



DELEGATION AGREEMENT

This agreement made the 1st day of April, 2007.

BETWEEN:

PROVINCIAL AGRICULTURAL LAND COMMISSION
("ALC")
133 – 4940 Canada Way
Burnaby, B.C. V5G 4K6

AND:

OIL AND GAS COMMISSION ("OGC")
200, 10003 – 100th Avenue
Fort St. John, BC V1J 6M7

WHEREAS the ALC is responsible for approving applications for the non-farm use of Agricultural Land Reserve lands (ALR), including oil and gas activities and pipelines, under the *Agricultural Land Commission Act* (the "Act");

AND WHEREAS the OGC is responsible for regulating oil and gas activities and pipelines under the *Oil and Gas Commission Act, Petroleum and Natural Gas Act* and *Pipeline Act*;

AND WHEREAS preserving and protecting agricultural land and oil and gas development are both important to the economic, social and environmental sustainability of British Columbia;

AND WHEREAS the ALC and the OGC wish to further the one window regulation of the oil and gas industry and seek ways to streamline and improve the review and approval processes for applications for oil and gas activities and pipelines on ALR lands while preserving agricultural lands and encouraging the farming of agricultural lands;

NOW THEREFORE the ALC and the OGC agree, pursuant to section 26 of the Act, to enable the OGC to exercise the powers of the ALC under subsections 25 (1) and (2) of the Act, to decide applications for oil and gas activities and pipelines on ALR lands, and to exempt certain oil and gas activities and pipelines on ALR lands, as set out in this agreement, from the requirement of an application under the Act.

1 Applicability of Agreement

This agreement applies to ALR lands in the Peace River Regional District and Northern Rockies Regional District upon which oil and gas activities and pipelines are proposed, constructed or operated.

Applications and decisions for other non-farm use, subdivision, exclusion or inclusion remain the responsibility of the ALC and are not part of this agreement.

2 OGC Responsibilities

- 2.1 The OGC will exercise its delegated powers and operate under this agreement as follows:
 - 2.1.1 receive, consider and decide to approve or not approve applications set out in article 6 for oil and gas activities on ALR lands by:
 - 2.1.1.1 ensuring decisions are consistent with the purpose and intent of the Act,
 - 2.1.1.2 adhering to all or part of the guidelines in Appendix II ,
 - 2.1.1.3 minimizing impacts of oil and gas activities and pipelines on ALR lands, having regard for the sound development of the oil and gas sector, and
 - 2.1.1.4 providing copies of the applications to relevant local governments as notification and considering issues or concerns raised by the local government, if any;
 - 2.1.2 receive, evaluate and record pre-disturbance assessments as set out in Schedule A of this Agreement, submitted to the OGC under article 6 or article 7;
 - 2.1.3 provide such other information as may be requested by the ALC to assess oil and gas development on ALR lands.
- 2.2 For clarity, the OGC Commissioner and Deputy Commissioner are authorized to approve or not approve ALC applications submitted under article 6.1 of this agreement.
- 2.3 When land is no longer required for an oil and gas activity or pipeline on ALR lands, the OGC will:
 - 2.3.1 require the owner of the oil and gas activity or pipeline to submit a completed post-reclamation site assessment report as set out in Schedule B, to the OGC and the surface landowner, and
 - 2.3.2 evaluate and record Schedule B assessments before issuing a Certificate of Restoration for wellsites or other oil and gas activities.
 - 2.3.3 evaluate and record Schedule B assessments for pipelines immediately upon completion of construction and reclamation, upon request for approval to abandon or within a maximum of 24 months after installation.
- 2.4 For clarity, articles 2.3, 3.1, 3.2 and 3.3 apply to oil and gas activities or pipelines on ALR lands approved or authorized before the effective date of this agreement and for which Schedule B reports have not been submitted as of the effective date of this agreement.

3 Inspection and Compliance

- 3.1 As part of its general inspection programs, the OGC will develop an inspection program satisfactory to the ALC and OGC for the inspection of oil and gas activities and pipelines approved by the OGC under article 6 or authorized under article 7 and conduct inspections to ensure compliance with the Act and the requirements under this agreement.
- 3.2 The OGC will investigate and take appropriate remedial and enforcement actions as authorized under section 56 (1) of the Act for non-compliance of oil and gas activities

and pipelines on ALR lands with the Act and regulations. Remedial and enforcement actions include inspections, stop work orders, determinations and remediation orders, order of compliance and penalties.

- 3.3 The OGC will investigate and respond to all complaints from landowners regarding reclamation of sites disturbed by oil and gas activities and pipelines on ALR lands approved or authorized under this agreement and seek the advice of a Professional Agrologist, if appropriate.
- 3.4 The OGC will ensure its inspectors have a general knowledge and awareness of appropriate reclamation practices on ALR lands and seek the advice of the landowner or a Professional Agrologist regarding any areas of concern.
- 3.5 The OGC may also take appropriate enforcement actions under other Acts and regulations administered by the OGC.

4 Reporting, Data Gathering and Information Sharing

- 4.1 The OGC will submit to the ALC by May 1 of each year or such other date agreed upon by the ALC Chief Executive Officer and OGC Commissioner, a report summarizing the following information for the preceding annual period:
 - 4.1.1 Total number of Schedule A's for activities exempted from application
 - 4.1.2 Total number of Schedule B's
 - 4.1.3 Total number of ALC applications approved by the OGC Commissioner and/or Deputy Commissioner
 - 4.1.4 Total number of ALC applications not approved by the OGC Commissioner and/or Deputy Commissioner
 - 4.1.5 Total number of investigations
 - 4.1.6 Total number of enforcement actions under this agreement
 - 4.1.7 Summary of individual investigations and enforcement actions (individual or table form acceptable) including:
 - 4.1.7.1 Oil and gas company contact information
 - 4.1.7.2 Surface landowner contact information
 - 4.1.7.3 Location of the oil and gas activity or pipeline
 - 4.1.7.4 Description of the issue or concern
 - 4.1.7.5 Resolution of the issue or concern
- 4.2 The OGC will gather and keep appropriate statistics and information on all applications, activities exempted from applications, inspections and compliance matters dealt with under this agreement and necessary for the preparing of reports under article 4.1 and conducting audits under article 5.
- 4.3 The Parties agree to exchange information related to the administration of this Agreement (i.e. compliance reports; annual inspection reports; audits) to the extent permitted by and in accordance with their respective privacy and/or access to information legislation.

- 4.3.1 All information supplied to by one party o another may not be disclosed without the consent of the supplying party, except as required by law or for investigative and enforcement purpose.
- 4.3.2 Where a Party discloses information as a requirement of law, the disclosing party shall immediately notify the other party the details of such disclosure.

5 Audits

An audit team approach including staff representatives from both the ALC and OGC along with an independent auditor will be used to determine delegation effectiveness. The OGC, at its cost, will retain the services of an independent auditor, satisfactory to the ALC, to annually review a sample of decisions and activities authorized without applications, under this agreement. The purpose of the audit is set out in Appendix III attached to this agreement. The general Terms of Reference for the audit will be based on Appendix III and details of the audit will be approved by ALC and OGC Commissioner each year. The ALC Chief Executive Officer and OGC Commissioner may by mutual agreement specify additional requirements for an annual audit.

6 Oil and Gas Activities Requiring an Application to OGC

- 6.1 As per article 2.2 of this agreement, an application under section 20 (3) of the Act to the OGC is required for the oil and gas activities on ALR lands marked by an “X” in column 2 of Appendix I provided that all of the following conditions are satisfied:
 - 6.1.1 the surface landowner has consented by signing a surface lease agreement with the owner of the proposed oil and gas activity, or by signing a Form C/General Instrument, or the entry, occupation or use has been authorized by an order of the Mediation Arbitration Board;
 - 6.1.2 the owner of the proposed oil and gas activity obtains advice regarding the site assessment, construction of the development and reclamation of the land, from a reclamation specialist with appropriate training and a minimum of 2 years of related experience in land reclamation; and
 - 6.1.3 the owner of the proposed oil and gas activity files the following reports with the OGC, which must be prepared in consultation with the surface landowner prior to constructing the development:
 - 6.1.3.1 an assessment of the site as set out in Schedule A;
 - 6.1.3.2 a site reclamation plan for restoring the land to an equivalent topographic and soil condition that existed prior to disturbance, as set out in Schedule B;
 - 6.1.3.3 a report which provides evidence that the proposed oil and gas activity complies with paragraphs 6.1.1 and 6.1.2 and which includes a detailed survey plan.
- 6.2 If an oil and gas activity is approved under article 2.1.1, it is a condition of the approval that when the land is no longer required for the oil and gas activity, the owner of the oil and gas activity must reclaim the disturbed area in accordance with Schedule B (or any other condition as set by the OGC) and submit a Schedule B report to the OGC and the surface landowner upon completion of reclamation work, prior to applying for a Certificate of Restoration. For pipelines, the owner of the pipeline must reclaim the

disturbed area in accordance with Schedule B (or any other condition as set by the OGC) and submit a Schedule B report to the OGC and the surface landowner within 24 months of installation and reclamation of a pipeline.

6.3 The OGC may refer an application received under this article to the ALC for decision for the following reasons:

6.3.1 The decision, if made by the OGC, may give rise to a real or perceived conflict of interest;

6.3.2 The decision, if made by the OGC, conflicts with, or appears to conflict with a policy of the ALC;

6.3.3 The decision may result in a significant controversy between the ALC and a government agency, industry, or the public; or

6.3.4 Other circumstances mutually determined by the ALC Chief Executive Officer and the OGC Commissioner.

7 Oil and Gas Activities and Pipelines Exempted From Application

7.1 As provided by section 26 (2) of the Act, the oil and gas activities and pipelines marked by an “X” in column 4 of Appendix I are exempt from the requirement of an application under section 20 (3) provided that all of the following conditions are satisfied:

7.1.1 the surface landowner has consented by signing a surface lease agreement with the owner of the proposed oil and gas activity or pipeline, or by signing a Form C/General Instrument, or the entry, occupation or use has been authorized by an order of the Mediation Arbitration Board;

7.1.2 the existing and proposed buildings and structures which are part of the oil and gas activities or pipelines on a quarter section or equivalent area have a combined area of less than or equal to 450 square meters;

7.1.3 the combined total area occupied by existing and proposed oil and gas activities is less than 17 acres per quarter section (or 7 hectares per 65 hectare parcel);

7.1.4 the owner of the proposed oil and gas activity or pipeline obtains advice regarding the site assessment, construction of the development and reclamation of the land, from a reclamation specialist with appropriate training and a minimum of 2 years of related experience in land reclamation; and

7.1.5 the owner of the proposed oil and gas activity or pipeline files the following reports with the OGC, which must be prepared in consultation with the surface landowner prior to constructing the development:

7.1.5.1 an assessment of the site as set out in Schedule A;

7.1.5.2 a site reclamation plan for restoring the land to an equivalent topographic and soil condition that existed prior to disturbance as set out in Schedule B;

7.1.5.3 a report which provides evidence that the development complies with paragraphs 7.1.1 through 7.1.4 and which includes a detailed survey plan.

- 7.2 If an oil and gas activity is exempted under this article, it is a condition of the exemption that when the land is no longer required for the oil and gas activity, the owner of the oil and gas activity must reclaim the disturbed area in accordance with Schedule B (or any other condition as set by the OGC) and submit a Schedule B report to the OGC and the surface landowner upon completion of reclamation work, prior to applying for a Certificate of Restoration. For pipelines, the owner of the pipeline must reclaim the disturbed area in accordance with Schedule B (or any other condition as set by the OGC) and submit a Schedule B report to the OGC and the surface landowner within 24 months of installation and reclamation of a pipeline.
- 7.3 Despite article 7.1, the OGC may require an application to be submitted if the OGC believes the proposed oil and gas activity or pipeline may significantly impair the agricultural use of the quarter section or equivalent area of ALR land on which the proposed oil and gas activity or pipeline will occur;
- 7.4 This agreement does not affect applications that may be required under other statutes for oil and gas activities.

8 Applications to the ALC

Applications under Section 20 (3) of the Act continue to be the responsibility of the ALC and follow the regular process for non-farm use applications submitted to the appropriate local government for the following:

- 8.1 Oil and gas activities marked by an X in column 3 of Appendix I;
- 8.2 Where the existing and proposed buildings and structures which are part of the oil and gas activities or pipelines on a quarter section or equivalent area have a combined area of greater than 450 square meters; and
- 8.3 Where the combined total area occupied by existing and proposed oil and gas activities is greater than 17 acres per quarter section (or 7 hectares per 65 hectare parcel).

9 Reconsideration

Reconsideration of an approval granted by the OGC under article 2.1.1 will be handled in accordance with the Agricultural Land Commission Act section 33.

10 Fees

The OGC may retain the entire fee payable under section 34 of the ALC Act, or if a fee is deemed unnecessary the fee may be waived. Applications submitted to the ALC in Column 3 continue to require a fee.

11 Disputes

- 11.1 If a dispute arises regarding whether the OGC or ALC should consider a specific application, the ALC Chief Executive Officer and OGC Commissioner will decide jointly.
- 11.2 A dispute between the parties regarding the interpretation of a provision of this agreement will be resolved by the ALC Chief Executive Officer and OGC Commissioner.

12 Term

- 12.1 The term of this agreement shall be for 1 year commencing on the effective date of this agreement unless extended by mutual agreement of the ALC CEO and the OGC Commissioner.
- 12.2 Either party may terminate the agreement on giving 3 months notice to the other party or by mutual agreement of the ALC Chief Executive Officer and the OGC Commissioner.

13 Effective Date

Subject to the execution of this agreement by the parties, the effective date is April 1st, 2007.

PROVINCIAL AGRICULTURAL LAND COMMISSION
Erik Karlsen, Chair

Signature: original signed

OIL AND GAS COMMISSION
Ross Curtis, Oil and Gas Commissioner

Signature: original signed

APPENDIX I
Responsible Agency for Applications under
the *Agricultural Land Commission Act*

	<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>	<i>Column 5</i>
	Non-farm Use	ALC Act Application to OGC	ALC Act Application to ALC via local govt	Exempt from ALC Act Application¹	Application to OGC under other Acts
1	Pipelines and surface facilities directly related to operation of the pipelines			X	X
2	Wells on existing sites			X	X
3a	Up to 3 stand-alone well sites per quarter section or equivalent area, including access roads & facilities directly related to operation of the well			X	X
3b	4 th stand-alone well site per quarter section or equivalent area, including access roads and facilities directly related to operation of the well	X			X
3c	5 th or greater stand-alone well sites per quarter section or equivalent area, including access roads & facilities directly related to operation of the well		X		X
4a	Change in use from a well to an activity described in item 5 (<450 sq. m.)	X			X
4b	Change in use from a well to an activity described in item 5 (>450 sq. m.), 8 or 9		X		X
5	Batteries, compressor stations, drilling and production waste handling, produced water and gas handling or processing facilities, and the combined area of associated buildings and structures on the quarter section or equivalent area is less than or greater than 450 sq m	X Bldg area less than 450 sq. m.	X Bldg area greater than 450 sq. m.		X
6a	Electric power lines immediately adjacent to access roads ²			X	X
6b	Electric power lines not adjacent to access roads ²	X			X
7	Commercial waste handling and disposal, including deep well disposal projects		X		X
8	Other facilities not exclusively related to oil & gas production, including material & equipment storage		X		X
9	Proposed oil & gas activity on a quarter section or 65 hectare parcel in which the combined total area occupied by existing and proposed activities is greater than 7 hectares (or 17 acres)		X		

¹ Exempted uses are subject to specified conditions of reporting and reclamation set out in this agreement.

² Electric power lines do not require Schedule A and B reporting

APPENDIX II

Guidelines for Reviewing Applications for Oil and Gas Activities and Pipelines on ALR Lands

Note: These guidelines are not all inclusive as each oil and gas activity or pipeline or the ALR land on which the activity or pipeline is proposed may have unique characteristics that may require different or additional considerations.

1. Land resource

- What is the agricultural potential of parcel of land?
- Is the land suitable for agriculture now or with improvements?
- Productivity
- What is the present land use? If it is currently cultivated or used for grazing a little more attention to impact will be necessary than for forested Crown land where the vegetation will have to be removed.
- What is the Agriculture capability rating (references: Land Capability Classification for Agriculture in BC, MOE Manual 1, 1983 and agriculture capability rating/map in Schedule A report). More attention and concern for Class 1-3 lands and less concern for class 4-6.

2. Agricultural concerns

- Will the proposed use permanently damage the physical capability of the land for agricultural use?
- What are the physical restrictions that may interfere with farm use (footprint, percent of parcel alienated from agricultural use; density of oil and gas development)
- What is the cumulative effect of these uses on the agricultural use of the land? How much of the area is now limited to agricultural use?
- Does the proposed use and its location impinge on field patterns, making the land difficult to cultivate (turn tractors etc.)?
- Can what is being proposed be accomplished in a different way (ie. twinning, directional drilling, shared access row)?
- If the access road cuts through the middle of a field can it be located along a field edge or fence line to minimize alienation of part of the land?
- Can an existing disturbed area be used to minimize new disturbance?
- Is the oil and gas activity located close to calving areas, buildings and grain storage facilities?
- Other surface landowner concerns specific to the agricultural use of their land

3. Area concerns

- Local government concerns
- If necessary, request recommendation or information from other sources such as Ministry of Agriculture and Lands, local government agricultural advisory committee or other agricultural stakeholders.

4. Request the opinion of a qualified professional

5. View property and meet with applicant on site if necessary

Appendix III

AUDIT

Purpose: To ensure that the Oil and Gas Commission carries out its responsibilities as set out in the delegation agreement and is making decisions while respecting the purpose and intent of the *Agricultural Land Commission Act*.

Independent Auditor:

The Oil and Gas Commission will acquire the services and cover the costs of an independent auditor once per year to review a sample of activities under this agreement.

The auditor's report will be submitted to the Provincial Agricultural Land Commission for use in reporting to the Minister of Sustainable Resource Management.

The auditor must meet the following requirements:

- i. be independent (not part of OGC or ALC staff)
- ii. be a Professional Agrologist with soils specialty and a member in good standing with an accredited professional body
- iii. be familiar with the *Agricultural Land Commission Act* and regulations
- iv. be capable of assessing the items set out in audit guidelines below

The audit team will comprise of the auditor who will lead the audit along with a representative from both the OGC and the ALC. These representatives will provide the auditor with the necessary access to documentation and answer questions as required in order to facilitate and conduct the audit.

Audit Guidelines:

The audit will be based on a reasonable sampling (proportional to activity in a particular area or areas) of Schedule A reports, Schedule B reports, OGC application decisions, investigations and enforcement actions.

Audit terms of reference will be approved by the ALC and OGC Commissioner each year.

The auditor will review and report on the following taking into consideration the purpose and intent of the *Agricultural Land Commission Act*:

- i. impact of oil and gas uses on ALR lands and agricultural use of those lands
- ii. effectiveness of reclamation of ALR lands disturbed by oil and gas activities as approved by the Oil and Gas Commissioner or exempted from application under an agreement under section 26 of the *Agricultural Land Commission Act*.
- iii. investigations and enforcement actions
- iv. other matters as identified and agreed upon by the ALC and OGC such as local government concerns, OGC staff concerns, agricultural stakeholder concerns

SCHEDULE A

SITE ASSESSMENT REQUIREMENTS:

The soils of the surface lease and related developments must be documented prior to construction so that the reclamation of the land can be planned effectively and reclamation requirements can be achieved. The objective of reclamation is to return the land to an equivalent capability to what existed prior to development. This means that operators must plan their operations to ensure that conditions on the reclaimed site are similar to pre-construction conditions. This report will set out the reclamation plan and identify a baseline of information to refer to when reclamation work is being undertaken.

These assessment requirements are intended to provide the flexibility to respond to practical realities of differing site characteristics and soils. There is room for interpretation of the Schedule A assessment criteria based on site specific issues and the professional judgement of the specialist hired to carry out the assessment.

Surface lease means all leases, easements, and rights-of-way which may be required for a well site, access road, pipeline, camp, workspace, sump, borrow pit and/or any other area related to oil and gas production.

It is recommended that the owner of the development be familiar with the *Weed Control Act* and its regulations to ensure that the construction, management, and reclamation of the surface lease is in compliance with this Act.

The level of effort required to conduct site assessments will vary depending on local conditions, but the following requirements are the minimum information, which must be filed with the Oil and Gas Commission and the surface landowner:

NOTE: Site Development should NOT occur when the soil is extremely wet

Site Information:

- well name/location or pipeline location (well to well)
- proposed oil and gas development (list all)
- for wellsite/access applications, approximate total area disturbed by existing access roads and wellsites on each quarter section (in square meters or hectares)
- Area of existing and proposed buildings and structures at the location (in square meters or hectares)
- petroleum company name contact information
- location and legal description of property(s)
- name and contact information of surface landowner or specify if Crown land
- date of site assessment
- name and address of person conducting the site assessment
- approximate construction date
- Form C signed by the surface landowner or representative

Site Description:

- a brief description of the surficial geology. This information is available from published soil surveys and government reports.
- the agricultural capability rating from published resource inventory maps, such as the Canada Land Inventory maps.
- current land use (cultivated, forested, range/grazing or other)
- a rating of the surface drainage as good, moderate or poor and a description and location of any existing natural water courses.
- a description of the site topography, indicating the gradient and aspect of slopes.

Sampling Procedures:

The primary purpose of the site assessment is to document the soil quality, quantity, and profile of the surface lease. Soil sampling can be done with hand tools, an auger, or construction equipment. The following procedures must be followed:

- the soil conditions of a well site, camp, borrow pit etc. must be sampled at five locations: one sample must be taken 5 m inside from each corner of the surface lease boundary, and one sample must be taken at the center of the surface lease. This is the minimum number of samples; more may be necessary based on site conditions.
- access roads and pipelines greater than 500 m in length require one sample on the centerline of the surface lease for every 250 m in length. This is the minimum number of samples; more may be necessary based on site conditions. If a change in landform/topography/soil characteristics/vegetation is noticed while traversing the right of way, that change should be inspected and/or sampled.
- access roads and pipelines less than 250 m in length require a minimum of two samples including one at the terminus and one at the midpoint.
- For wellsites, soil samples must extend 20 cm below the B horizon (20 cm into the C horizon), or to a maximum depth of 100 cm below the surface of the ground. Under frozen conditions, the soil samples must extend deep enough to accurately characterize the B horizon(s). For pipelines, soil samples must extend deep enough to accurately characterize the B horizon(s).

Soil Assessment:

A visual analysis of the soil at each sample location should include the following information:

Sample Number	A Horizon Depth (cm)	Description	B Horizon Depth (cm)	Description

The A horizon is the upper portion of the soil profile that has been significantly altered by accumulation of organic matter and by weathering processes. This layer is commonly referred to as “topsoil”. The B horizon is the soil layer below the topsoil that has been altered by weathering but has little or no visible accumulation of organic matter.

The description of each horizon must include its texture class, based on the Canadian System of Soil Classification, Third Edition, 1998.

The A horizon from the five samples from a wellsite, camp, borrow pit etc. must be combined and thoroughly mixed. A portion of this combined sample must be sent to a laboratory for an analysis of its organic content, pH, and texture. A laboratory analysis for pipelines is not required.

Photographs:

Photographs must be taken which show the condition of the surface lease prior to disturbance. Each photograph should have noted with it the location, direction and any comments:

Maps:

The site assessment must include a sketch map and a legal survey plan of the surface lease and associated developments that show the following information:

Large scale map:

- location of where the soil samples were taken
- topographical features such as, slope direction and drainage pattern
- current vegetation and land use
- total area required for development (in square meters or hectares)
- location and description of works required to prevent soil erosion from runoff

Small scale legal survey:

- location of the proposed well site, camp, borrow pit, access road, and pipeline rights-of-way
- location of other existing wellsites, access roads and pipelines on the subject parcel

SCHEDULE B

SITE RECLAMATION REQUIREMENTS:

This report is used to assess if the development site has been appropriately reclaimed and meets the criteria that demonstrate that reclamation is complete prior to a Certificate of Restoration being obtained for a well site or other oil and gas activity and within 24 months of installation and reclamation of a pipeline.

All sites constructed since 1995 must meet the following criteria. Sites that were developed prior to 1995 must also submit a Schedule B report containing the same information but will not be as rigorously reviewed.

The purpose of the following requirements is to ensure that the soil, topography, and vegetation of surface leases and pipelines are restored to an equivalent condition and capability after wells have been decommissioned and pipelines have been installed. Surface lease means all leases, easements, and rights-of-way that may be required for a well site, access road, pipeline, camp, workspace, sump, borrow pit and/or any other area related to oil and gas production. The requirements do not address site contamination and the disposal of wastes as these matters are the responsibility of other government agencies.

These reclamation requirements are intended to provide the flexibility to respond to practical realities of differing site characteristics and soils. There is room for interpretation of the Schedule B assessment criteria based on site specific issues and the professional judgement of the specialist hired to carry out the assessment.

Schedule A reports will be used as part of this review process as a baseline for pre-development information.

A report which documents that the following minimum requirements (in **bold**) have been met must be filed with the Oil and Gas Commission and the surface landowner prior to a Certificate of Restoration or approval to abandon is issued by the Oil and Gas Commission, or within 24 months of installing a pipeline:

NOTE: site development should NOT occur when the soil is extremely wet

Site Information:

- well name/legal and well site approval number or pipeline location (well to well)
- date of construction
- petroleum company name contact information
- location and legal description of property(s)
- name and contact information of surface landowner or specify if Crown land
- date of site inspection
- name and address of person conducting the site assessment

Definition of Surface Soil:

For the purposes of Schedule B, surface soil means the soil that has been salvaged, amended, and replaced onto the surface lease.

Sampling Procedures:

a. Well Sites, camps, borrow pits

No soil sampling is required for portions of the surface lease where soil disturbance has not occurred. Disturbance includes, but is not limited to, stripping, rutting, trenching, compaction, and erosion.

The quantity and quality of the replaced surface soil on a surface lease must be sampled using a 20 metre x 20 metre sampling grid. The edges of the grid should correspond to the boundaries of the surface lease, and grid should be adjusted to evenly cover the entire lease. A soil sample must be taken from the middle of each 20 m X 20 m grid, for each grid in the surface lease.

A minimum of four control samples must be taken from adjacent undisturbed ground; one each from the center point of each side of the surface lease.

b. Access Roads and Pipelines

The quantity and quality of the replaced surface soil must be sampled at 250 metre intervals for roads and pipelines > 250 m in length, and a minimum of two sampling locations is required for roads and pipelines less than 250 m in length (one at the terminus and one at the midpoint). This is the minimum number of samples; more may be necessary based on site conditions.

Two samples are required for each sampling location. One sample must be taken from the centerline of the access road or one sample must be taken from the disturbed ground over a pipeline, and one sample must be taken from undisturbed ground 10 m outside the boundary of the surface lease.

Soil Assessment:

Each soil sample must penetrate 20 cm below the surface soil, or to a maximum depth of 50 cm. A visual analysis of each sample of the surface soil must include the following information:

Sample Number	Surface Soil Depth (cm)	Description	Admixing %	Aggregate Size

The description of each sample must include its texture class, based on the Canadian System of Soil Classification, Third Edition 1998. The extent of admixing (i.e. mixing of the B horizon into the A horizon) must be recorded. The admixing classes are: 0-10%, 10-20%, 20-30% 30-40%, 40-50% and >50%.

The aggregate size distribution for each sample of the surface soil must be recorded. The aggregate size classes are: <2 cm, 2-5 cm, and >5-10 cm. **No soil aggregates greater than 10 cm are allowed.**

The surface soil from five representative samples from a wellsite, camp, borrow pit, etc. must be combined and thoroughly mixed. A portion of this combined sample must be sent to a laboratory for an analysis of its organic content, pH, and texture. A laboratory analysis for pipelines is not required.

A visual analysis of each sample from undisturbed ground must include the following information:

Sample Number	A Horizon Depth (cm)	Description	B Horizon Depth (cm)	Description

The description of each sample must include its texture class, based on the Canadian System of Soil Classification, Third Edition 1998.

Soil Reclamation Requirements:

The following minimum reclamation standards must be met:

a. Depth of Surface Soil

- the required replacement depth (RRD) of surface soil is 80% of the depth of the average A horizon on the adjacent undisturbed ground.
- the average replacement depth (ARD) is the average depth of all the surface soil samples. The ARD must be equivalent to or greater than the RRD.
- the minimum replacement depth (MRD) is 80% of the RRD. **All surface soil samples must be \geq the MRD, except for surface leases which were originally covered by native trees or shrubs or where the average A horizon depth on the undisturbed ground is <10 cm,**
 - Sites which were covered by trees or shrubs may have three surface soil samples, which are not adjacent, that are \geq 40% of the RRD.
 - The MRD requirement does not apply where the average A horizon depth on the undisturbed ground is <10 cm, but the available surface soil must be replaced as evenly as possible across the entire surface lease.

b. Mixing of Soil Horizons

- **the average admixing of all the surface soil samples must not be greater than 30%.** That is, the average of the samples must be composed of less than 30% of non-surface soil (B horizon).

c. Soil Structure

- **the average aggregate class of the surface soil samples must be the same as the average aggregate class of the samples from the undisturbed ground.**
- the bulk density of the subsoil of the disturbed ground for each sampling location must not be more than 120% of the average bulk density of the subsoil of the undisturbed ground.

Topographic Requirements:

The topography of the surface lease must be restored to its original or better condition. The reclamation of the surface lease is to be assessed by comparing the reclaimed site, as a whole, with adjacent undisturbed ground. The following requirements must be met:

Criteria:	Requirement:
Drainage	<ul style="list-style-type: none"> • Surface drainage must be consistent with the original natural drainage patterns, directions, and capacity, or be compatible with the surrounding landscape. • Facilities and structures left in place must not impede natural surface drainage and water flow.
Erosion	<ul style="list-style-type: none"> • The frequency and extent of erosion features must be similar to adjacent undisturbed land.
Contour	<ul style="list-style-type: none"> • The contour of the surface lease must conform to adjacent land or be consistent with present or intended land uses.

Stability	<ul style="list-style-type: none"> • No visible evidence of slope movement, slumping, subsidence, or tension cracks are allowed.
Gravel and Rocks	<ul style="list-style-type: none"> • May not be piled, windrowed, or concentrated in one area unless it improves the agricultural capability of the surface lease.
Debris	<ul style="list-style-type: none"> • No industrial or domestic debris is allowed. • No large wood debris that could be removed with a brush rake is allowed, unless permitted in writing by the landowner.

Vegetation Requirements:

Reclamation of a surface lease includes restoring vegetation by either replanting native vegetation or applying a suitable seed mixture. Preventing soil erosion, and preventing an increase in the distribution of weeds, should be the main criteria when choosing a seed mixture.

The reclamation of the surface lease is to be assessed by visually comparing the reclaimed site, as a whole, with adjacent undisturbed ground. The following requirements must be met within 24 months of applying the seed mixture or introducing vegetation:

Criteria:	Requirement:
Species	<ul style="list-style-type: none"> • Seed mixtures must not increase the frequency or distribution of any weed species on the surface lease or on adjacent undisturbed ground. • Seed mixtures must include species that are adapted to the climate and soil conditions of the Peace River region of British Columbia. (contact your local Ministry of Agriculture office if you require information or assistance) • Native species must be similar to vegetation which would occur naturally on the undisturbed ground.
Density	<ul style="list-style-type: none"> • ≥ 80% of the density on adjacent undisturbed ground.
Height	<ul style="list-style-type: none"> • ≥ 80% of height on adjacent undisturbed ground.
Health	<ul style="list-style-type: none"> • Plants should be healthy based on a visual inspection of their vigour, height, and colour.
Cover	<ul style="list-style-type: none"> • the vegetation must cover ≥ 80% of the soil surface if the species on the reclaimed site are similar to the vegetation on the adjacent undisturbed ground. • where the species composition on the reclaimed site is different from the vegetation on the undisturbed ground, or the undisturbed ground has been cultivated, vegetation on the reclaimed site must cover ≥ 80% of the soil surface. • vegetation on the reclaimed site must be evenly distributed, or be similar to the distribution on the undisturbed ground.

Photographs:

Photographs must be taken which show the condition of the surface lease, associated developments and pipelines after reclamation. Each photograph should have noted with it the location, direction and any comments.

Overall Summary:

A short summary statement suggesting a pass or fail, comments on where criteria have not been met and if this will have a negative impact on the use of the land for agriculture and/or what should be done to remedy the problem areas. Any landowner/occupant comments or requests should be noted.

Report author sign off/signature and date.