |
| 9 | Lloydminster | | 608.0 to 646.0 |
| 10 | Cummings | | 646.0 to 672.0 |
| 11 | Devonian | | 672.0 to NDE |

Utikoomak Lake 155

| Item | Column 1 | Column 2 | | |
|------|--------------------------------|-----------------------------------|--|---|
| | | Well Log Data | | |
| | Zone | 00/6-30-80-9W5 Sonic Log (mKB) | 12-28-80-9W5 ^a Electric Log (ft. KB) | 2-21-79-8W5 ^b Electric Log (ft. KB) |
| 1 | Peace River and Spirit River | 315.5 to 558.7 | | |
| 2 | Shunda and Pekisko | 558.7 to 607.0 | | |
| 3 | Banff and Exshaw | 607.0 to 884.0 | | |
| 4 | Wabamun | 884.0 to 1125.0 | | |
| 5 | Winterburn | 1125.0 to 1267.0 | | |
| 6 | Ireton | 1267.0 to 1568.0 | | |
| 7 | Beaverhill Lake | 1568.0 to 1686.0 | | |
| 8 | Slave Point and Fort Vermilion | 1686.0 to 1718.0 | | |
| 9 | Watt Mountain and Gilwood | 1718.0 to 1724.0 | 5552 to 5576 ^a | 5689 to 5771 ^b |

| | | | | |
|----|--|------------------|--|--|
| 10 | Muskeg and Keg River | 1724.0 to 1750.0 | | |
| 11 | Granite Wash | 1750.0 to 1755.0 | | |
| 12 | Precambrian | 1755.0 to NDE | | |
| a | West Nipisi Unit No. 1: definition of unitized zone | | | |
| b | Nipisi Gilwood Unit No. 1: definition of unitized zone | | | |

Wabamun 133A

| Item | Column 1 | Column 2 |
|------|---------------------------------|------------------------------------|
| | | Well Log Data |
| | Zone | 00/15-23-52-4W5 Sonic Log (mKB) |
| 1 | Belly River | Surface to 710.0 |
| 2 | Lea Park | 710.0 to 865.0 |
| 3 | Wapiabi | 865.0 to 1016.0 |
| 4 | Cardium and Lower Colorado | 1016.0 to 1245.0 |
| 5 | Viking | 1245.0 to 1276.0 |
| 6 | Joli Fou | 1276.0 to 1295.5 |
| 7 | Upper Mannville | 1295.5 to 1424.0 |
| 8 | Glauconite | 1424.0 to 1445.0 |
| 9 | Lower Mannville | 1445.0 to 1474.0 |
| 10 | Banff and Exshaw | 1474.0 to 1631.0 |
| 11 | Wabamun | 1631.0 to 1790.0 |
| 12 | Graminia, Blue Ridge and Calmar | 1790.0 to 1840.0 |
| 13 | Nisku | 1840.0 to 1877.0 |
| 14 | Ireton | 1877.0 to NDE |

Wabasca 166, 166A, 166B, 166C and 166D

| Item | Column 1 | Column 2 |
|------|----------|------------------|
| | | Well Log Data |
| | | 00/11-10-81-25W4 |

| | Zone | Induction Log (ft. KB) |
|---|----------------------|-------------------------------|
| 1 | Pelican and Joli Fou | 720 to 824 |
| 2 | Grand Rapids | 824 to 1116 |
| 3 | Clearwater | 1116 to 1452 |
| 4 | Wabiskaw | 1452 to 1536 |
| 5 | McMurray | 1536 to 1608 |
| 6 | Wabamun | 1608 to 1677 |
| 7 | Winterburn | 1677 to NDE |

White Bear 70

| Item | Column 1 | Column 2 | |
|-------------|-------------------|-----------------------------|--|
| | | Well Log Data | |
| | Zone | 01/5-15-10-2W2 | |
| | | Neutron Log (ft. KB) | |
| 1 | Viking | 2670 to 2843 | |
| 2 | Mannville | 2843 to 3200 | |
| 3 | Gravelbourg | 3200 to 3645 | |
| 4 | Watrous | 3645 to 3902 | |
| 5 | Tilston | 3902 to 3944 | |
| 6 | Souris Valley | 3944 to 4380 | |
| 7 | Bakken | 4380 to 4420 | |
| 8 | Torquay | 4420 to 4590 | |
| 9 | Birdbear | 4590 to 4690 | |
| 10 | Duperow | 4690 to 5214 | |
| 11 | Souris River | 5214 to 5593 | |
| 12 | Dawson Bay | 5593 to 5780 | |
| 13 | Prairie Evaporite | 5780 to NDE | |

White Fish Lake 128

| Item | Column 1 | Column 2 | |
|-------------|----------------------|------------------------------------|-------------------------------------|
| | | Well Log Data | |
| | Zone | 00/14-11-6213W4^a | 00/10-16-62-12W4^b |
| | | Induction Log (mKB) | Induction Log (mKB) |
| 1 | Viking and Joli Fou | 347.6 to 386.0 | 347.0 to 383.5 |
| 2 | Colony | 386.0 to 426.0 | 383.5 to 397.5 |
| 3 | Upper Grand Rapids 2 | 426.0 to 439.0 | 397.5 to 431.0 |

| | | | |
|---|-----------------------------|----------------|----------------|
| 4 | Lower Grand Rapids 1 | 439.0 to 453.0 | 431.0 to 445.0 |
| 5 | Lower Grand Rapids 2 | 453.0 to 471.0 | 445.0 to 459.0 |
| 6 | Upper Clearwater | 471.0 to 498.0 | 459.0 to 491.5 |
| 7 | Lower Clearwater | 498.0 to 522.0 | 491.5 to 516.5 |
| 8 | McMurray | 522.0 to NDE | 516.5 to 539.5 |
| 9 | Woodbend | | 539.5 to NDE |
| a | Colony Channel Type Log | | |
| b | Non-Colony Channel Type Log | | |

Woodland Cree 226, 227 and 228

| Item | Column 1 Zone | Column 2 Well Log Data | | |
|------|----------------------|-------------------------------|------------------|---------------------------|
| | | 00/6-18-87-18W5 | 00/7-24-86-14W5 | 00/9-34-86-17W5 |
| | | Sonic Log (mKB) | Sonic Log (mKB) | Neutron-density Log (mKB) |
| 1 | Bullhead | Surface to 494.0 | Surface to 475.0 | Surface to 498.0 |
| 2 | Debolt | 494.0 to 540.0 | NP | 498.0 to 504.0 |
| 3 | Shunda | 540.0 to 664.0 | NP | |
| 4 | Pekisko | 664.0 to 753.0 | 475.0 to 518.5 | |
| 5 | Banff and Exshaw | 753.0 to 1051.0 | 518.5 to 823.0 | |
| 6 | Wabamun | 1051.0 to 1312.0 | 823.0 to 1078.0 | |
| 7 | Winterburn | 1312.0 to 1397.0 | 1078.0 to 1205.5 | |
| 8 | Ireton | 1397.0 to 1662.0 | 1205.5 to 1509.0 | |
| 9 | Beaverhill Lake | 1662.0 to 1700.0 | 1509.0 to 1566.0 | |
| 10 | Slave Point | 1700.0 to NDE | 1566.0 to 1613.5 | |
| 11 | Granite Wash | | 1613.5 to 1614.0 | |
| 12 | Precambrian | | 1614.0 to NDE | |

SCHEDULE 5

(Subsection 79(1))

Royalties

Interpretation

Definition of *marketable gas*

1 In this Schedule, ***marketable gas*** means gas, consisting mainly of methane, that meets industry or utility specifications for use as a domestic, commercial or industrial fuel or as an industrial raw material.

Actual Selling Price

Highest value

2 (1) For the purposes of this Schedule, if the Minister determines that the actual selling price of oil or gas is less than the fair value of that oil or gas at the time and place of production, the actual selling price is deemed to be that fair value. In that case, the Minister must send the contract holder notice of the royalties payable and, within 30 days after the day on which the notice is received, the holder must pay the royalties payable in accordance with that notice.

Factors to consider

(2) In determining the fair value of oil or gas, the Minister, in consultation with the council, must take into account the following factors:

- **(a)** any applicable reference price;
- **(b)** in the case of gas, transportation cost, volume of fuel gas and heat value;
- **(c)** in the case of oil, transportation cost, quality adjustment for sulphur content and density;
- **(d)** whether the parties to the transaction are related parties within the meaning of subsection 82(4) of these Regulations;
- **(e)** the Bank of Canada's daily exchange rate for converting U.S. dollars to Canadian dollars; and
- **(f)** the factor of 6.2898 to convert barrels of oil to cubic metres of oil.

Oil Royalty

Calculation of royalty — oil

3 (1) The royalty on oil that is recovered from, or attributed to, lands in a contract area consists of the basic royalty determined in accordance with subsection (2) or (3) and the supplementary royalty determined in accordance with subsection (5). All amounts are to be calculated at the time and place of production.

Basic royalty — first five years

(2) During the five-year period beginning on the day on which production of oil from the contract area begins, the basic royalty for each month of that period is equal to the actual selling price multiplied by the monthly royalty determined in accordance with column 2 of the table to this subsection, based on the monthly production, referred to in column 1, of oil that is recovered from, or attributed to, each well.

TABLE

| Item | Column 1 Monthly Production (m ³) | Column 2 Monthly Royalty (m ³) |
|------|---|---|
| 1 | 80 or less | 10% of the number of cubic metres |
| 2 | More than 80 but not more than 160 | 8 m ³ plus 20% of the number of cubic metres in excess of 80 |
| 3 | More than 160 | 24 m ³ plus 26% of the number of cubic metres in excess of 160 |

Basic royalty — subsequent years

(3) Beginning immediately after the period referred to in subsection (2), the basic royalty for each subsequent month is equal to the actual selling price multiplied by the monthly royalty determined in accordance with column 2 of the table to this subsection, based on the monthly production, referred to in column 1, of oil that is recovered from, or attributed to, each well.

TABLE

| Item | Column 1 Monthly Production (m ³) | Column 2 Monthly Royalty (m ³) |
|------|---|---|
| 1 | 80 or less | 10% of the number of cubic metres |
| 2 | More than 80 but not more than 160 | 8 m ³ plus 20% of the number of cubic metres in excess of 80 |

| | | |
|---|-------------------------------------|--|
| 3 | More than 160 but not more than 795 | 24 m ³ plus 26% of the number of cubic metres in excess of 160 |
| 4 | More than 795 | 189 m ³ plus 40% of the number of cubic metres in excess of 795 |

Notice to council

(4) The Minister must send the council notice of the date on which the production referred to in subsection (2) begins.

Supplementary royalty

(5) The supplementary royalty is

- (a) in respect of oil to which subsection (2) applies, the amount determined by the formula

$$(T - B)0.50(P - R)$$

- where
- **T** is the amount of oil, in cubic metres, that is recovered from, or attributed to, each well in the contract area during the month,
- **B** is the monthly royalty, in cubic metres, determined in accordance with the table to subsection (2),
- **P** is the actual selling price of the oil per cubic metre, and
- **R** is the reference price, equal to (b) in respect of oil to which subsection (3) applies, the amount determined by the formula
 - (i) in the case of oil recovered from a source set out in column 2 of the table to this subsection, the price set out in column 3, and
 - (ii) in any other case, \$25 per cubic metre; and
-

$$(T - B)[0.75(P - R - \$12.58) + \$6.29]$$

- where
- **T** is the amount of oil, in cubic metres, that is recovered from, or attributed to, each well in the contract area during the month,
- **B** is the monthly royalty, in cubic metres, determined in accordance with the table to subsection (3),
- **P** is the actual selling price of the oil per cubic metre, and
- **R** is the reference price, equal to
 - (i) in the case of oil recovered from a source set out in column 2 of the table to this subsection, the price set out in column 3, and

- (ii) in any other case, \$25 per cubic metre.

TABLE

| Item | Column 1 First Nation Lands | Column 2 Source Producing Before January 1, 1974 | Column 3 Reference Price (\$/m ³) |
|------|--------------------------------|--|---|
| 1 | Pigeon Lake 138A | Cardium | 24.04 |
| | | Leduc | 25.37 |
| 2 | Sawridge 150G | Gilwood Sand | 25.13 |
| 3 | Enoch Cree Nation 135 | Lower Cretaceous | 24.64 |
| | | Acheson Leduc | 24.45 |
| | | Yekau Lake Leduc | 25.01 |
| 4 | Sturgeon Lake 154 | Leduc | 21.51 |
| 5 | Utikoomak Lake 155 | Gilwood Sand Unit No. 1 | 25.00 |
| | | West Nipisi Unit No. 1 | 24.58 |
| 6 | White Bear 70 | 10-2-10-2 W2 well | 22.40 |
| | | 8-9-10-2 W2 well | 22.63 |
| 7 | Siksika 146 | 6-25-20-21 W4 well | 18.19 |
| 8 | Ermineskin 138 | 6-11-45-25 W4 well | 19.18 |

Gas Royalty

Calculation of royalty — gas

4 (1) When gas that is recovered from, or attributed to, lands in a contract area is sold, the royalty payable is the gross royalty value of the gas, determined in accordance with subsection (2), less the portion of the cost of gathering, dehydrating, compressing and processing the gas that is equal to its gross royalty value divided by its total value.

Gross royalty

(2) The gross royalty value of gas that is recovered from, or attributed to, lands in the contract area is the basic gross royalty value of 25% of the quantity of that gas multiplied by the actual selling price plus the supplementary gross royalty value determined in accordance with subsection (3). All amounts are to be calculated at the time and place of production.

Supplementary gross royalty

(3) The supplementary gross royalty value of gas, individually determined for each gas component produced, is equal to the sum of the products obtained by multiplying 75% of the quantity of each gas component by

- **(a)** in the case of marketable gas, **(b)** in the case of pentanes plus, if the actual selling price exceeds \$27.68/m³, 50% of the portion of the actual selling price in excess of \$27.68/m³;

- (i) if the actual selling price exceeds \$10.65/1000 m³ but does not exceed \$24.85/1000 m³, 30% of the difference between the actual selling price per 1000 m³ and \$10.65/1000 m³, or
- (ii) if the actual selling price exceeds \$24.85/1000 m³, \$4.26/1000 m³ plus 55% of the portion of the actual selling price in excess of \$24.85/1000 m³;
-
- (c) in the case of sulphur, if the actual selling price exceeds \$39.37/t, 50% of the portion of the actual selling price in excess of \$39.37/t;
- (d) in the case of other components from a source that produces marketable gas, an amount equal to the product obtained by multiplying the actual selling price of each of those components by the percentage by which the overall royalty rate for marketable gas, taking both basic and supplementary gross royalty values into account, exceeds 25%; and
- (e) in the case of other components from a source that does not produce marketable gas, the lesser of one third of the actual selling price of that component and the amount determined under any special agreement entered into under subsection 4(2) of the Act.

Measurement of volumes

(4) For the purposes of this section, volumes referred to are volumes measured at standard conditions of 101.325 kPa and 15°C.

Notice to council

(5) The Minister must send the council notice of any costs that are deducted under subsection (1) for gathering, dehydrating, compressing and processing.

Royalty on Oil or Gas Consumed

No royalty payable

5 (1) Despite sections 2 to 4, the royalty payable on oil or gas recovered from, or attributed to, lands in a contract area is nil if the oil or gas is consumed in drilling for, producing or processing oil or gas that is recovered from, or attributed to, those lands.

Royalty payable

(2) However, subsection (1) does not apply to oil or gas that is consumed in the production or processing of crude bitumen.

SCHEDULE 6

(Section 113)

Administrative Monetary Penalties

PART 1

Indian Oil and Gas Act

| Item | Column 1 | Column 2 |
|------|-------------|--------------|
| | Provision | Penalty (\$) |
| 1 | 5(1)(a)(i) | 10,000 |
| 2 | 5(1)(a)(ii) | 10,000 |
| 3 | 16 | 10,000 |
| 4 | 17(2) | 10,000 |

PART 2

Indian Oil and Gas Regulations

| Item | Column 1 | Column 2 |
|------|------------|--------------|
| | Provision | Penalty (\$) |
| 1 | 16 | 10,000 |
| 2 | 19(2) | 1,000 |
| 3 | 21(a)(i) | 1,000 |
| 4 | 21(a)(ii) | 1,000 |
| 5 | 21(a)(iii) | 1,000 |
| 6 | 21(a)(iv) | 1,000 |
| 7 | 21(a)(v) | 1,000 |
| 8 | 21(b)(i) | 1,000 |
| 9 | 21(b)(ii) | 1,000 |
| 10 | 21(b)(iii) | 1,000 |
| 11 | 21(b)(iv) | 1,000 |
| 12 | 21(b)(v) | 1,000 |
| 13 | 21(b)(vi) | 1,000 |
| 14 | 21(c)(i) | 1,000 |
| 15 | 21(c)(ii) | 1,000 |
| 16 | 21(c)(iii) | 1,000 |
| 17 | 21(c)(iv) | 1,000 |
| 18 | 21(c)(v) | 1,000 |
| 19 | 21(c)(vi) | 1,000 |
| 20 | 21(c)(vii) | 1,000 |
| 21 | 21(d)(i) | 1,000 |
| 22 | 21(d)(ii) | 1,000 |

| | | |
|----|-------------|------------------|
| 23 | 21(d)(iii) | 1,000 |
| 24 | 21(d)(iv) | 1,000 |
| 25 | 21(d)(v) | 1,000 |
| 26 | 21(d)(vi) | 1,000 |
| 27 | 21(d)(vii) | 1,000 |
| 28 | 21(d)(viii) | 1,000 |
| 29 | 21(e) | 1,000 |
| 30 | 21(f) | 1,000 |
| 31 | 32(1) | 2,500 |
| 32 | 32(2)(a) | 10,000 |
| 33 | 32(2)(b) | 2,500 (per hole) |
| 34 | 32(2)(c) | 2,500 |
| 35 | 32(2)(d) | 10,000 |
| 36 | 32(2)(f) | 1,500 |
| 37 | 33(1) | 10,000 |
| 38 | 34 | 10,000 |
| 39 | 59(2) | 10,000 |
| 40 | 75(5) | 10,000 |
| 41 | 78 | 10,000 |
| 42 | 82(2)(a) | 1,000 |
| 43 | 82(2)(b) | 1,000 |
| 44 | 82(2)(d) | 1,000 |
| 45 | 83(2) | 2,000 |
| 46 | 98 | 1,000 |

REGULATORY IMPACT ANALYSIS STATEMENT

(This statement is not part of the Regulations.)

Executive summary

Issues: The *Indian Oil and Gas Act (1974)* [IOGA, 1974] has remained relatively unchanged for 35 years and, similarly, the *Indian Oil and Gas Regulations, 1995* (1995 Regulations) for more than 20 years. The IOGA, 1974 and the 1995 Regulations govern oil and gas activities on First Nation lands. This regime has remained stagnant while provincial acts and regulations have evolved in response to industry and technological developments. In order to update and modernize the oil and gas regime on First Nation lands, new regulations are required.

Description: The *Indian Oil and Gas Act (2009)* [IOGA, 2009] received royal assent in May 2009 and requires supporting regulations to be brought into force. To bring the IOGA, 2009 into force without delay, Phase 1 *Indian Oil and Gas Regulations* (the Regulations) have been developed to replace the 1995 Regulations. The IOGA, 2009 was designed to increase the legal certainty of the regulatory process governing oil and gas exploration and development; improve the Government of Canada's ability to regulate oil and gas activity; and, enhance environmental

protection while ensuring the preservation of First Nation sites of cultural, historical and ceremonial significance.

In continuing with and building on the legislative development process, regulatory development has been done in partnership with oil- and gas-producing First Nations, and their level of participation has been unprecedented.

These new Regulations consist of provisions in the areas of (a) subsurface tenure; (b) drainage and compensatory royalty; (c) First Nations' audit; and (d) royalty reporting requirements to facilitate royalty verification. In addition, provisions from the existing 1995 Regulations have been carried forward, with modifications to (a) ensure compatibility with the IOGA, 2009; (b) reflect modern regulatory drafting conventions; (c) reflect current, proven and beneficial practices and procedures that have evolved over years of working in partnership with stakeholders; and (d) address comments provided as a result of reviews by the Standing Joint Committee for the Scrutiny of Regulations.

Rationale: The federal government and First Nation stakeholders agree that a modern oil and gas regulatory regime on First Nation lands would support resource development, while addressing the specific needs and contexts of First Nation communities. New legislation and regulations were determined to be the best option to provide clear authorities and powers for Canada; address investment barriers on First Nation lands through a closer alignment with provincial rules and practices; and reduce the reliance on rules embedded in contracts so that Canada has the proper tools to encourage industry compliance and to respond appropriately to address non-compliance. These Regulations will result in \$84.2 million in administrative burden relief (benefits) and impose \$483,311 in total costs, generating a net benefit of \$83.7 million equivalent to \$12 million annually. These savings will largely benefit small to medium-size industry operators who will receive approximately 72% of the administrative cost savings, or almost \$60.2 million. The IOGA, 2009 and these Regulations form the basis for a modern framework for the oil and gas regime on First Nation lands.

Issues

While provincial acts and regulations governing the conservation and development of oil and gas resources have been, over the past 20 years, enhanced and adapted to industry and technological developments, the federal regulatory regime for oil and gas development activities on First Nation lands has not. A modern federal regulatory framework has been developed for the oil and gas regime on First Nation lands that is closer aligned with the provincial regime to support resource development.

On May 14, 2009, amendments modernizing the *Indian Oil and Gas Act* (1974) [IOGA, 1974] received royal assent, resulting in a new *Indian Oil and Gas Act*(2009)[IOGA, 2009]. The coming into force of the IOGA, 2009 required the development of new regulations to replace the *Indian Oil and Gas Regulations, 1995*(1995 Regulations).

Under the current federal regime, the lack of a consistent set of rules that are different from rules off reserves has made investment in oil and gas projects on reserves less attractive, as industry has had to employ duplicative processes and systems — one for their on-reserve projects and another for their projects in the rest of the province. It has been challenging

to regulate the full range of modern oil and gas development activities on First Nation lands due to limited regulatory enforcement mechanisms.

This new federal regulatory regime will lift barriers to industry investment on First Nation lands while providing the federal government with modern tools to efficiently and effectively encourage industry compliance and to take appropriate action to address non-compliance.

Background

Indian Oil and Gas Canada, a special operating agency of Crown-Indigenous Relations and Northern Affairs Canada, administers the *Indian Oil and Gas Act*. As the regulator of oil and gas exploration and development on First Nation lands, the Government of Canada fulfills the Crown's fiduciary and statutory obligations to First Nations regarding oil and gas resources. According to Indian Oil and Gas Canada's analysis, oil and gas may be present in approximately 300 First Nation reserves in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario and the Northwest Territories. There are approximately 50 First Nations with active oil and gas exploration or production, mainly in Alberta and Saskatchewan. In fiscal year 2016–17, \$59 million in oil and gas royalties, bonuses and rentals were collected by Indian Oil and Gas Canada on behalf of the producing First Nations, and \$41 million were invested by industry to drill and complete 26 wells on First Nation lands.

While external factors such as world energy prices, competitiveness of provincial regimes and access to markets may partially explain the limited pace of exploration and development of oil and gas resources on First Nation lands, regulatory barriers faced by industry on federal lands are likely a contributing factor.

The *Indian Oil and Gas Act* was enacted in 1974, during the first global energy crisis, to provide the tools necessary to operate in a heavily regulated oil and gas industry. Although transactions have grown in volume, variety and complexity, the Act remained unchanged for 35 years while provincial acts and associated regulations were enhanced and adapted to industry and technological developments and were amended to include modern redress mechanisms.

This has resulted in an uneven playing field for First Nations wanting to attract industry investment as the existing legislative and regulatory regime governing oil and gas activity on First Nation lands does not provide the level of clarity and certainty that modern industry requires and expects when making its investment decisions. The following are examples:

- Under the existing IOGA, 1974 and 1995 Regulations, the Government of Canada does not have the necessary enforcement tools to encourage industry compliance and to take appropriate action to address non-compliance. Indian Oil and Gas Canada has limited options to address non-compliance: cancelling a lease or court action.
- Operational practices and schedules related to data collection and royalty calculation are misaligned with those of the oil- and gas-producing provinces. The impact for some companies deciding to invest on First Nation lands is that they have to develop duplicate processes and systems for reporting their oil and gas activities on reserve lands, separate from those for reporting their activities off reserves. The need to duplicate efforts represents an administrative burden and is a disincentive to companies considering investment on First Nation lands.

Furthermore, the Government of Canada currently lacks the required authorities to audit a company conducting business on First Nation lands. With such large sums of money involved in the oil and gas industry, auditing is one of the essential tools to confirm that First Nations are indeed receiving the proper return in exchange for their natural resources.

The development of the Regulations began in parallel with the IOGA, 2009 undergoing the parliamentary review and approval processes. Just as the legislative development process, regulatory development has been done in partnership with oil- and gas-producing First Nations, and their level of participation has been unprecedented. First Nations were funded and were provided with opportunities to review and provide feedback on the policy intent behind the Regulations, on the regulatory drafting instructions, and on drafts of the proposed Regulations. First Nations' funding included provisions to obtain independent legal and technical expertise and advice.

To facilitate the regulatory drafting process, given that oil and gas is a highly complex and technical industry, the Regulations were subdivided into nine themes:

- 1. Drainage and compensatory royalty
- 2. Subsurface tenure
- 3. Surface tenure
- 4. Exploration
- 5. Environment
- 6. Enforcement
- 7. Conservation
- 8. Moneys management
- 9. Royalty

To bring the IOGA, 2009 into force with minimal delay, the Department (formerly known as Indigenous and Northern Affairs Canada) proposed, and oil- and gas-producing First Nations agreed, that regulatory development would occur incrementally and that the IOGA, 2009 would be brought into force once Phase I Regulations had been drafted.

These Regulations consist of “new” provisions in the areas of subsurface tenure; drainage and compensatory royalty; First Nations' audit; and royalty reporting requirements to facilitate royalty verification. In addition, to cover the whole range of oil and gas activities on First Nation lands and to ensure that there will be no regulatory gaps once brought into force, the provisions pertaining to the other themes are carried over from the 1995 Regulations with only minor changes

- To ensure compatibility with the IOGA, 2009.
- To reflect modern regulatory drafting conventions.
- To reflect current practices and procedures that have evolved over years of working in partnership with Indian Oil and Gas Canada, First Nations, industry and the provinces and that have proven beneficial to regulating oil and gas activity on First Nation lands, such as the environmental review process.
- To address recommendations made by the Standing Joint Committee for the Scrutiny of Regulations.

The Government of Canada will continue to work with First Nation stakeholders on the development of new proposed regulations that will progressively replace sections of the Regulations carried over from the 1995 Regulations.

Objectives

The objective is to bring the IOGA, 2009 into force to create a more efficient and effective regulatory regime for First Nations oil and gas exploration and development and to align more closely the on-reserve regime with the regulatory environment off reserves. Specific objectives of the new federal regulatory regime are to

- Ensure that First Nations and industry have a predictable regulatory environment in which to make investment decisions.
- Provide for a more robust and flexible compliance and enforcement regime that includes criteria for regulatory decision-making, a definition of the rights and responsibilities of all parties, and clear authorities and tools to encourage compliance.

Description

The 1995 Regulations are repealed and replaced with these Regulations, which are fully compatible with the IOGA, 2009. These Regulations include new rules in addition to provisions carried over from the 1995 Regulations.

To ensure that First Nations and industry have a predictable regulatory environment in which to make investment decisions, one that is more aligned with the regulatory environment off reserves, these Regulations

- (a) Establish procedures for: the issuance of licences and terms and conditions those of licences to explore lands for potential oil and gas; subsurface contracts that allow oil and gas production; surface contracts for accessing subsurface interests; and the determination of the length of the initial term for both permits and leases. These changes subject stakeholders to regulated, rather than negotiated, procedures and terms.
- (b) Establish rule sets for the earning provisions on permits and for the continuation of contracts. Provisions in the Regulations explain how additional lands are earned under a permit, and outline the circumstances under which a contract is continued after its initial term, which are significant steps in ensuring that First Nations and industry have a predictable operating environment.
- (c) Establish record keeping and reporting requirements for a wide range of data, including information required to enhance the accuracy of royalty assessments and payments; data on the likelihood of oil and gas production potential; and progress reports on oil and gas development activities. These changes align data reporting and gathering with that of the provinces. Once supporting informatics enhancements have been completed, the Government of Canada will use the same system as the provinces and will be able to automatically extract the data it needs and industry will no longer need to maintain duplicate processes and systems for their on- and off-reserve projects.
- (d) Broaden the option of the electronic submission of data and issuance of notices. This better aligns the regime with the standards and processes of its more modern and efficient counterparts within the provinces.

- (e) Establish when compensatory royalty is owed where First Nation lands are drained of their oil and gas by drilling in adjoining areas. This change is rooted in existing provincial drainage laws, thus ensuring consistency with the off-reserve system, but also including modifications to address concerns regarding the uniqueness of First Nation land boundaries.

To provide a more robust and flexible compliance and enforcement regime that includes criteria for regulatory decision-making, a definition of the rights and responsibilities of all parties, and clear authorities and tools to encourage compliance, the new elements of these Regulations

- (a) Add a process by which First Nations may arrange to conduct an audit, on behalf of the Minister of Indian Affairs and Northern Development (the Minister), of the activities of those engaged in oil and gas exploration and development on their lands. Modernization of the regime includes addressing the perspectives of many stakeholders. This provision represents a means for First Nations to become more involved in ensuring that the compliance and enforcement regime is robust and flexible.
- (b) Remove the provision by which the decisions of the Executive Director of Indian Oil and Gas Canada may be reviewed by the Minister, as under the IOGA, 2009, all decisions are made by the Minister. The increasing complexity of regulating industry activities means that redress mechanisms also require updating and modernization. The ministerial review of Executive Director decisions has proven to be an unnecessary step, since these disputes are usually taken to the courts. This particular change ensures that, when a stakeholder is not in agreement with a decision of the Minister, the issue can be addressed by a court of competent jurisdiction in a timelier manner.
- (c) Establish administrative monetary penalties for specified violations of the Act and the Regulations. A modern suite of regulatory tools, including a schedule of violations, to encourage industry compliance and to appropriately address situations of non-compliance will improve the Government of Canada's ability to regulate oil and gas development on First Nation lands. The Act and the Regulations provide the authority to audit, to issue shutdown and remedial action orders, as well as to inspect, search and seize in a manner consistent with the off-reserve regime.
- (d) Ensure all applications for oil and gas surface activities include an environmental review to ensure activities are undertaken without causing irreparable damage to First Nation lands. Providing that environmental reviews are performed prior to any project construction is a key aspect of ensuring the Government of Canada establishes a regulatory environmental regime that is consistent and compatible with the regulatory environmental regime off reserves, and that First Nation sites of cultural, historical and ceremonial significance are preserved.

In June 2006, the Standing Joint Committee for the Scrutiny of Regulations (the Committee) made a number of recommendations regarding the 1995 Regulations. Most of the recommendations pointed to inconsistencies between the English and French versions of the 1995 Regulations. It was also found that there were minor language issues in the English text. While the rewrite of the Act and the Regulations have largely eliminated the provisions where these issues were noted by the Committee, all of the Committee's recommendations were taken into account and addressed in these Regulations.

Regulatory development

Consultation (prior to prepublication in the Canada Gazette, Part I)

Initiated in 2008, regulatory development under this initiative was undertaken in close collaboration with the Indian Resource Council, an Indigenous organization that advocates on behalf of 189 member First Nations whose lands have oil and gas resources or potentially have such resources. Indian Oil and Gas Canada and the Indian Resource Council established the Joint Technical Committee, made up of departmental subject matter experts and oil and gas technicians from some of the major oil- and gas-producing First Nations, to review and provide input during the development of the Regulations. Funding was provided to the Joint Technical Committee so that they could obtain independent technical and legal advice in order to review and provide feedback on the policy intent behind the Regulations, on the regulatory drafting instructions, and on drafts of proposed Regulations.

Consultations on modernizing the on-reserve oil and gas regime have been among the most comprehensive ever conducted by the Department (formerly known as Indigenous and Northern Affairs Canada). First Nations were consulted directly during the development of the proposed Regulations to ensure that they were informed, meaningfully involved and had every opportunity to participate in the development of the proposed Regulations. Also, Indian Oil and Gas Canada held 10 information symposiums to discuss the proposed changes and answer questions, engaged and distributed information packages to more than 250 stakeholders, conducted over 80 one-on-one meetings, and held 6 technical workshops. Letters reporting on regulatory development progress were provided regularly, and annual updates were presented at the Indian Resource Council's general meetings. Indian Oil and Gas Canada continues to provide quarterly newsletters for First Nations and industry with active oil and gas interests on reserve.

In 2015, the Department (formerly known as Indigenous and Northern Affairs Canada) provided funding to three First Nations, namely Loon River First Nation, White Bear First Nation and Frog Lake First Nation, so that they could obtain independent technical and legal reviews of the draft Regulations. These First Nations were chosen based on their differing locations and commodities. This was done to complement and confirm similar reviews conducted by the Joint Technical Committee.

The proposed Regulations were distributed three times as consultation drafts, in March 2014, in May 2015, and in September 2017 to different groups of stakeholders, including the Indian Resource Council, all oil- and gas-producing First Nations, other First Nation organizations, oil and gas companies, the Canadian Association of Petroleum Producers, and provincial oil and gas regulators. An advance copy of the prepublication draft was provided at two symposiums held in early 2016 for Chiefs of oil- and gas-producing First Nations from British Columbia, Alberta and Saskatchewan. Approximately 150 attendees participated in these symposiums that reviewed the draft Regulations clause by clause. The May 2015, early 2016, and September 2017 versions were also published in the *First Nations Gazette* for public review and feedback.

Additional consultation activities were conducted in late 2016 and into spring of 2017 which resulted in several changes being brought to the draft Regulations to accommodate the desire of oil- and gas-producing First Nations for increased participation in the management of their oil and gas resources. These changes provide First Nations with additional flexibility in approving continuances, amending drilling commitments, and dealing with assignments.

Oil- and gas-producing First Nations and First Nations with oil and gas potential, the major oil- and gas-producing provinces, and the oil and gas industry all support the development of a modernized on-reserve oil and gas regime since they stand to benefit from an improved business climate as a result.

All feedback from different groups of stakeholders, including the Indian Resource Council, oil- and gas-producing First Nations, First Nation organizations, industry and provinces was carefully considered and was invaluable in improving these Regulations. Stakeholder feedback that was received was grouped under the following three themes: (1) technical; (2) First Nation governance; and (3) First Nation consultation.

Technical comments received include proposed changes to data requirements, time frames, and environmental protection measures and were accommodated in the Regulations where appropriate.

While there is general support for the need for a modern regulatory regime, over the course of the legislative and regulatory development process, some First Nations raised broader jurisdictional aspirations related to management and control of their oil and gas resources. These aspirations were not accommodated at this time to the extent desired; these Regulations strike a balance between the flexibility that First Nations have requested and the requirements of a modern regime that is more closely aligned with the regulatory environment off reserve.

In response to feedback related to First Nation governance and consultation, and the jurisdictional aspirations of First Nations, the Government of Canada has committed to explore, in partnership with oil and gas First Nations, potential options for greater First Nation jurisdiction and control over oil and gas management on reserve. The Government is working with the Indian Resource Council, who in turn will be consulting its membership on potential options.

A record of consultation on the Act and the proposed Regulations is posted on the Indian Oil and Gas Canada website at <http://www.pgic-iogc.gc.ca/eng/1471964522302/1471964567990>. In addition, the May 19, 2018 proposed Regulations were published on the *First Nations Gazette* at <http://www.fng.ca> for public consultation.

Consultation (during the public comment period following prepublication in the Canada Gazette, Part I)

Indian Oil and Gas Canada adopted a proactive consultation and engagement approach upon prepublication of the proposed Regulations in the *Canada Gazette, Part I*, on May 19, 2018. Indian Oil and Gas Canada engaged Indigenous stakeholders by letter, email, meetings, and one-on-one consultations. Engagement with stakeholders such as industry, industry organizations, and provincial agencies occurred by letter and email. On November 7 and 8, 2018, industry information sessions were held in Calgary, Alberta, to provide a general overview of the proposed Regulations and an opportunity to ask questions.

Regular updates were also published on the Indian Oil and Gas Canada website at <http://www.pgic-iogc.gc.ca/eng/1100110010002/1100110010005>. The general public was invited to comment and provide feedback during the 90-day comment period ending on August 17, 2018.

During the comment period, Indian Oil and Gas Canada strived to provide stakeholders with detailed information in a timely manner. Some comments resulted in necessary changes to provisions in the proposed Regulations. Indian Oil and Gas Canada proactively sent two letters to all stakeholders providing updates on the changes that were being made. These letters, dated June 28, 2018, and July 19, 2018, are available on the Indian Oil and Gas Canada website (<http://www.pgic-iogc.gc.ca/eng/1100110010002/1100110010005>). After the issuance of these letters, further consultation activities were undertaken to ensure that stakeholders were aware of the changes and to provide another opportunity to comment prior to final approval.

A total of 17 stakeholders submitted comments and feedback: the Indian Resource Council, six First Nations, four oil and gas companies, one industry organization, four provinces and a member of the public. Indian Oil and Gas Canada has responded to all comments and feedback either verbally or in writing.

A large number of comments and feedback centred on implementation or clarification of language used in the proposed Regulations. For example, the interplay between the existing leases and the proposed Regulations, especially with regard to continuance and royalty provisions; the definitions of First Nation lands and bitumen, among others; audits and examinations; spacing units; offset notices; and subsurface contract bidding processes. Given that many of these comments were duplicative, the responses were compiled in a fact sheet which was first published in the quarterly newsletter that is issued to all stakeholders, and also made available on Indian Oil and Gas Canada's website (<http://www.pgic-iogc.gc.ca/eng/1100110010002/1100110010005>). Other questions concerned elements that will be addressed in Phase II of the regulatory development, such as royalties, exploration (seismic) and environmental protection. In addition, during the November 7 and 8, 2018 information sessions, a desire for earlier engagement in Phase II regulatory development was expressed by several industry representatives. These comments and feedback have been included in the ongoing Phase II engagement and discussions.

Some feedback touched upon areas that are outside of the scope of the Regulations, such as elements relating to federal/provincial agreements and drafting conventions. These have been noted and shared with appropriate areas of responsibility.

During the consultation period, a further review of the English and French regulatory text revealed that changes had been made during editing which created inconsistencies in both texts. In addition, some wording was modified in editing after the September 2017 publication in the *First Nations Gazette* which slightly altered the intent from the September 2017 version. These inconsistencies have been rectified in the final regulatory text and do not have any impacts on stakeholders. For example, the word "reserve" was used in a number of provisions in place of the defined term "First Nation lands." Another example is the definition of "actual selling price" which was altered during editing. However the definition has since been modified in these Regulations to reflect the wording of the September 2017 version.

The following paragraphs summarize the comments and feedback which elicited changes to the Regulations:

Approval of assignment

In section 25 of the proposed Regulations, it was stipulated that the assignee must meet with the council if the council makes a request, and provides for a delay of the Minister's approval of

the assignment of 15 days to allow time for the meeting to occur. If the assignee did not meet with the council, the Minister could still approve the assignment. Comments received indicated that the timing and approach of this provision did not foster positive relationship building. As such, the following changes were made to this section:

- the 15-day delay is removed;
- the assignee is required to indicate on the application that the meeting occurred with the First Nation, or that the First Nation has provided a written waiver for the meeting; and
- an application is deemed incomplete and further processing is to be halted if the confirmation of, or waiver for, the meeting is not included with the application.

Opening of bids

In subsection 42(4) of the proposed Regulations, the provision provided the council with 7 days after the public tender process closed to notify the Minister of a rejection of the highest bid. Comments were received indicating that the 7-day timeline in subsection 42(4) was unrealistic and did not provide adequate time. The timeline was modified to 15 days to allow the council time to convene and provide the written resolution to the Minister.

Financial ability

Paragraph 49(2)(g) of the *Indian Oil and Gas Regulations, 1995* provides that the Executive Director may refuse to approve an assignment of contract rights if the assignee cannot provide evidence of financial ability to fulfill its contract obligations. This provision was initially excluded from the proposed Regulations; however, in response to a comment, it was re-instated as an added assurance to First Nations. The provision provides that a potential assignee will provide evidence of its financial ability to meet contractual obligations.

Continuance of subsurface contracts

Subsection 63(f) of the proposed Regulations provided for an indefinite continuance of a contract on lands within the spacing unit “that is not producing but is shown by mapping to be potentially capable of producing from the same pool.” It was indicated by some stakeholders that this provision should be regarded in the same manner as subsection 63(g) for spacing units that are potentially productive. As such, subsection 63(f) was amended with respect to mapped lands such that they will qualify for a one-year continuance rather than the indefinite continuance.

Related parties

As part of the implementation of these Regulations, the Petrinex system will be used, in the future, to access production volume information used to calculate the royalty on First Nation oil and gas contracts. This system captures information on the relationship between producers and purchasers of oil and gas and, therefore, contains specific definitions regarding “related parties.” The wording of subsection 82(4) of the proposed Regulations did not quite reflect the Petrinex system definitions. Therefore, to ensure proper alignment with the definitions, minor changes to subsection 82(4) of the Regulations were made to ensure proper alignment.

First Nation audits and examinations

Subsection 86(2) of the proposed Regulations stipulated that a person who conducts an audit or examination must not be employed by, affiliated to or represent any oil or gas company. Comments were received indicating that this wording unintentionally disqualified auditors who had previously been affiliated with an oil or gas company. The Regulations were amended to reflect that the person conducting the audit or examination, and the person accompanying the auditor or examiner, must not be affiliated with the company being audited.

Compensatory royalty

Most royalty provisions in the *Indian Oil and Gas Regulations, 1995* have been preserved in these Regulations and will be reviewed in Phase II of the regulatory development. However, a series of provisions relating to compensatory royalties were modified. Sections 93 to 102 provided that offset notices outlining payable compensatory royalties be sent to contract holders within different time frames depending on whether the well is considered confidential or non-confidential. Comments received indicated that this was unfavourable to First Nations and represented a loss of revenue. The Regulations were amended to allow for the issuance of a pre-offset notice for confidential wells to align the compensatory royalty calculations with non-confidential wells. This change will result in an increase in compensatory royalty payments to First Nations and, accordingly, in a decrease in profit to industry. Given this material change, both First Nations and industry have been consulted and no negative feedback has been received.

Actual selling price

Schedule I to the 1995 Regulations includes provisions relating to the concept of Fair Market Value that were inadvertently omitted from the proposed Regulations. These provisions and the inclusion of the basic royalty calculation have been included in these Regulations. These changes do not impact any calculations as they reflect current practices.

Record search

Subsection 2(5) of the proposed Regulations provided that a person may request a record search of non-confidential, contractual documentation in the Minister's possession. In the July 19, 2018 letter to stakeholders, it was indicated that the expression "contractual documentation" was considered too broad and may allow for the inadvertent disclosure of confidential information. A change was proposed, but further discussions with stakeholders have confirmed that this change is not required as there are mechanisms in place to ensure confidential information is not released.

Modern treaty obligations and Indigenous engagement and consultation

As required by the *Cabinet Directive on the Federal Approach to Modern Treaty Implementation*, an assessment of modern treaty implications was conducted on the proposal. The assessment did not identify any modern treaty implications or obligations, as the proposal is outside of the geographic and subject matter scope of modern treaties.

Instrument choice

The federal government has committed to support stronger Indigenous communities, economic development, appropriate regulatory oversight, and credible environmental reviews through the implementation of the modernized IOGA, 2009 and its associated regulations.

The federal government and First Nations stakeholders agree that a modern oil and gas regulatory regime on First Nation lands will support sound development of these resources on reserve, while addressing the specific needs and contexts of First Nation communities. New legislation and regulations were determined to be the best option to provide clear authorities and powers for the Government of Canada, to remove barriers to investment on First Nation lands through a closer alignment with provincial rules and practices, and to reduce the reliance on rules embedded in contracts so that the Government of Canada has the proper tools, equivalent to provincial regulators, to encourage industry compliance and to respond appropriately to address non-compliance.

It is anticipated that updating and modernizing the regulatory regime will improve the business climate on oil and gas First Nation lands and be beneficial to all stakeholders, including First Nations and industry. Stakeholders were extensively consulted and are in support of the Regulations. No undue impacts on other areas or sectors are expected.

Regulatory analysis

Costs and benefits

In recent years, crude oil prices have undergone significant decreases due to world oil production exceeding world oil consumption. First Nations, which account for about 1% of the oil-producing sector in Canada, have been impacted at least as much as other jurisdictions. Although the Regulations create an improved climate for industry investment on First Nation lands, other factors such as world oil prices and access to markets will have a major impact on the sector. As each First Nation's situation is unique due to variations in both their oil and gas leases and their production volumes, the fluctuations in world oil prices have and will continue to have varying impacts on First Nations. Although the Regulations will not change these fluctuations, it may help to alleviate challenges the industry currently faces.

Indian Oil and Gas Canada anticipates that one of the benefits of the Regulations is an improved investment climate due to a regulatory environment that is more closely aligned with provincial requirements. This harmonization will, in turn, improve the functioning of oil and gas activities on reserves and create a more positive investment climate for the oil and gas industry and for First Nations. The alignment of industry reporting requirements with current practices in the oil- and gas-producing provinces, enabled by the IOGA, 2009 and the Regulations, is expected to reduce the cost of doing business on First Nation lands. In the absence of harmonization, industry has had to employ duplicate processes and systems.

There will also be some incremental costs. For companies already operating on reserve lands, some additional requirements will need to be met. However, with the exception of a new requirement for companies to apply for subsurface contracts in relation to a water disposal well, these requirements mostly codify procedures that are already being followed through administrative practice and voluntary compliance, such as right-of-entry charges for surface access, reporting unforeseen incidents and fixing surface access rates when a subsurface contract is issued.

These Regulations will result in \$84.2 million in administrative burden relief (benefits) and impose \$483,311 in total costs generating a net benefit of \$83.7 million equivalent to \$12 million annually. The cost and benefits are detailed in the table below.

| Cost/benefit item | Total Present Value (2019 price base year) | Annualized values |
|---|---|------------------------------|
| Administrative burden savings | | |
| Submission of information | \$83,289,159 | \$11,858,503 |
| Introduction of prescribed forms | \$263,413 | \$37,504 |
| Determination of fair value | \$3,850 | \$548 |
| Application for contract | \$105,873 | \$15,074 |
| Subsurface contract rights | \$34,535 | \$4,917 |
| Initial term of permit | \$7,699 | \$1,096 |
| Term of lease | \$7,699 | \$1,096 |
| No amendment and Intermediate term of permit | \$257,483 | \$36,660 |
| Bitumen recovery project | \$8,191 | \$1,166 |
| Continuation of subsurface contracts OLD | \$169,249 | \$24,097 |
| Pooling, production, allocation and unit agreements | \$14,796 | \$2,107 |
| <i>Total administrative burden savings (benefits)</i> | <i>\$84,161,949</i> | <i>\$11,982,768</i> |
| Costs | | |
| Service wells | \$3,441 | \$490 |
| Continuation of subsurface contracts NEW | \$316,193 | \$45,019 |
| Estimated Compensatory Royalty — Saskatchewan | \$123,726 | \$17,616 |
| Estimated Compensatory Royalty — Alberta | \$39,952 | \$5,688 |
| <i>Total costs</i> | <i>\$483,311</i> | <i>\$68,813</i> |
| Net benefits | \$83,678,637 | \$11,913,955 |

Throughout Indian Oil and Gas Canada's engagement process, industry has not expressed any concerns related to the net outcome of the Regulations including the amendments made after the prepublication in the *Canada Gazette*, Part I.

Small business lens

The small business lens does not apply to these Regulations, as there are no costs to small business.

"One-for-One" Rule

These Regulations are considered an “OUT” under the “One-for-One” Rule, as they result in a net positive reduction in administrative burden costs. According to the Department’s (formerly known as Indigenous and Northern Affairs Canada) analysis using the Regulatory Cost Calculator (as per the methodology described in the *Red Tape Reduction Regulations*), it has been assessed that the Regulations could save companies involved in oil and gas activities on First Nation lands an annualized equivalent of over \$6.6 million (based on a 7% discount rate, measured in 2012 Canadian dollars).

| | |
|---|-------------|
| Annualized administrative costs (constant 2012 dollars) | \$6,654,296 |
| Annualized administrative costs per business (constant 2012 dollars) | \$36,764 |

There are currently approximately 200 oil and gas companies with active agreements on First Nation lands, and it is estimated that 25% of these reserve lease and land holdings are held by First Nation-owned companies. For the purposes of costing the impact of the Regulations, a simple per proponent perspective was adopted. While some regulatory transactions, such as royalty reporting, occur several times a year, others are annual, and others only occur once as part of the life cycle of an oil and gas agreement. Assumptions made in the Regulatory Cost Calculator are based on available data on transactions (statistics on frequency of information submissions, frequency and number of required authorizations) over the course of recent years as well as on estimates of time required to perform certain tasks (e.g. preparing a free form letter versus filling out a prescribed form). The salary source is the 2014 Mercer Total Compensation Survey for the Energy Sector (bonuses, stock options or other compensation considerations were not included).

The decrease in the administrative burden will result in savings for companies involved in oil and gas activities on reserves, as a consequence of a number of updates to the Regulations in support of a more efficient regime for oil and gas activities on reserves. These updates include

- The codification of procedures for the issuance of licences, as well as surface and subsurface contracts, and transparent terms and conditions for these contracts, replacing the need to negotiate the terms of each specific agreement.
- The provision of defined rule sets for the earning provisions on permits and for the continuation of contracts, replacing the need to negotiate the terms of each specific agreement.
- The establishment of record keeping and reporting requirements for a wide range of data, including information required to enhance the accuracy of royalty assessments and payments, data required to support the continuance application of a subsurface contract, plus a one-time continuance application requirement.
- The introduction of the electronic submission of data and issuance of notices, to eliminate the requirement for industry to maintain duplicate systems and processes for their on-reserve projects.

Regulatory cooperation and alignment

These Regulations bring the federal regulatory regime for oil and gas development activities on First Nation lands into closer alignment with provincial regulations and practices off reserve. The Regulations will reduce duplication of processes and clarify procedures between on- and

off-reserve projects, resulting in an expected net present value savings to industry of \$83.7 million, as well as increase consistency between on- and off-reserve compliance, enforcement and environmental regimes.

Strategic environmental assessment

In accordance with the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*, a preliminary scan was conducted. It was concluded that a detailed analysis is not required.

Phase II regulatory development will focus on oil and gas exploration, environmental considerations, enforcement and conservation. A new strategic environmental assessment will be conducted at that time.

The Regulations are expected to have a net positive indirect impact. The Regulations set out provisions for consultation and negotiation between Chief and council of the First Nation and representatives from oil and gas companies. All applications for oil and gas surface activities must include an environmental review to ensure activities are undertaken without causing irredeemable damage to First Nation lands. In addition, the Regulations add an ability for a First Nation to conduct an audit of royalty monies owed by those engaged in oil and gas exploration and development on their lands, as well as the ability of Indian Oil and Gas Canada to issue shutdown and remedial action orders, and to inspect, search and seize in a manner consistent with the off-reserve regime.

Taken together, these Regulations will lead to better protection of First Nation lands, and reduce risks to the environment.

Gender-based analysis plus

A gender-based analysis plus (GBA+) assessment was conducted and found that the Regulations are likely to have an overall positive indirect impact on Indigenous Canadians. Primarily, the Regulations will result in net benefits to First Nations communities. The increased environmental protections offered by a modern regulatory regime will benefit First Nations women in particular. The research completed as part of the GBA+ assessment has shown that women are particularly vulnerable to negative health impacts caused by environmental pollution. By providing more opportunities for First Nations' Chiefs, councils and communities to be consulted and accommodated, agreements with oil and gas companies will likely better incorporate and address the concerns of diverse community members, including women, elders, youth and people who follow a traditional lifestyle that relies on the land.

Implementation, compliance and enforcement, and service standards

Implementation

The IOGA, 2009 and the Regulations will be brought into force on August 1, 2019.

Indian Oil and Gas Canada personnel are responsible for the administration and enforcement of the IOGA, 2009 and the Regulations. Throughout the development of the Regulations, officials with Indian Oil and Gas Canada have been developing or modifying forms, procedures and information systems and training personnel in order to implement and enforce the modernized

regulatory regime in these Regulations. Information and updates on the Act and Regulations will be available on the website.

In addition, the Department (formerly known as Indigenous and Northern Affairs Canada) also funded the production of a First Nations Readiness Report, which was completed in March 2016. This report recommended areas where support should be provided to First Nations for the implementation of the Regulations. Building on the report's findings, Indian Oil and Gas Canada has entered into an agreement with the Indian Resource Council whereby they will assume a leadership role in providing readiness training to First Nations that will assist them in preparing for the implementation of the Act and Regulations.

It is anticipated that stakeholders will have the necessary information to comply with the new requirements when the Regulations come into force. Information packages about the modified, clarified and new requirements of the Regulations will be provided to all stakeholders. Information will also be provided on the Indian Oil and Gas Canada website. In practice, there is a high level of compliance in the area.

Indian Oil and Gas Canada will train staff and develop operational policies, including a process guide for industry, in order to efficiently and effectively implement the administrative monetary penalties system.

Compliance and enforcement

Indian Oil and Gas Canada will continue to conduct engagement and outreach with industry, including industry associations such as the Canadian Association of Petroleum Producers. Indian Oil and Gas Canada's compliance and enforcement framework principles are to educate, promote and protect. These principles, especially the principle of education, are being used to assist Industry in adjusting to the new oil and gas regime on First Nation lands.

The compliance and enforcement structure is a combination of authorities under the IOGA, 2009 and the Regulations.

- (a) The IOGA, 2009 provides the authority to conduct an audit of those companies engaged in oil and gas activities on First Nation lands. The Regulations provide that First Nations may conduct such audits, on behalf of the Minister, upon application as set out in the Regulations. The ability to audit companies encourages compliance in royalty reporting and the extension of authority represents a means for First Nations to become involved in the regulatory process.
- (b) The Regulations no longer contain the requirement for a ministerial review of the Executive Director's (Indian Oil and Gas Canada) decision before making an application for a judicial review. All decisions will now be made by the Minister under the IOGA, 2009 and the Regulations. This ensures that when a stakeholder is not in agreement with a decision of the Minister, the issue can be addressed by a court of competent jurisdiction in a more expeditious manner.
- (c) The IOGA, 2009 and Regulations clearly set out the type of offences punishable, along with associated penalties, for issues of non-compliance. This ensures that the companies are aware of their rights and obligations as well as the possible penalties associated with non-compliance. Schedule 6 to the Regulations provides the administrative monetary value associated with various penalties under the Act.

- (d) The IOGA, 2009 provides the authority to inspect operations/records; conduct search and seize where necessary; issue shutdown and/or remedial action orders; all in response to non-compliance. This ensures that the companies are aware of their rights and obligations as well as being aware of possible action that may be taken by Indian Oil and Gas Canada.
- (e) The Regulations require that applications for oil and gas activities include an environmental review, where necessary. This ensures oil and gas activities are carried out in a manner consistent with the wishes of the First Nation and without causing irreparable damage to First Nation sites of cultural, historical, and ceremonial significance.

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