

TOURMALINE OIL CORP. PROPOSED CAMPSITE IN DL 189 (11-36-81-22) AMS # 100120871 Schedule 'A' Assessment



Land + Environmental

Report Prepared by

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## Executive Summary

Tourmaline Oil Corp. (the Proponent) commissioned Prospect Environmental Services Ltd. (Prospect) to complete the required Schedule A assessment for a proposed campsite — herein referred to as "the proposed development".

The assessment at Proposed Campsite in DL 189 (11-36-81-22) was completed on February 12, 2025, to collect and review the required data to provide recommendations and guidance based on the requirements set forth within the Delegation Agreement (ALC and OGC, 2017) for a Schedule A assessment for areas within the Agricultural Land Reserve.

The objective of this assessment was for the proposed development to meet Schedule A requirements set forth within the Delegation Agreement, including the area assessment, pre-development site assessment, soil conservation and water management and reclamation planning. The table below provides a summary of the findings discussed within this report. The statements within this executive summary must be reviewed and executed in conjunction with the remainder of this report.

Category	Assessment Summary	Discussion
Appendix I - ALC Act Application	Is not exempt from a non-farm use application as the proposed development meets Item 5 of Appendix I.	An application is required to be submitted to the Ministry of Agriculture (MOA) and the Peace River Regional District (PRRD).
Appendix II	The proposed development is located within Appendix II items: • 5, uncultivated land	Appendix II rationale is presented in the Introduction section below, and the Appendix II table is appended for reference.
Soil	Topsoil across the entire proposed development consisted of a brown, silt loam Ap horizon. Subsoil consisted of a grey brown, silty clay loam Bt horizon.	The first lift is recommended to be stripped to colour change following the depths and volumes outlined in the appended Soil Stripping Recommendations and Volumes table. The second lift will consist of the Bt subsoil horizon, with a recommended stripping depth of 10-15 centimetres (cm). In addition, a qualified professional (QP) is recommended to be onsite during soil handling and storage activities to ensure restoration meets Schedule B requirements under the Delegation Agreement.
Land Use	The current land use of the proposed development consisted of hayland.	Restoration of the campsite is recommended to be completed in consultation with the landowner(s) to be reflective of current land uses, including in areas of watercourses. Consultation with landowner(s) should be completed in relation to selection of seeds and replacement of any effected farming structures (fencing, gates etc.). Soils must be handled utilizing best management practices that avoids admixing, compaction, erosion or overall degradation of soil health through the proposed development area.
Invasive Plants	No invasive species were observed; however, the assessment was limited due to snow cover (15-50 cm).	General best management practices regarding invasive plant control are provided in Recommendations below.
Topography and Surface Features	Slight to moderate wind and water erosion potential was observed for the entire development due to open high wind area with dry silty soils.	Care should be taken to manage surface water to minimize erosion potentials. Wind erosion controls may need to be added in consultation with a QP.



#### TABLE OF CONTENTS

1		Intr	oduction	1
	1.1		Appendix I: Categories of Oil and Gas Activity and Ancillary Activity Non-Farm Uses	1
	1.2		Appendix II: Guidelines for Planning Oil and Gas Activities and Ancillary Activities on ALR Lands	1
2		Sch	edule A Assessment	1
	2.1		Purpose	1
3		Area	a Assessment	2
4		Site	Assessment	2
	4.1		Site Information	2
	4.2	2	Soil Inspection Procedures	2
	4.3	3	Soil Assessment	2
	4.4	1	Photographs	3
	4.5	5	Noxious Weeds	3
5		Rec	commendations for Soil Conservation and Surface Water Management	3
	5.1		Surface Water Management	3
	5.2	2	Soil Stripping and Conservation	3
	5.3	3	Invasive Plants	4
6		Rec	lamation Plan	6
7		Clos	sure	8
8		Pro	ponent Review & Acknowledgement	9
9		Proj	ject Participation	10
10	)	Dist	ribution	10
11		Refe	erences	11



#### TABLES

Table 1 Project Information	. 2
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#### LIST OF ACRONYMS

Agricultural Land Commission (ALC)	1
Agricultural Land Commission Act (ALC Act)	1
BC Energy Regulator (BCER)	1
British Columbia (BC)	5
Centimetre(s) (cm)	2
Energy Resource Activities Act (ERAA)	5
Environmental Protection and Management Regulation (EPMR)	4
Hectare(s) (ha)	3
Invasive Species Council of BC (ISCBC)	5
Kilometre(s) (km)	2
Metre(s) (m)	4
Oil and Gas Commission (OGC)	4
Peace River Regional District (PRRD)	5
Pre-Construction Environmental Assessment (PCEA)	1
Prospect Environmental Services Ltd. (Prospect)	1
Tourmaline Oil Corp. (the Proponent)	1
Treaty 8 Planning and Mitigation Measures (TPMM)	.1

#### APPENDICES

Figures	Site Drawing Area Assessment Map
Tables	Appendix I Appendix II Landowners Detailed Soil and Vegetation Data

Appendix AMapsAppendix BSite Photographs

#### TABLE OF REVISIONS

Revision Number	Revision Date	Revision Notes	Revised By
0	-	Original	-



## 1 Introduction

Tourmaline Oil Corp. (the Proponent) commissioned Prospect Environmental Services Ltd. (Prospect) to complete the required Schedule A assessment for the proposed campsite — herein referred to as "the proposed development". Detailed assessment findings are presented in the attached figures and tables. A summary of the findings and applicable recommendations are provided in the subsequent sections of this report as required by the Agricultural Land Commission (ALC) and BC Energy Regulator (BCER) Delegation Agreement (ALC and OGC, 2017).

1.1 Appendix I: Categories of Oil and Gas Activity and Ancillary Activity Non-Farm Uses

The Appendix I table is attached for reference and the applicable item to the proposed development is highlighted and discussed below.

#### 1.1.1 Non-Farm Use Area Calculations

Non-farm use area is shown on the attached survey plan (Appendix A).

The proposed development meets the criteria listed in Item 5 of Appendix I of the Delegation Agreement. Therefore, an application for non-farm use permission under the *Agricultural Land Commission Act (ALC Act)* is required.

1.2 Appendix II: Guidelines for Planning Oil and Gas Activities and Ancillary Activities on ALR Lands

The proposed development meets the criteria listed in Item 5. The Appendix II table is attached for reference with the applicable Appendix II item to the proposed development highlighted.

The proposed development cannot be located on non-ALR lands due to the overall coverage of ALR within this area and to allow for use of a prior disturbance (e.g. prior laydown area). Utilization of prior disturbance allows for the overall reduction of total new cut area required for the proposed development. Additionally, the proposed development location is adjacent to forested land and does not cause fragmentation or block access to the land for agricultural uses as there is another access east of the proposed development adjacent to the road.

### 2 Schedule A Assessment

The field assessment details, Appendix I, Appendix II, applicable regulations, any observed invasive species, landowner information and soil stripping recommendations are available in the appended tables. Further details as required are presented below.

#### 2.1 Purpose

As per the Delegation Agreement, the purpose of the Schedule A is to include:

1. The Area Assessment: to link with Appendix II Guidelines and document current land resource and agricultural use in the area of the application to aid in planning the location of the project in a manner that minimizes agricultural impacts;



- 2. Pre-development Site Assessment to document baseline site information for soil management and reclamation planning;
- 3. Recommendations for Soil Conservation and Surface Water Management, based on an analysis of planned developments using the baseline site assessment; and
- 4. Reclamation planning, to provide a preliminary reclamation plan.

### 3 Area Assessment

The tables presenting the area assessment for non-farm use is appended in the Survey Plan (Appendix A). The area assessment map is appended. The area assessment and the Appendix II rational, discussed above, were considered in conjunction with each other to minimize impacts to the ALR per the Delegation Agreement. Considerations to the Appendix II rationale are outlined above.

### 4 Site Assessment

#### 4.1 Site Information

The table below outlines general information regarding the proposed development including land ownership, proposed development features, geographical location and assessment details.

Project Location	Proposed Campsite in DL 189 (11-36-81-22)
Proponent	Tourmaline Oil Corp.
Proposed Development Features	Campsite
(as shown on the survey plan)	
Land Ownership	Entirely within private land (see appended Landowner Information).
Proximity to the Agricultural Land	Located entirely within the ALR.
Reserve (ALR)	
(see survey plan, Appendix A)	
Proximity to Nearest Town	Approximately 53 kilometres (km) from Chetwynd, BC.
(see route map, Appendix A)	
Assessment Professional(s)	Riley Milne, AAg
Date of Assessment	February 12, 2025
Limitations	The assessment was completed under winter conditions with 15-50 centimetres (cm) of snow cover, 15-20 cm of frost.
	The above noted conditions may have concealed some surface features during the assessment and resulted in limitations which are discussed in the applicable sections of the report.
Anticipated Construction Date	Within two years of regulatory approval.
Total Application Area (hectares, ha)	As shown on survey plan (Appendix A).

Table 1 Project Information

### 4.2 Soil Inspection Procedures

The sampling procedures were completed as per Schedule A, Section 2 of the Delegation Agreement (ALC and OGC, 2017) using hand tools, such as axes, shovels, and augers.

#### 4.3 Soil Assessment

The attached tables provide a general description of the soil throughout the proposed development at the time of the assessment. Soil classification in the field was completed based on The Canadian System



of Soil Classification, Third Edition (Soil Classification Working Group, 1998). Available mapped soil classifications and agricultural capability are identified in the appended tables in the Project Overview table (Lord, 1986; Agriculture and Agri-Food Canada, 2013).

#### 4.4 Photographs

Photographs of the Schedule A field assessment are provided in Appendix B, including soil profile horizons.

#### 4.5 Noxious Weeds

No invasive species were observed at the time of the assessment, the assessment was limited due to winter conditions. Best practices for management of invasive plant species are included below.

## 5 Recommendations for Soil Conservation and Surface Water Management

#### 5.1 Surface Water Management

It is recommended that surface water is managed through the construction of ditches around the lease to ensure that water flows around the development and does not interrupt natural drainage patterns. Erosion control measures may be required to ensure that erosion is not introduced to the adjacent lands. If construction is completed during the winter, erosion controls for spring run-off should be considered and implemented if determined they may be required. Erosion control measures may include the below:

- Straw waddles
- Riprap
- Coconut matting
- Silt fencing with suitable permeability

A QP may be consulted should the need for a more detailed surface water management plan be identified during the construction.

#### 5.2 Soil Stripping and Conservation

The soil stripping recommendations and volumes Table for the proposed development are appended which summarizes the average stripping depths and volumes, minimum and maximum topsoil depths and soil observations. There was a noticeable colour change from surface soil to subsoil, therefore stripping to colour change is recommended.

The topsoil (Ap horizon) was defined by its brown colour and silt loam texture.

A second lift of the subsoil (Bt horizon) of 10-15 cm is recommended to be stripped across the entire development. The Bt horizon was noted to be grey brown in colour and silty clay loam in texture.

Avoidance of admixing, compaction and erosion of the topsoil and subsoil piles is key to ensure successful reclamation efforts are achieved at the end of the proposed developments operation. Utilization of best management practices during the construction of the development will aid in successful reclamation efforts. This includes deployment of matting to limit compaction and proper storage of soil piles. Further



discussion regarding soil storage, erosion and sediment controls are discussed further in the sections below.

As a best management practice for reclamation, it is recommended that an as-built site plan, including, but not limited to oil and gas structures, fences, topsoil and subsoil storage, and surface drainage features, be available for company field staff, site contractors, landowners, BCER staff and any other relevant stakeholders if requested. As changes occur to the development, this information should be updated.

It is recommended that soil salvage during construction is supervised to ensure the recommendations within this report are adhered to. Soil handling activities associated with construction and interim and final restoration of the proposed development are recommended to be supervised by a qualified professional (QP), as defined by the Delegation Agreement and *Professional Governance Act (PGA)* (King's Printer, 2018).

#### 5.2.1 Erosion and Compaction - Prevention & Control

The operator(s) must ensure that they preserve the topsoil for future reclamation. The soil piles must be constructed in a manner that prevents soil instability, erosion, and general degradation of soils. Topsoil and subsoil should be stored at least 1.0 metre (m) apart to prevent admixing of soil, which greatly decreases the quality of the topsoil and significantly reduces the ability of the soil to sustain vegetation growth.

It is recommended that soil piles be managed to avoid erosion and manage invasive plant species. Methods include seeding with a rapidly establishing, ecologically suitable erosion control mix, track packing or use of a tackifier. During soil storage, it is recommended that they be contoured to increase surface area, to prevent loss of soil through erosion or establishment of less desirable vegetation.

Soil salvage and reclamation should not be undertaken during saturated soil conditions to prevent compaction and rutting. Should the development conditions prevent the best management practices from being utilized, it is recommended that a QP develop a site-specific plan that meets the operators project objectives and the expectation of the BCER.

No steep slopes were encountered. However, care should be taken to ensure the stability of the slope is maintained through means of erosion control measures such as: limiting soil disturbance to the necessary areas, minimizing soil traffic on soil piles, timely reclamation and erosion repair, use of erosion control materials etc.

Consultation with a QP and developing a site-specific plan for erosion and sediment control based on the conditions and season of construction is recommended.

#### 5.3 Invasive Plants

While no noxious invasive plants were identified, the assessment was completed under winter conditions. As a result, the identification of some species may have been limited.

#### 5.3.1 Regulatory Background

As per the Delegation Agreement, weeds, or invasive plants, must be controlled on oil and gas operating areas as required under the *Weed Control Act* in consultation with the applicable landowner(s) (ALC and OGC, 2017; King's Printer, 1996).

The Weed Control Act (King's Printer, 1996) requires that all land occupiers control designated noxious plants and states that "in accordance with the regulations, an occupier must control noxious weeds



growing or located on land and premises, and on any other property located on land and premises, occupied by that person".

Based on Oil and Gas Commission (OGC) Industry Bulletin 2018-08, released on May 10, 2018, the BCER has established the Order M152 under the authority of Section 33 of the *EPMR* (King's Printer, 2016), where plant species listed in 'Schedule A, Part I – Provincial Weeds of the *Weed Control Regulation'*, are established as invasive plants (King's Printer, 2011). Section 15 of the *EPMR* requires that proponents make reasonable efforts to minimize the transport of invasive plants and prevent invasive plants from establishing within their operating areas. For example, operators may steam clean equipment to reduce the potential for weed transportation and are recommended to seed the disturbed areas (where practicable) to discourage the establishment of invasive plants.

#### 5.3.2 Invasive Plant Compliance Records

In addition to the above noted bulletin, the BCER published a Technical and Information Update on June 29, 2023, regarding amendments to the *Energy Resource Activities Act (ERAA)* effective on June 12, 2023, that requires permit holders to prepare and maintain an invasive plant compliance record (BCER, 2023). The update summarizes requirements of what the reports must contain and is applicable to the below:

- Dormancy and Shutdown Regulation
- Drilling and Production Regulation
- Geophysical Exploration Regulation
- Liquified Natural Gas Facility Regulation
- Oil and Gas Processing Facility Regulation
- Oil and Gas Road Regulation
- Pipeline Regulation

A list of invasive plants having specific impacts with priority for the northeast BC per *ERAA* (King's Printer, 2008) are outlined in Industry Bulletin 2017-05 (BC Oil and Gas Commission, 2017). The Proponent must ensure they abide by *ERAA* regarding the control of the invasive plants on this list in all areas of the proposed development.

#### 5.3.3 Invasive Plants Best Management Practices Summary

The best line of defence and the most cost-effective approach against invasive species is prevention. When an invasive species is introduced early detection and rapid response to eradicate is key to limit the spread of the species, especially for species that spread quickly. As such, it is recommended that an annual site inspection be completed to encourage early identification and management of invasive plants.

Additional guidance material for best management practices is available at the below sources:

- The Invasive Species Council of BC (ISCBC) maintains a resource library of publications for identification and treatment of invasive species (ISCBC, 2023)
- Best Practices for Managing Invasive Plants on Oil & Gas Operations (ISCBC, 2013)
- Peace River Regional District (PRRD) Strategic Plan and Profile for the PRRD area of operation (Peace River Regional District, 2024). This plan should be consulted for management strategies pertaining to invasive plants.

Some general best management practices for the prevention and control of invasive plants are:

• Where invasive plants are observed, a pre-construction treatment (ie. herbicide, mechanical pulling, cutting) based on species and landowner consultation may assist the control of these plants.



- Where possible work from un-infested areas prior to moving to infested areas.
- Ensure any imported fill material utilized at the location is weed free, including but not limited to laboratory seed analysis.
- During all site activities personnel should avoid parking, turning around or staging equipment in
  areas where invasive plants are observed. Ensure equipment is clean prior to entering the location
  and is cleaned prior to entering an infested area to an area with no prior identified species of
  concern. While in the field under dry conditions, an air compressor or broom can be used to clean
  vehicles and equipment, in addition to washing daily. In moist or wet soil conditions if equipment
  is muddy and a pressure washer is not available remove mud using a shovel, bar, or boots as
  appropriate.
- Ensure boots are clean prior to entering the work area and after cleaning equipment.
- Where possible dispose of invasive species seeds and plant parts in a garbage bag and dispose of appropriately at the landfill.
- Inspect clothing for seeds prior to entering a weed free zone.
- Removal of soil and any vegetation structures, including seeds, from equipment or matting prior to entry or transport offsite.
- Remove invasive plants and reseed, as soon as reasonably practicable, with seed mixtures that are locally adapted, non-persistent and rapidly establishing. Any invasive species treatments and utilized seed mixtures must be selected and implemented in consultation with the applicable landowner(s) (e.g. ensure compliance with farming operations such as organic farming etc.).

## 6 Reclamation Plan

The primary goal of reclamation is to ensure that surface soil, topography and vegetation of the operating areas is restored to an equivalent condition as predevelopment when the location is no longer required for the ancillary activity. Specific criteria for reclamation of identified ALR lands are outlined in the Schedule B criteria of the Delegation Agreement. A Schedule B assessment is required according to guidelines outlined within Section II, sub-section 4.3 of the Delegation Agreement (ALC and OGC, 2017).

Debris, such as large rocks impeding the land use of the proposed development must be removed.

The information contained within this report prepares the base of information to support the reclamation of the proposed development after the area is no longer required for the ancillary activity. A final reclamation plan should be developed at the time of final reclamation to ensure adherence with applicable regulations and guidelines at that time and include identification of any additional potential barriers to successful reclamation that may arise.

#### 6.1.1 Land Use Objective

Upon completion of reclamation, the development must be restored to conditions that are supportive of pre-existing land use in consultation with the affected landowner(s). Land uses encountered during the Schedule A Assessment included hayland. Current land use is presented on the appended drawings.

#### 6.1.2 Soil Handling

Care must be taken to avoid admixing of the topsoil and subsoils during replacement, or admixing of additional coarse fragments (gravel, cobbles, etc.). Proper spacing (best management practice of 1 m) of the topsoil and subsoils at the time of stripping will aid in proper storage and replacement activities and avoid admixing during storage.



During reclamation activities ensure that subsoils are de-compacted prior to replacement of soils to allow for adequate rooting zone for vegetation establishment and appropriate water flow. Soils must be replaced in reverse order from construction to ensure proper replacement order of the topsoil and subsoil. Soils must be handled only during dry or frozen conditions to limit compaction and admixing. Prior to soil replacement, the contour of the area must be replaced to its natural state to allow for proper drainage of surface water.

Soil handling activities are recommended to be supervised by a QP onsite to aid in ensuring the location will meet Schedule B requirements at final reclamation. In addition, it is recommended that the QP onsite implement erosion and sediment control measures as necessary to ensure soils are properly stabilized. Examples of suitable erosion and sediment controls may include:

- Silt fence, with consideration to permeability of materials to allow for slowed water flow
- Coconut matting and/or wattles
- Erosion control blankets in conjunction with a suitable seed mix that is rapidly establishing

Selection of erosion and sediment controls should be selected by the QP on site at the time to best assess the risk of erosion and sediment loss and implement the most suitable control.

#### 6.1.3 Re-Vegetation

For reclamation on private land, reclamation planning must include landowner and stakeholder consultation, including seed selection.

Re-vegetation efforts include the proper management of invasive species. Reference the Invasive Species section above for a summary of best management practices, however this is not an exhaustive list and consultation with a QP is recommended. If invasive species are determined to be present in concentrations that are not consistent with offsite or pre-construction conditions, treatment must be organized in consultation and approval from the affected landowner.



## 7 Closure

Prospect has prepared this report for the exclusive use of the proponent using accepted environmental assessment practices. The recommendations contained within this report represent Prospect's best judgement based on the field assessment and available desktop data.

Based on the site reconnaissance and the available information, it was found that the proposed development construction and operations will not cause material adverse effects to any of the government environmental objectives outlined above per the Delegation Agreement should the recommendations contained herein be adhered to. Because of the preceding information, no further rationale and mitigation strategies are required.

Should you have any questions or concerns, please do not hesitate to contact the Project Manager, Loni Evans at levans@prospectenv.ca.



Riley Milne, BASc, AAg Environmental Professional



Ashley Scott, ATAg Environmental Professional



Tom Peters, RTAg, TAg, BC-CESCL Environmental Professional



## 8 Proponent Review & Acknowledgement

In signing this, I agreed that I have read and acknowledged the information presented in this report and will adhere to the recommendations contained within.

Name:		
Title:		
Date:		



## 9 Project Participation

Name	Role		
Riley Milne, BASc, AAg	Assessment Professional(s)		
Ashley Scott, ATAg	Reporting		
Tom Peters, RTAg, TAg, BC-CESCL	Senior Review		

## 10 Distribution

Name	Recipient	Format
Dwayne English	Proponent	Digital
Bryce Hotte		
Diane MacPhee	Land Administrator	Digital
Christina Burgess		
As Listed within Landowner Information	Landowner	Digital



#### **11** References

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# FIGURES









TOURMALINE OIL CORP. PROPOSED CAMPSITE IN DL 189 (11-36-81-22) AREA ASSESSMENT MA PE25-023

on History

Project Number: PE25-023 Date of Assessment: February 12, 2025 Scale: 1:20,000 Page: 1 of 1



# TABLES

#### Schedule A Assessment Project Overview



#### **Project Information**

Client	Tourmaline Oil Corp.
Legal	11-36-081-22W6
Date of Assessment	February 12, 2025
Assessment Professional(s)	Riley Milne

#### Site Description

Limitations	Frost (cm):	15-20	Snow (cm):	15-50	
Limitations	Conditions	Winter conditions			
Soil Classification	ЗХ				
Agricultural Capability	Lynx/Sundance/Eaglesham				
Current Land Use(s)	Hayland				
Surface Drainage	Mod. Well Drained	Describe	-		
Aspect	Northwest to Northeast	Slope %	0-0.5 No slopes over 5%, were observed at the ti of the assessment.		
Erosion Potential (Wind)	Slight to Moderate	Describe	- -		
Erosion Potential (Water)	Slight to Moderate	Describe	-		
Existing Erosion	No	Describe	-		
Surface Expression	Level	Describe	-		
Contour	Blended and consistent.	Describe	-		
Instability	None Observed	Describe	-		
Gravel & Rock	None Observed	Describe	-		
Debris	None Observed	Describe	·		
Existing Structures	None Observed				
Crossings	Numerous crossings were identified as shown on the Survey Plan (Appendix A).				

#### Vegetation

Land Use	łayland						
Dominant	Timothy	mothy					
Sub-Dominant	No other species identified due to w	o other species identified due to winter conditions					
Health	N/A*	If fair/poor/NA describe:	Could not assess due to winter conditions				
Cover %	-	Height (m)	-				
Invasive Plants	No invasive species were observed a	t the time of the ass	essment.				



#### Appendix I Categories of Oil and Gas Activity and Ancillary Activity Non-Farm Uses

Per section 26(2) of the Agricultural Land Commission Act (King's Printer, 2002), the ALC and the OGC agree that oil and gas activities and ancillary activities located on the identified ALR lands are exempt from the requirements of an application under the ALC Act for permission for non-farm use as indicated in the table below. Applicable Appendix I item(s) are highlighted below.

Item	Proposed Non-farm Use	Exempt from application under the ALC	Application under the ALC Act for non-
		Act for non-farm use permission	farm use permission made to the BCER
1	Oil and gas activity or ancillary activity sites, where the combined total		
	area occupied by existing and proposed activities on the section is	х	-
	<20.0 hectares.		
2	Oil and gas activity and ancillary activity sites where the combined total		
	area occupied by existing and proposed activities on the section is	-	Х
	>20.0 hectares.		
3	Pipelines or electric powerlines that are buried; powerlines that are	×	
	immediately adjacent to access roads.	A	
4	Above ground electric power line that is not immediately adjacent to		×
	access roads.	-	^
5	Conversion or expansion of an existing oil and gas activity or ancillary		
	activity, or a new oil and gas activity or ancillary activity that is listed in		
	(i)-(v) below, for which new land is required and the total project		
	(lease) area is >3.0 hectares.		
	(i) Facilities (including gas processing plants) that handle product		×
	from more than one facility or well site,		~
	(ii) Camps,		
	(iii) Sumps,		
	(iv) Borrow/aggregate extraction sites		
	(v) Produced-water/fresh-water storage site		
6	Oil and gas waste storage, treatment, and/or disposal facility that is		
	operated by a person who is not a producer, or a conversion or		×
	expansion of such a site for which new land is required.		^

Applicable item highlighted.



### Appendix II Guidelines for Planning Oil and Gas Activities and Ancillary Activities on ALR Lands

Per the ALC-OGC Delegation Agreement, applicable Appendix II item(s) are highlighted below.

1	Land that is not within the ALR.							
2	Land that is classified as BC Land Capability for Agriculture Class 7.							
3	Forested land that has limited current or planned agriculture use.							
4	Land for which agriculture use is generally limited to perennial forage crops or grazing (Class 5 or 6).							
	Uncultivated pasture land where any of the following apply:							
	• There are no practicable alternatives to locate the activities on lands identified in 1-3;							
	<ul> <li>The proposed activities are located on the land in order to utilize existing disturbance;</li> </ul>							
	• Locating the activities elsewhere would have a more significant impact on productive ag. Land;							
5	<ul> <li>Locating the activities elsewhere would have a more significant impact on existing or planned agricultural options;</li> </ul>							
	<ul> <li>Locating the activities elsewhere would have an unacceptable incremental impact on residents' use of their property; or</li> </ul>							
	• Locating the activities elsewhere would have an unacceptable incremental impact on public and worker safety or significant environmental values.							
	Cultivated land where any of the following apply:							
	<ul> <li>The proposed activities are located on the land in order to utilize existing disturbance;</li> </ul>							
	• There are no practicable alternatives to locate the activities on lands identified in 1-4;							
	• Locating the activities elsewhere would have a more significant impact on productive agricultural land;							
6	<ul> <li>Locating the activities elsewhere would have a more significant impact on existing or planned agricultural options:</li> </ul>							
	<ul> <li>Locating the activities elsewhere would have an unacceptable incremental impact on residents' use of their property; or</li> </ul>							
	<ul> <li>Locating the activities elsewhere would have an unacceptable incremental impact on public and worker safety or significant environmental values.</li> </ul>							

#### Schedule A Assessment Applicable Regulations and Guidelines



Regulation or Guideline	Private Land	Crown Land
ALC - BC OGC Delegation Agreement	X - on ALR	X - on ALR
Agricultural Land Commission Act	X - on ALR	X - on ALR
Energy Resources Activities Act (ERRA)	Х	х
Weed Control Act (WCA)	Х	х
Peace River Regional District (PRRD) Invasive Plant Program Strategic Plan and Profile	Х	Х

Note: "X" indicates full applicability

This list provides a broad overview. Not all regulations and guidelines that may apply to the development are listed here.



Client:	Tourmaline Oil Corp.	Date:	February 12, 2025	Lead:	Riley Milne				
Legal(s):	11-36-081-22W6			Assist:	Eric Bicknell				
Landowner Information									
Landowner(s)	Land Legal	PID	Landowner Mailing Address	Resident/Occupant	Concerns				
Crew Energy Inc.	District lot 189	011-979-879	2900, 250 6th Ave SW,	none	none				
(c/o Tourmaline Oil Corp.)			Calgary, Alberta T2P 3H7						

(c/o Tourmaline Oil Corp.) Note: W6M - West of the 6th Meridian

#### Schedule A Assessment Soil Stripping **Recommendations and** Volumes



Client:	Tourmaline Oil Corp.		Date:	February 12, 2025		Lead:	Riley Milne	
Legal(s):	11-36-081-22W6			•		Assist:	Eric Bicknell	
			Soil Str	ipping Recom	nendations			
Feature	Assessment Points	First Lift – Avg. (cm)	Horizons included in First Lift	Minimum Depth (cm)	Maximum Depth (cm)	Colour	Second Lift (cm) <sup>[1]</sup>	Colour
Entire proposed development	C1-C11	25	Ap	19	34	Brown	10-15	Grey Brown
				Soil Volum	es			
	Area (ha)	Average Topsoil Depth (cm)	Recommended Subsoil Stripping Depth (cm)	Topsoil Volume (m³) <sup>[2]</sup>		Subsoil Volume (m³) <sup>[3]</sup>		Total (m³)
Entire proposed development	23.49	25	15	58,725		35,235 95		
	-	-	-	58,725		35,235		93,960
Note: 1. Estimated to range from 10-15 cm 2. "Augusta Tananii Danth" "Augusta" (Augusta)								

"Average Topsoil Depth" x "Area (ha)" (Estimated Development Area)
 "Second Lift (cm)" x "Area (ha)" (Estimated Development Area)



Client:	Tourmaline Oil Co	rp.					Date:	February 12	, 2025		Lead:	Riley Milne		-	
Legal(s):	11-36-081-22W6						•				Assist:	Eric Bicknell		-	
Assessment	Point Leger	nd			1										
A	Access Road/Shof	ly		D	Decking Site			R <sup>1</sup>	Remote Sump			None	Wellsite		
В	Borrow Pit			Р	Pipeline			R	Riser Site			w	Workspace		
<sup>1</sup> If riser present th	en RS will be used														
Point	C1	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil Dr	ainage	Mod. We	ll Drained
					Structure	Consistency (see		Mottles	1	Gle	yed				-
Horizon	Deptn (cm)	Texture	Colour	Moisture	(see legend)	legend)	Abundance	Size	Colour	Y/N	Colour	Seepage	Deptn cm	2	.,
Ap	27	SiL	Brown	Dry	FB	SH	None	-	-	No	-	Surface Soil		Subsoil (%)	
Bt	39	SiCL	Grey Brown	Dry	MB	SH	Few	Fine	Orange	No		10-15	G	15-20	G
C	20+	Sil	Light Brown	Drv	Gr	SH	None			No		0	c	0	c
					-							2	6		
	-	-	-	-	-	-	-	-	-	-	-	4	3	~	3
-	-	-	-	-	-	-	-	-	-	-	-	Admix	cing %	0-1	10%
-	-	-	-	-	-	-	-	-	-	-	-	C	ue to normal f	arming practice	es
Topsoil Depth	27	Comments:						-							
Point	C2	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil Dr	ainage	Mod. We	Il Drained
			l 1		Structure	Consistency (see		Mottles	ļ	Gle	yed		-		
Horizon	Depth (cm)	Texture	Colour	Moisture	(see legend)	legend)	Abundance	Size	Colour	Y/N	Colour	Seepage	Depth cm	2	22
Ap	22	SiL	Brown	Dry	FB	SH	None	-	-	No	-	Surface Soil (%)		Subsoil (%)	
Bt	20+	SiCL	Grey Brown	Dry	MB	SH	None		-	No		2-5	G	5-10	G
-	_	-		_	_	-	_	-	-	-	-	0	c	0	c
				-								-	-		-
	-	-	-	-	-	-	-	-	-	-	-	<2	5	<2	5
	-	-	-	-	-	-	-	-	-	-	-	Admis	ding %	0-1	10%
-	-	-	-	-	-	-	-	-	-	-	-	E	ue to normal f	arming practice	es
Topsoil Depth	22	Comments:						-							
Point	C3	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil Dr	ainage	Mod. We	ell Drained
					Structure	Consistency Isoa		Mottles	-	Gle	yed				
Horizon	Depth (cm)	Texture	Colour	Moisture	(coo logond)	Logond)		6°~~		w/h	6-1	Seepage	Depth cm	2	24
					(see legenu)	iegenu)	Abundance	Size	Colour	1/N	Colour				
Ap	24	SiL	Brown	Dry	FB	SH	Abundance	-	Colour -	No	-	Surface Soil		Subsoil (%)	
Ap	24	SiL	Brown Grey Brown	Dry	FB MB	SH	Abundance None None	-	-	No	-	Surface Soil (%)	G	Subsoil (%)	G
Ap Bt	24 40 201	SiL	Brown Grey Brown	Dry Dry	FB MB	SH SH	Abundance None None	-		No No		Surface Soil (%) <2	G	Subsoil (%) <2	G
Ap Bt C	24 40 20+	SiL SiCL -	Brown Grey Brown Dark Grey Brown	Dry Dry Dry	FB MB Ma	SH SH H	Abundance None None None	-		No No No	- -	Surface Soil (%) <2 <2	G	Subsoil (%) <2 <2	G
Ap Bt C	24 40 20+	SiL SiCL -	Brown Grey Brown Dark Grey Brown	Dry Dry Dry -	FB MB Ma	SH SH H	Abundance None None -		Colour - - -	No No No		Surface Soil (%) <2 <2 <2 <2	G C S	Subsoil (%) <2 <2 <2	G C S
Ap Bt C -	24 40 20+ - -	SiL SiCL - -	Brown Grey Brown Dark Grey Brown - -	Dry Dry Dry -	FB MB Ma -	SH SH H -	Abundance None None	- - - -	Colour - - - -	No No No -		Surface Soil (%) <2 <2 <2 <2 <2 Admin	G C S	Subsoil (%) <2 <2 <2 <2 0-1	G C S
Ap Bt C - -	24 40 20+ - -	SiL SiCL - - - -	Brown Grey Brown Dark Grey Brown - - -	Dry Dry Dry - -	(see legend) FB MB Ma - - -	SH SH H - -	Abundance None None			No No - -		Surface Soil (%) <2 <2 <2 <2 <2 Admin	G C S cing %	Subsoil (%) <2 <2 <2 <2 olimitation of the second secon	G C S LO%
Ap Bt C - - - Topsoil Depth	24 40 20+ - - - 24	SiL SiCL - - - - Comments:	Brown Grey Brown Dark Grey Brown - - -	Dry Dry Dry - -	(see legend) FB MB Ma - - -	sH SH H - -	Abundance None None		Colour 	No No No - -		Surface Soil (%) <2 <2 <2 <2 <2 Admin	G C S ding %	Subsoil (%) <2 <2 <2 <2 0-1 arming practice	G C S L0%
Ap Bt C - - Topsoil Depth	24 40 20+ - - - 24	SiL SiCL - - - Comments:	Brown Grey Brown Dark Grey Brown	Dry Dry Dry - -	FB         MB           Ma         -           -         -           -         -	евенну SH SH - - -	Abundance None None None Abundance None Abundance Abundance None Abundance Abundance None Abundance Abundance None None Abundance Abundance None None None None None None None Non	Northeast	Colour 	No     No     No     -     -     -     Compacting	Coour	Surface Soil (%) <2 <2 <2 <2 <2 Admin C	G C S ding %	Subsoil (%) <2 <2 <2 <2 o-1 arming practice Mod. Wel	G C S L0% es
Ap Bt C - - Topsoll Depth Point	24 40 20+ - - 24 C4	SiL SiCL - - Comments:	Brown Grey Brown Dark Grey Brown	Dry Dry - -	FB MB Ma - - - -	евенну SH SH - - -	Abundance None None None Abundance None Abundance Aspect/Slope %	Northeast Mottles	Colour		Coour 	Surface Soil (%) <2 <2 <2 <2 <2 Admin C Soil Dr	G C S ding % evue to normal f	Subsoil (%) <2 <2 <2 <2 orbit of the second seco	G C S LO% es
Ap Bt C - - Topsoil Depth Point Horizon	24 40 20+ - - 24 24 C4 Depth (cm)	SiL SiCL - - Comments: Landscape	Brown Grey Brown Dark Grey Brown	Dry Dry - - - Moisture	FB MB Ma	SH SH H - - - - - - - - -	Abundance None None None Abundance Abundance	Northeast Northeast Size	Colour	V/N No No - - - Compaction Gite V/N	Colour 	Surface Soil (%) <2 <2 <2 Admin C Soil Dr	G C S ding % uue to normal f ainage	Subsoil (%) <2 <2 <2 0-1 arming practice Mod. Wel 1:	G G C C S LO% Constraints of the second seco
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon	24 40 20+ - - 24 24 C4 Depth (cm) 19	SiL	Brown Grey Brown Dark Grey Brown	Dry Dry - - - Moisture	FB MB Ma	SH SH - - - - Consistency (see legend)	Aburdance None None None Aburdance Aspect/Slope % Aburdance None None	Northeast Northeast Size	Colour	V/N           No           No           - <td>Colour  Slight - yed</td> <td>Surface Soil Dr (%) &lt;2 &lt;2 &lt;2 Admin E Soil Dr Seepage I Surface Soil</td> <td>G C S ding % diue to normal f ainage Depth cm</td> <td>Subsoil (%) &lt;2 &lt;2 &lt;2 0-1 arming practice Mod. Well 1: Subsoil (%)</td> <td>G C S LOW es</td>	Colour Slight - yed	Surface Soil Dr (%) <2 <2 <2 Admin E Soil Dr Seepage I Surface Soil	G C S ding % diue to normal f ainage Depth cm	Subsoil (%) <2 <2 <2 0-1 arming practice Mod. Well 1: Subsoil (%)	G C S LOW es
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap	24 40 20+ - - 24 C4 Depth (cm) 19	SiL SiCL Comments: Landscape Texture SiL	Brown Grey Brown Dark Grey Brown  Position  Colour  Brown  Grey Prom	Dry Dry Dry Ory Dry Dry Dry Dry Dry Dry Dry Dry Dry	Level           Structure (see legend)           FB	Consistency (see legend)	Aburdance None None None Aburdance Aspect/Slope % Aburdance None None None None	Northeast Mottles Size	Colour	V/N           No           No           No           -   -	Colour Slight yed Colour	Surface Soil (%) <2 <2 <2 <2 Admin C Soil Dr Seepage I Surface Soil (%)	G C S ding % Pue to normal f ainage Depth cm	Subsoil (%) <2 <2 <2 <2 <2 0-1 arming practice Mod. Well 1: Subsoil (%)	G C C S LOW es
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt	24 40 20+ - - 24 C4 C4 Depth (cm) 19 20+	SiL SiCL Comments: Landscape Texture SiL SiL	Brown Grey Brown Dark Grey Brown Position Brown Grey Brown Grey Brown	Dry Dry Moisture Dry Dry Dry	FB MB Ma	Consistency (see legend) SH - Consistency (see SH SH	Abundance None None None Appert/Slope % Abundance None None None None None None None Non	Northeast Nottles Size	Colour	V/N           No           No           - <td>Colour Colour Colour Colour</td> <td>Surface Soil (%) &lt;2 &lt;2 &lt;2 Admin C Soil Dr Seepage I Surface Soil (%) &lt;2</td> <td>G C S ding % fue to normal f diue to normal f diue to normal f diue to normal f diue to normal f</td> <td>Subsoil (%) &lt;2 &lt;2 &lt;2 &lt;2 0-1 arming practice Mod. Wel 1: Subsoil (%) &lt;2</td> <td>G G C S LOW Es S LOW G G G G</td>	Colour Colour Colour Colour	Surface Soil (%) <2 <2 <2 Admin C Soil Dr Seepage I Surface Soil (%) <2	G C S ding % fue to normal f diue to normal f diue to normal f diue to normal f diue to normal f	Subsoil (%) <2 <2 <2 <2 0-1 arming practice Mod. Wel 1: Subsoil (%) <2	G G C S LOW Es S LOW G G G G
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -	24 40 20+ - - 24 C4 Depth (cm) 19 20+ -	SIL SICL SICL Comments: Comments: SIL SICL SICL SICL .	Brown Grey Brown Dark Grey Brown Position  Brown Grey Brown Grey Brown	Dry Dry Dry	Level Level Structure (see legend) FB MB	Consistency (see legend) SH - - - Consistency (see legend) SH SH -	Abundance None None None Aspect/Slope % Abundance None None None None	Northeast Northeast Mottles Size	Colour	V/N           No           No           -           -           -           -           -           -           -           -           -           -           -           -           -           -           Gite           V/N           No           No           -	Colour Co	Surface Soil (%) <2 <2 <2 <2 Admin C Soil Dr Seepage I Surface Soil (%) <2 <2 <2	G C S ding % fue to normal f dinage Depth cm G G C	Subsoil (%) -2 -2 -2 -2 -2 -2 -11 Subsoil (%) -2 -2 -2	G C S L0% es El Drained I9 G G C
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -           -	24 40 20+ - - 24 C4 C4 Depth (cm) 19 20+ - -	SIL SICL SICL Comments: Comments: SIL SICL SICL SICL .	Brown Grey Brown Dark Grey Brown Position  Frown Grey Brown Grey Brown	Dry Dry Dry	Level Level Structure (see legend) F8 MB	Consistency (see legend) SH - - - - - - SH SH - - -	Abundance None None None Aspect/Slope % Abundance None None None .	Northeast Mottles Northeast Size	Colour	V/N           No           No           No           -           -           -           -           -           -           Ompaction           Gite           V/N           No           No           -           -           -           -           -           -           -           -           -           -           -	Colour Co	Surface Soil (%) <2 <2 <2 <2 Admin C Soil Dr Seepage I Surface Soil (%) <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	G C S ding % ding ding ding ding ding ding ding ding	Subsoil (%) -2 -2 -2 -2 -2 -2 -1	es G G C S S C W S S C C S S
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -           -	24 40 20+ - - 24 24 C4 Depth (cm) 19 20+ - -	SIL SICL SICL Comments: Comments: SIL SICL SICL SICL	Brown Grey Brown Dark Grey Brown  Pastion  Colour  Brown  Grey Bro	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Structure (see legend) FB MB I I I I I I I I I I I I I I I I I I	Consistency (see legend) SH - - - Consistency (see legend) SH - - -	Abundance None None Aspect/Slope % Abundance None None None None None	Northeast Northeast Size	Colour	V/N           No           No           -           -           -           -           -           -           -           -           -           -           -           -           -           Site           V/N           No           No           -           -           -           -           -           -           -	Colour - - - - - - - - - - - - -	Surface Soil (%) 	G C S dag % tue to normal f ainage Depth cm G C C S dag %	Subsoil (%) -2 -2 -2 -2 -2 -2 -2 -2 -1 Mod. Wel 11 Subsoil (%) -2 -2 -2 -2 -2 -2 -2 -0-1	Il Drained G G C S Il C G C S L0%
Ap Bt C - - Topsoll Depth Point Horizon Ap Bt - - - - - - - - - - - - -	24 40 20+ - - 24 24 C4 Depth (cm) 19 20+ - - - -	SIL SICL SICL Comments: Comments: SIL SICL SICL SICL	Brown Grey Brown Dark Grey Brown Dark Grey Brown Grey B	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Structure (see legend) FB MB	Consistency (see legend) SH Consistency (see legend) SH SH - - -	Aburdance None None Aspect/Slope % Aspect/Slope % None None None None None None None	Northeast Northeast Size	Colour	V/N           No           No           -           -           -           -           -           -           -           Gle           Y/N           No           No           -           -           -           -           -           -           -           -           -           -           -           -           -           -           -           -	Colour Slight Colour Colour Colour Colour Colour Colour	Surface Soli (%) <2 <2 <2 <2 Admin Soli Dr Seepage I Surface Soli (%) <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	G C S ding % true to normal f ainage Depth cm G C C S ding %	Subsoil (%) -2 -2 -2 -2 -2 -2 -2 -1 Mod. Wel 1: Subsoil (%) -2 -2 -2 -2 -2 -2 -1 srming practice	Il Drained G C S LO% es Il Drained Ig G C S LO% es LO% es
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -	24 40 20+ - - 24 24 C4 Depth (cm) 19 20+ - - - - - - - 19	SIL	Brown Grey Brown Dark Grey Brown Dark Grey Brown Grey B	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Structure (see legend) FB MB Ma	Consistency (see legend) SH Consistency (see legend) SH SH - - - -	Aburdance None None Appect/Slope % Abundance None None None None	Northeast Northeast Size	Colour	V/N           No           No           No           -           -           -           -           Compaction           Gle           V/N           No           No           -           -           -           -           -           -           -           -           -           -           -           -           -           -           -           -	Colour Slight Colour Colour Colour Colour Colour	Surface Soil (%) <2 <2 <2 Admin Soil Dr Scepage I Surface Soil (%) <2 <2 <2 <2 Soil Dr Surface Soil (%) <2 <2 <2 <2 <2 Admin (%)	G C S ding % true to normal f ainage Depth cm G C C S S ding %	Subsoil (%) -2 -2 -2 -2 -2 -2 -2 -1 Mod. We 1: Subsoil (%) -2 -2 -2 -2 -2 -2 -1 srming practice	Il Drained G C S LO% es Il Drained Il G G C S LO% es LO% Est Est Est Est Est Est Est Est
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -	24 40 20+ - - 24 C4 C4 Depth (cm) 19 20+ - - - - - - - 19	SIL	Brown Grey Brown Dark Grey Brown  Pastion  Colour  Brown  Grey Bro	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Structure (see legend) FB MB Ma	Consistency (see legend) SH Consistency (see legend) SH SH - - - -	Abundance None None Aspect/Slope % Abundance None None None None	Northeast Northeast Size	Colour	V/N           No           No           No           -           -           -           -           -           -           -           Gle           V/N           No           No           -           -           -           -           -           -           -           -           -           -           -           -           -           -	Colour Slight yed Colour Colour Colour	Surface Soil (%) <2 <2 <2 Admin Soil Dr Seepage Surface Soil (%) <2 <2 <2 <2 Admin Surface Soil (%) <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	G C S ding % Usue to normal f ainage Depth cm G C S S ding %	Subsoil (%) -2 -2 -2 -2 -2 -2 -2 -1 arming practice Subsoil (%) -2 -2 -2 -2 -2 -1 srming practice	G     G     C     S     S
Ар Вt С - - - - ТорзоII Depth Роіпt Ар Вt - - - ТорзоII Depth Роіпt Роіпt	24 40 20+ - - 24 C4 C4 Depth (cm) 19 20+ - - - - - - 19 20 -	SIL SIL SIL Comments: Comments: SIL SIL SIL SIL Comments: Comments:	Brown Grey Brown Dark Grey Brown Dark Grey Brown  Position Grey Brown Grey Br	Dry Dry Try Try Try Try Try Try Try Try Try T	Level	Consistency (see legend) SH Consistency (see legend) SH SH - - - -	Abundance None None Aspect/Slope % Abundance None Aspect/Slope % Abundance None None Abundance None Abundance Abunda	Northeast	Colour	V/N           No           No           No           -           -           -           -           Gle           V/N           No           No           -           -           -           -           Ompaction           -	Colour	Surface Soil (%) <2 <2 <2 Admin Soil Dr Seepage I Surface Soil (%) <2 <2 <2 Admin Surface Soil (%) <2 <2 <2 Admin Surface Soil (%) <2 <2 Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil Dr Surface Soil (%) <2 Soil Dr Surface Soil (%) Surface Soil (%) Surface Soil Dr Surface Soil Dr Surface Soil Dr Surface Soil Dr Surface Soil (%) Surface Soil Dr Surface Soil Dr Su	G G G G G C C C C C C S G G C C S S dag %	Subsoil (%) -2 -2 -2 -2 -2 -2 -2	G     G     C     S     S      II Drained      G     G     C     S      Iow      Is      In Drained
Ap           Bt           C           -           -           Topsoil Depth           Point           Horizon           Ap           Bt           -           Bt           -	24 40 20+ - - 24 24 C4 Depth (cm) 19 20+ - - - - - - 19 20+ (cs 19 20 20+ (cs)	SIL	Brown Grey Brown Dark Grey Brown Dark Grey Brown Grey Brown Golour Brown Grey Brown Grey Brown Grey Brown Grey Brown Grey Brown Colour Colour Colour Colour Colour Colour Colour	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Level Level Level Structure (see legend) Level Level Structure (see legend)	Consistency (see legend)	Abundance None None None Aspect/Slope % Abundance Aspect/Slope % Abundance Aspect/Slope % Abundance	Northeast Northeast Northeast Northeast Northeast Northeast Northeast Northeast	Colour	V/N           No           No           No           -           -           -           -           Ompaction           Gle           V/N           No           No           -	Colour	Surface Soli (%) <2 <2 <2 Admin Soli Dr Seepage I	G G G G G G G G G G G G G G G G G G G	Subsoil (%)         -2           -2         -2           -2         -2           -2         -2           Mod. We         1           Subsoil (%)         -2           -2         -2           -2         -2           -2         -2           -2         -2           -2         -2           -2         -2           Mod. We         -1           Arming practice	G     G     C     S     S      II Drained      G     G     C     S      Iow      es      Il Drained      Id Drained      Id Drained      S
Ap           Bt           C           -           -           Topsoll Depth           Point           Ap           Bt           -           -           Topsoll Depth           Point           -	24 40 20+ - - 24 C4 Depth (cm) 19 20+ - - - - - - - 19 C5 Depth (cm)	SiL	Brown Grey Brown Dark Grey Brown Dark Grey Brown Colour Colour Colour Colour	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Level Level Level Structure (see legend) Level Level Structure Structure Structure Structure Level	Consistency (see legend) SH Consistency (see legend) SH SH - - - - Consistency (see	Abundance None None None Aspect/Slope % Abundance Aspect/Slope % Abundance Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Northeast Northeast Northeast Size Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           -           -           -           -           Gle           V/N           No           No           -           -           -           Ompaction           -	Colour Slight Colour Colour Colour Colour Colour Colour Colour Colour	Surface Soli (%) <2 <2 <2 Admin Soli Dr Seepage I Surface Soli (%) <2 <2 <2 Admin Surface Soli C Soli Dr Seepage I Seepage I Surface Soli Dr	G C S ding % uue to normal f ainage Depth cm G C S S ding % Uue to normal f ainage Depth cm	Subsoil (%) -2 -2 -2 -2 -2 -2	G     G     S      II Drained      G     G     C     S      II Drained      II Drained      II Drained      II Drained      S      II Drained      S
Ap           Bt           C           -           Topsoll Depth           Point           Ap           Bt           -           -           Topsoll Depth           Point           -           -           -           -           -           -           -           Topsoll Depth           Point           Horizon           Ap	24 40 20+ - - 24 C4 Depth (cm) 19 20+ - - - - - - - - 19 C5 Depth (cm) 25	SIL	Brown Grey Brown Dark Grey Brown Dark Grey Brown Colour Position Colour Brown Colour Colour Brown Colour Colour Colour Brown Colour	Dry Dry Try Try Try Try Try Try Try Try Try T	Level Level Level Level Structure (see legend) Level Structure fB MB Level Structure fB	Consistency (see legend) Consistency (see legend) SH Consistency (see legend) SH	Abundance None None None Aspect/Slope % Abundance None None None None Appect/Slope % Abundance Appect/Slope % Abundance None None None None None None None Non	Northeast Northeast Northeast Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           -           -           -           -           Gle           V/N           No           No           -           Gle           V/N           No           -	Colour	Surface Soil (%) 	G G G G G G G G G G G G G G G G G G G	Subsoil (%)         -2           <2	G     G     C     S     S      II Drained      G     G     C     S      II Drained      II Drained      S      II Drained      S
Ap           Bt           C           -           Topsoll Depth           Point           Ap           Bt           -           Topsoll Depth           Point           Ap           Bt           -           -           Topsoll Depth           Point           Ap           Bt           -	24 40 20+ - - 24 C4 C4 Depth (cm) 19 20+ - - - - - - - 19 C5 Depth (cm) 25 43	SIL	Brown           Grey Brown           Dark Grey Brown           -           -           Position           Brown           Grey Brown           Grey Brown           Position           Brown           Grey Brown	Dry Dry Dry	Level Level Structure (see legend) Level Structure Structure Structure Structure Structure MB	SH           SH           -           -           -           -           -           -           SH           -           -           SH           SH           -      -     -	Abundance None None None Aspect/Slope % Abundance None None None None Aspect/Slope % Abundance None None None None None None None Non	Northeast Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           -           -           -           -           -           -           Gle           V/N           No           -   -	Colour Slight Colour Colour Colour Colour Colour Colour Colour Colour Colour Colour	Surface Soli Dr (%) 	G G G G G G G G G G G G G G G G G G G	Subsoil (%)         -2           <2	G     G     C     S     IO% es II Drained I     G     G     C     S II Drained II Drained II Drained II Drained II Drained II Drained II G     G     G     G     S II Drained II Drain
Ap           Bt           C           -           Topsoil Depth           Point           Ap           Bt           -           -           Topsoil Depth           Point           -	24 40 20+ - - 24 24 24 24 24 24 24 24 24 24 24 20+ 20+ 20+ 20+ 20+ 20+ 25 43 20+	SiL SiL SiCL SiL SiCL SiCL Comments: Comments: Comments: SiL SiCL SiCL SiCL SiCL SiCL SiCL SiCL	Brown           Grey Brown           Dark Grey Brown           -	Dry	Level Level Level Structure (see legend) Level Structure	Consistency (see legend) SH - - - - - - - - - - - - - - - - - -	Abundance None None Aspect/Slope % Aspect/Slope % Aspect/Slope % Abundance None Aspect/Slope % A	Size	Colour	V/N           No           No           No           -           -           -           -           -           -           -           -           -           -           -           Solution           -	Colour  Colour  Slight  Colour  Slight  Colour  Colour	Surface Soil Dr (%) 	G G G G G G G G G G G G G G G G G G G	Subsoil (%)         -2           -2         -2           -2         -2           -2         -2           -3	G     G     C     S     ID% es II Drained I9 G G G G C S II Drained I5 II Drained
Ap           Bt           C           -           Topsoil Depth           Point           Horizon           Ap           Bt           -           -           Topsoil Depth           Point           -           Bt           -   -           -	24 40 20+ - - 24 24 24 24 24 24 24 24 24 24 24 20+ 20+ 20+ 20+ 20+ 20+ 25 43 20+ 25 43 20+	SiL SiL SiCL SiL SiCL SiCL SiCL SiCL SiC	Brown           Grey Brown           Dark Grey Brown           -	Dry	Level           Structure (see legend)           FB           MB           -      -	Consistency (see legend) Consistency (see legend) SH - - - Consistency (see legend) SH SH SH SH SH SH SH -	Abundance None None None Aspect/Slope % Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Aspect/Slope % None None None None None None None None	Northeast Northeast Northeast Northeast Northeast Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           No           -           -           -           -           -           Compaction           Gite           V/N           No           -           No	Colour	Surface Soil Or Surface Soil Or Seepage I Surface Soil Or Seepage I Surface Soil Or C Seepage I Surface Soil Or Surface Soil Or	G G G G G G G G G G G G G G G G G G G	Subsoil (%)           <2	G         G           C         S           L0%         es           III Drained         G           L9         G           III Drained         S           III Drained         S           III Drained         S           III Drained         G           G         G           G         G           C         S           III Drained         S
Ар Вt С - - Topsoll Depth Point Horizon Ар Вt - - - Topsoll Depth Point Вt - - - - - - - - - - - - -	24 40 20+ - - 24 24 24 24 24 24 24 24 24 24 24 20+ 20+ 3 20+ 3 20+ 3 25 43 20+ 25 43 20+ 25	SiL SiL SiCL SiL SiCL SiCL SiCL SiCL SiC	Brown           Grey Brown           Dark Grey Brown           -           -           -           Position           Grey Brown           Grey Brown           Grey Brown           -           -           Position           -	Dry Dry Dry	Level           Structure (see legend)           FB           MB           Ma           -           -           -           Structure (see legend)           FB           MB           -           -           Structure (see legend)           FB           MB           -	Consistency (see legend) Consistency (see legend) SH - - - - - - - - - - - - - - - - - -	Abundance None None Aspect/Slope % Aspect/Slope % Aspect/Slope % Aspect/Slope % Abundance None Aspect/Slope % A	Northeast Northeast Northeast Northeast Northeast Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           No           -           -           -           -           -           Compaction           Gite           V/N           No           -      -	Colour	Surface Soil Or Surface Soil Or Seepage I Surface Soil Or	G G G G G G G G G G G G G G G G G G G	Subsoil (%)	G         G           C         S           L0%         es           es         III Drained           L9         G           G         C           S         III Drained           HI Drained         S           III Drained         G           G         G           C         S           III Drained         III Drained           III Draine         III Draine
Ар Вt С - - - - - - - - - - - - -	24 40 20+ - - 24 24 24 24 24 24 24 24 24 24 24 20+ 3 20+ 3 20+ 3 20+ 3 25 43 20+ 25 43 20+ 25 43 20+ 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 3 20+ 20+ 20+ 20+ 20+ 20+ 20+ 20+ 20+ 20+	SiL SiL SiCL Comments: SiL SiCL SiCL SiCL SiCL SiCL SiCL SiCL	Brown           Grey Brown           Dark Grey Brown           -	Dry Dry Dry Ory Dry Dry Dry Dry Dry Dry Dry Dry Dry D	Level           Structure (see legend)           FB           MB           Ma           -           -           Structure (see legend)           FB           MB           -           -           -           Structure (see legend)           FB           MB           -	Consistency (see legend) SH - - - - - - - - - - - - - - - - - -	Abundance           None           None           None           Abundance           Abundance           Abundance           Abundance           Abundance           Abundance           Abundance           None           Abundance           None           Abundance           None           Abundance           None	Northeast Northeast Northeast Northeast Northeast Northeast Northeast Size Size Size Size Size Size Size Size	Colour	V/N           No           No           No           No           -           -           -           -           Compaction           Gite           V/N           No           -      -	Colour	Surface Soil Or Surface Soil Or Soil Or Surface Soil O	G G S S ding % Pue to normal f Depth cm G G G G G G G C S S ding % C S G G G G G G G G G G G G G G G G G G	Subsoil (%)         <2	G         G           C         S           L0%         es           es         III Drained           L9         G           G         C           S         III Drained           HI Drained         S           ISI         G           G         C           ISI         S           III Drained         IIII Drained           ISI         IIIIIIII Draine           ISI
Ар Вt С - - - - - - - - - - - - -	24 40 20+ - - 24 24 24 24 24 24 24 24 24 24 24 20+ 20+ 3 20+ 3 20+ 25 43 20+ 25 43 20+ 25 43	SiL SiL SiCi SiCi SiCi SiCi SiCi SiCi Si	Brown Grey Brown Dark Grey Brown  Position  Frostion  Grey Brown  Grey Brown  Grey Brown  Grey Brown  Colour  Position  Dark Grey Brown  Grey  Grey Brown  Grey Br	Dry Dry Dry	Level           Structure (see legend)           FB           MB           Ma           -           -           Structure (see legend)           FB           MB           -           -           -           Structure (see legend)           FB           MB           -	Consistency (see legend) SH - - - - - - - - - - - - - - - - - -	Aburdance None None Aspect/Slope % Aburdance None Aburdance None None Aburdance Aburdance None Aburdance None Aburdance None Aburdance None Aburdance None None None None None None None Non	Northeast Northe	Colour	V/N           No           No           No           -           -           -           -           -           Site           V/N           No           -   -	Colour	Surface Soil (%) 	G G C S ding % ainage Depth cm G G C S ding % Depth cm G G C S ding % C S ding %	Subsoil (%)         <2	G         G           C         S           L0%         es           es         G           c         S           es         G           c         S           c         S           c         S           c         S           c         G           c         S           c         S           c         S           c         S           c         S           c         S           c         S           c         S           c         S           c         S           c         S



Point	C6	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil D	ainage	Mod. We	II Drained
Horizon	Depth (cm)	Texture	Colour	Moisture	Structure (see legend)	Consistency (see legend)	Abundance	Mottles Size	Colour	Gle Y/N	Colour	Seepage	Depth cm	2	13
Ap	23	SiL	Dark Brown	Dry	FB	SH	None		-	No	-	Surface Soil		Subsoil (%)	
Bt	20+	SICL	Grey Brown	Dry	MB	SH	None		-	No	-	<2	G	<2	G
-	-	-	-	-			-	-	-	-	-	<2	с	<2	с
-	-	-	-	-	-		-	-	-	-	-	<2	s	<2	s
-	-	-	-	-	-	-	-	-	-	-	-	Admi	king %	0-7	10%
-	-	-	-	-	-	-	-	-	-	-	-		ue to normal f	arming practic	es
Topsoil Depth	23	Comments:						-							
Point	C7	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil D	ainage	Mod. We	II Drained
Horizon	Denth (cm)	Texture	Colour	Moisture	Structure	Consistency (see		Mottles		Gle	yed	Seenage	Denth cm		4
					(see legend)	legend)	Abundance	Size	Colour	Y/N	Colour	Surface Soil			1
Ap	24	SiL	Dark Brown	Dry	FB	SH	None	-	-	No	-	(%)		Subsoil (%)	
Bt	29	SICL	Grey Brown	Dry	MB	SH	None	-	-	No	-	<2	G	<2	G
с	20+	CL	Brown	Dry	Ma	VH	None	-	-	-	-	<2	с	<2	с
-	-	-	-	-	-	-	-	-	-	-	-	<2	S	<2	S
-	-	-	-	-	-	-	-	-	-	-	-	Admi	ang %	0-1	10%
- Tonsoil Denth	- 24	- Comments:	-	-	-	-	-		-	-	-	L	ue to normai i	arming practice	5
ropson beput	- 4							-							
Point	C8	Landscape	Position		Level		Aspect/Slope %	Northeast Mottles	0-0.5	Compaction Gle	Slight yed	Soil Di	ainage	Mod. We	II Drained
Horizon	Depth (cm)	Texture	Colour	Moisture	Structure (see legend)	Consistency (see legend)	Abundance	Size	Colour	Y/N	Colour	Seepage	Depth cm	2	19
Ap	29	SiL	Dark Brown	Dry	FB	SH	None	-	-	No	-	Surface Soil (%)		Subsoil (%)	
Bt	20+	SICL	Grey Brown	Dry	MB	SH	None	-	-	No	-	<2	G	<2	G
-	-	-	-	-	-	-	-	-	-	-	-	<2	с	<2	с
-	-	-	-	-	-	-	-	-	-	-	-	<2	s	<2	s
-	-	-	-	-	-	-	-	-	-	-	-	Admi	cing %	0-1	10%
-	-	-	-	-	-		-	-	-	-	-	C	ue to normal f	arming practice	es
Topsoil Depth	20	Commenter													
	25	comments:						-							
Point	C9	Landscape	Position		Level		Aspect/Slope %	Northeast	0-0.5	Compaction	Slight	Soil D	ainage	Mod. We	II Drained
Point	C9 Depth (cm)	Landscape Texture	Position	Moisture	Level Structure (see legend)	Consistency (see legend)	Aspect/Slope %	- Northeast Mottles Size	0-0.5 Colour	Compaction Gle Y/N	Slight yed Colour	Soil Di Seepage	ainage Depth cm	Mod. We	II Drained
Point Horizon	C9 Depth (cm)	Landscape Texture SiL	Position Colour Dark Brown	Moisture	Level Structure (see legend) FB	Consistency (see legend) SH	Aspect/Slope % Abundance None	Northeast Mottles Size	0-0.5 Colour	Compaction Gle Y/N No	Slight yed Colour	Soil Dr Seepage Surface Soil	ainage Depth cm	Mod. We	II Drained
Point Horizon Ap Bt	C9 Depth (cm) 34 42	Landscape Texture SiL SiCL	Position Colour Dark Brown Grey Brown	Moisture Dry Dry	Level Structure (see legend) FB MB	Consistency (see legend) SH SH	Aspect/Slope % Abundance None None	Northeast Mottles Size	0-0.5 Colour	Compaction Gle Y/N No No	Slight yed Colour -	Soil Dr Seepage Surface Soil (%) <2	ainage Depth cm G	Mod. We 3 Subsoil (%) <2	II Drained
Point Horizon Ap Bt C	C9 Depth (cm) 34 42 20+	Landscape Texture SiL SiCL CL	Position Colour Dark Brown Grey Brown Brown	Moisture Dry Dry Dry	Level Structure (see legend) FB MB	Consistency (see legend) SH SH	Aspect/Slope % Abundance None .	Northeast Mottles Size	0-0.5 Colour - -	Compaction Gle Y/N No No	Slight yed Colour - -	Soil Dr Seepage Surface Soil (%) <2 <2	ainage Depth cm G C	Mod. We 3 Subsoil (%) <2 <2	II Drained
Point Horizon Ap Bt C	C9 Depth (cm) 34 42 20+ -	Landscape Texture SiL SiCL CL -	Position Colour Colour Dark Brown Brown -	Moisture Dry Dry Dry	Level Structure (see legend) FB MB -	Consistency (see legend) SH SH -	Aspect/Slope % Abundance None	Northeast Mottles Size	Colour - - - -	Compaction Gie Y/N No No -	Slight yed Colour - - - -	Soil Dr Seepage Surface Soil (%) <2 <2 <2 <2	ainage Depth cm G C S	Mod. We 3 Subsoil (%) <2 <2 <2	II Drained 44 G C S
Point Horizon Ap Bt C - -	C9 Depth (cm) 34 42 20+ -	Landscape Texture SiL SiCL CL	Position Colour Dark Brown Grey Brown Brown	Moisture Dry Dry Dry -	Level Structure (see legend) FB MB - - -	Consistency (see legend) SH - - -	Aspect/Slope % Abundance None None	Northeast Mottles Size	Colour	Compaction Gle Y/N No - - -	Slight yed Colour - - - - -	Soil Dr Seepage Surface Soil (%) <2 <2 <2 <2 <2 Admi	ainage Depth cm G C S sing %	Mod. We           3           Subsoil (%)           <2	Il Drained 44 G C S L0%
Point Horizon Ap Bt C - - -	C9 Depth (cm) 34 42 20+ - - -	Landscape Texture SiL SiCL CL	Position Colour Dark Brown Grey Brown Brown	Moisture Dry Dry	Level Structure (see legend) FB MB	Consistency (see legend) SH SH - - - - -	Aspect/Slope % Abundance None None	Northeast Mottles Size	0-0.5 Colour - - - - - - -	Compaction Gle Y/N No - - - -	Slight ved Colour - - - - - - - - - - -	Soil Da Seepage Surface Soil (%) <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	ainage Depth cm G C S sing % uue to normal f	Mod. We 3 Subsoil (%) <2 <2 <2 <2 org org arming practice	II Drained I4 G C S 10% es
Point Horizon Ap Bt C - - - Topsoll Depth	25 C9 Depth (cm) 34 42 20+ - - - - - 34	Landscape Texture SiL SiL CL CL C Comments:	Position Colour Dark Brown Grey Brown Brown	Moisture Dry Dry Dry	Level Structure (see legend) FB MB	Consistency (see legend) SH SH - - - -	Aspect/Slope % Abundance None None	Northeast Mottles Size	0-0.5 Colour - - - - - - - -	Compaction Gle V/N No - - - -	Slight Colour - - - - - -	Soil Di Seepage Surface Soil (%) <2 <2 <2 <2 Admi	ainage Depth cm G C S ding % uue to normal f	Mod. We 5 Subsoil (%) <2 <2 <2 <2 0-1 arming practice	II Drained II I I I I I I I I I I I I I I I I I
Point Morizon Ap Bt C - - - Topsoll Depth Point	25 C9 Depth (cm) 34 42 20+ - - - - - 34 C10	Landscape Texture SiL SiL CL CL CL CL CL Landscape Landscape Landscape	Position Colour Dark Brown Grey Brown Brown Position Position	Moisture Dry Dry - -	Level Structure (see legend) FB	Consistency (see legend) SH - - - - - -	Aspect/Slope % Abundance None None Aspect/Slope %	Northeast Mottles Size 	0-0.5 Colour - - - - - - - - - - - - - - -	Compaction Gie Y/N No - - - - Compaction	Slight colour - - - - Slight	Soil Dr Seepage Surface Soil (%) <2 <2 <2 Admi C Soil Dr	ainage Depth cm G C C S cing % ue to normal f	Mod. We           Subsoil (%)         :           <2	II Drained
Point Horizon Ap Bt C - - Topsoil Depth Point Horizon	C9 Depth (cm) 34 42 20+ - - - 34 C10 Depth (cm)	Landscape Texture SiL SiL CL CL CL CL CL CL Landscape Landscape Texture	Position Colour  Gray Brown  Gray Brown  Brown  Position Colour  Colour	Moisture Dry Dry Moisture	Level Structure (see legend) FB MB	Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope %	Northeast Mottles Size 	0-0.5 Colour	Compaction Gie Y/N No - - - - - Compaction Gie	Slight Colour - - - - Slight yed	Soil Dr Seepage Surface Soil (%) <2 <2 <2 <2 Admi C Soil Dr Seepage	ainage Depth cm G C S s ding % uue to normal f ainage Depth cm	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon Ap Bt C - - Topsoll Depth Point Horizon	C9 Depth (cm) 34 42 20+ - - - 34 C10 Depth (cm)	Landscape Texture SiL SiL CL	Position Colour Dark Brown Grey Brown Brown Colour Position Colour Colour	Moisture Dry Dry Dry Moisture	Level Structure (see legend) FB MB	Consistency (see legend) SH SH	Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Abundance	Northeast Mottles Size 	0-0.5 Colour - - - - - - - - - - - - - - - - - - -	Compaction Gie Y/N No - - - - - Compaction Gie Y/N	Slight Colour - - - - Slight yed Colour	Soil D Seepage Surface Soil (%) <2 <2 <2 Admi C Soil D Seepage Surface Soil	ainage Depth cm G C S ding % uue to normal f ainage Depth cm	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon Ap Bt C - - Topsoll Depth Point Horizon Ap	25 C9 Depth (cm) 34 42 20+ - - - - 34 C10 Depth (cm) 24	Landscape Texture SiL SiL C C C C C C C C C C C C C C C C C C C	Position Colour Colour Cry Brown Brown Brown Colour Colour Colour Dark Brown Dark Brown	Moisture Dry Dry Moisture Dry Dry	Level Structure (see legend) F8 MB	Consistency (see legend) SH Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Abundance None None	Northeast Mottles Size Size West Mottles Size	0-0.5 Colour - - - - - - - - - - - - - - - - - - -	Compaction Gle Y/N No	Slight Colour - - - - - Slight yed Colour	Soil Di Seepage Surface Soil (%) <2 <2 <2 Admi C Soil Di Seepage Surface Soil (%)	ainage Depth cm G C S S ding % uue to normal f ainage Depth cm	Mod. We           Subsoil (%)           <2	Il Drained
Point Horizon Ap Bt C C - - - Topsoll Depth Point Horizon Ap Bt	25 C9 Depth (cm) 34 42 20+ - - - - - - - 34 C10 Depth (cm) 24 35	Landscape Texture SiL Cu	Position Colour Dark Brown Grey Brown Brown Position Colour Dark Brown Grey Brown Grey Brown Grey Brown Colour	Moisture Dry Dry Moisture Dry	Level  Structure (see legend)  FB  MB	Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope % Abundance None Eve	Northeast Mottles Size West Mottles Size Fine	0-0.5 Colour - - - - - - - Colour - - - - - - - - -	Compaction Gie V/N No	Slight Colour - - - - - - - - - - - - - - - - - - -	Soil Da Seepage Surface Soil (%) <2 <2 <2 <2 Admi Soil D Seepage Surface Soil (%) 2-5	ainage Depth cm G C S ding % ue to normal f ainage Depth cm G G G G	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon Ap Bt C C - - Topsoil Depth Point Horizon Ap Bt C	25 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - - - - - - - -	Landscape SiL SiL C Comments: Comments: SiL SiL SiL SiL SiL SiL SiL SiL SiL	Position Colour Dark Brown Grey Brown Brown Colour Position Colour Dark Brown Grey Brown Ught Brown Ught Brown	Moisture Dry Dry Moisture Dry	Level  Structure (see legend)  FB  MB	Consistency (see legend) SH SH	Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Abundance None Few None None	Northeast Mottles Size West Mottles Size Fine	0-0.5 Colour - - - - - - - Colour - - - - - - - - -	Compaction Gie V/N No No - - - - - - - - - - - - - - - -	Slight ved Colour  Slight  ved Colour	Soil Do Seepage <2 <2 <2 Admi Soil Do Seepage Surface Soil (%) 2.5 <2	ainage Depth cm G G C S ue to normal f ainage Depth cm G G G C C C C C C C C C C C C C C C C	Mod. We           Subsoil (%)           <2	II Drained II Orained II Orained II Drained II Drained II Drained II Orained
Point Horizon C C C C C C C C C C C C C C C C C C C	25 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - - - - - - - -	Landscape SiL SiL C Comments: Comments: SiL SiL SiL SiL SiL SiL SiL SiL SiL	Position Colour Colour Grey Brown Grey Brown Position Colour Colour Colour Colour Grey Brown Grey Brown Grey Brown Grey Brown Colour	Moisture Dry Dry Try Moisture Dry Dry Cry Dry Cry Cry Cry Cry Cry Cry Cry Cry Cry C	Level (see legend) F8 MB	Consistency (see legend) SH SH - - - - - - - - - - - - - - - - -	Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Abundance Few None Few None	Northeast Mottles Size 	0-0.5 Colour	Compaction Gie V/N No No Compaction Compaction Gie V/N No No No No	Slight           ved           -      -           - <td>Surface Soil (%) &lt;2 &lt;2 &lt;2 &lt;2 Admit Soil Do Seepage Surface Soil (%) 2-5 &lt;2 &lt;2 &lt;2 Surface Soil (%) 2-5 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2 &lt;2</td> <td>ainage Depth cm G G C S ainage Depth cm G G C S G G G G G G G G G G G G G G G G</td> <td>Mod. We           Subsoil (%)           &lt;2</td> <2	Surface Soil (%) <2 <2 <2 <2 Admit Soil Do Seepage Surface Soil (%) 2-5 <2 <2 <2 Surface Soil (%) 2-5 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	ainage Depth cm G G C S ainage Depth cm G G C S G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon C Foint Point Point Point C G G G G G G G G G G G G G G G G G G	25 C9 Depth (cm) 34 42 20+ - - - - - - - 34 C10 Depth (cm) 24 35 20+ - - - - - - - - - - - - - - - - - - -	Landscape SiL SiL CL	Position Colour Dark Brown Grey Brown Found Position Colour Dark Brown Colour Light Brown Light Brown	Moisture Dry Dry Dry	Level Structure (see legend) FB MB	Consistency (see legend) SH SH - - - - - - - - - - - - - - - - -	Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Mottles Size West Mottles Size Fine Fine	0-0.5 Colour  Colour	Compaction Gie V/N No No Compaction Compaction Compaction Gie Y/N No No No No No - - - - - - - - - - - - -	Slight ved Colour  Colour  Slight  Ved Colour	Soil Do Seepage <2 <2 <2 Admi C Soil Do Seepage Surface Soil (%) <2-5 <2 <2 <2 Surface Soil (%)	ainage Depth cm G G C S ainage Depth cm G G C G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	II Drained
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Point Horizon Ap Bt C	25 C9 Depth (cm) 34 42 20+ - - - - - - - - 34 C10 Depth (cm) 24 35 20+ - - - - - - - - - - - - - - - - - - -	Landscape SiL SiL SiL CL CL CL CL CL CL CL CL CL C	Position Colour Colour Colour Correstroom Brown Brown Colour Colo	Moisture Dry Dry Try Try Moisture Dry Dry Dry Dry Try Try Try Try Try Try Try Try Try T	Level  Structure (see legend)  FB	Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope % Aspect/Slope % Abundance Rone Few None Few None Aspect/Slope % Abundance Acpect/Slope % Abundance Acpect/Slope % Abundance Acpect/Slope % Abundance Acpect/Slope % Acp	Northeast Mottles Size 	0-0.5 Colour	Compaction         Gie           V/N         No           No         -           -         -           -         -           Compaction         Gie           Y/N         No           No         -           No         -           No         -           No         -           No         -           -         - <tr tr="">     Compaction</tr>	Slight colour co	Soli Da Seepage <2 <2 <2 Admin Soli Da Seepage Surface Soli (%) 2-5 <2 <2 <2 Admin (%) 2-5 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	ainage Depth cm G G C S ding % ue to normal f G G G G G G G G G G ug % ue to normal f	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon Ap Bt C	25 C9 Depth (cm) 34 42 20+ - - - - 34 C10 Depth (cm) 24 35 20+ - - - - - - - - - - - - -	Landscape Texture SiL SiL Cl Cl Cl Comments: Comments: SiL SiL SiL SiL Cl	Position Colour  Dark Brown  Grey Brown  Position  Dark Brown  Colour	Moisture Dry Dry Moisture Dry Dry Dry Dry	Level	Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope % Abundance Rone Few None Few None Aspect/Slope % Abundance Aspect/Slope %	Northeast Mottles Size Size Mottles Size Fine Fine North Mottles	0-0.5 Colour - - - - - - - - - - - - -	Compaction V/N No No Compaction Compaction No No No No No Compaction Gite V/N Compaction Gite Compaction Comp	Slight	Soil Da Seepage <2 <2 <2 Admi Soil Da Seepage Surface Soil (%) 2-5 <2 <2 Admi c Soil Da	ainage Depth cm G G C S drg % Ueue to normal f G G C S drg % Ueue to normal f G drg % Ueue to normal f	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon Ap Bt C C Topsoll Depth Point Ap Bt C C Bt C C C C C C C C C C C C C C C	25 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - -	Landscape SIL SIL CL	Position Colour Colour Colour Brown Grey Brown Colour Position Colour Colour Colour Colour Colour Colou Colo	Moisture Dry Dry C. Moisture Dry Dry Cry Cry Cry Cry Cry Cry Cry Cry Moisture Cry	Level  Structure (see legend)  FB  MB	Consistency (see legend) SH	Aspect/Slope % Abundance None None Aspect/Slope % Abundance None Few None Few None Aspect/Slope % Abundance Aspect/Slope %	Northeast Mottles Size West Mottles Size Fine Fine North Mottles Size	0-0.5 Colour - - - - - - - - - - - - -	Compaction Compaction	Slight Colour Colour Colour Colour ved Colour Colour Colour Slight Colour Colour Colour Colour Colour Colour	Sourface Sould (%) <2 <2 <2 <2 Admin Seepage Surface Sould (%) 2.5 <2 <2 <2 Admin (%) 2.5 <2 <2 <2 Admin (%) 2.5 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	ainage Depth cm G G C S use to normal f G G C S G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	II Drained           II           G           C           S           IO%           es           II Drained           II Drained           II Drained
Point Horizon C Topsoll Depth Point C C C C C C C C C C C C C C C C C C C	25 C9 C9 34 42 20+ - - - - - - - - - - - - -	Landscape SiL SiL C Comments: SiL	Position Colour Colour Colour Colour Position Colour Colou	Moisture Dry Dry Compared Moisture Dry Dry Dry Compared Dry Dry Compared Dry Dry Compared Dry Compared Dry Dry Compared Dry Compared Dry Dry Compared Dry	Level  Structure (see legend)  FB  MIddle  Structure (see legend)  FB  B  C  Level  Level  Structure (see legend)  FB  C  C  Structure	Consistency (see legend) SH SH	Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Mottles Size Mottles Mottles Size Fine Fine North Mottles	0-0.5 Colour - - - - - - - - - - - - -	Compaction Gie V/N No No Compaction Compaction No No No Compaction Compaction No No No No	Slight           ved           -           Slight           -   -	Soil Do Seepage <2 <2 <2 Admi Soil Do Seepage Surface Soil (%) 2.5 <2 <2 Admi C C Surface Soil (%) Seepage Surface Soil C Seepage	ainage Depth cm G G C S ue to normal f G G C S ue to normal f G G G G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	II Drained
Point Horizon C C C C C C C C C C C C C C C C C C C	25 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - -	Comments: Comments:	Position	Moisture Dry Dry Cry Moisture Dry Dry Dry Dry Dry Dry Dry Dry Cry Cry Cry Cry Cry Cry Cry Cry Cry C	Level	Consistency (see legend) SH SH	Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Mottles Size 	0-0.5 Colour - - - - - - - - - - - - -	Compaction Gie V/N No No Compaction Compaction No No No Compaction Compaction Compaction Compaction Compaction No No No No No No No No No No	Slight Colour - - - - - - - - - - - - -	Surface Soil (%) Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Cardinate Soil Card	ainage Depth cm G G G G G G G G G G G G G G G G G G G	Mod. We           subsoil (%)           <2	II Drained
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Point  Horizon  C  C  -  -  -  -  -  -  -  -  -  -  -	25 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - -	Comments: Landscape SiL SiL CL CL CL CL CL CL CL CL CL C	Position Colour  Dark Brown Grey Brown  Position  Dark Brown  Position  Dark Brown  Position  Colour  Position  Colour  Position  Colour  Position  Colour  Position  Colour	Moisture Dry	Level	Consistency (see legend) SH SH - - - - - - - - - - - - - - - - -	Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Mottles Size West Mottles Size Fine Fine Size Size Size Size	0-0.5 Colour Col	Compaction Gie V/N No No Compaction Compaction Compaction Compaction Compaction Compaction No Compaction No No No No No No No No No No	Slight Colour - - - - - - - - - - - - -	Surface Soil Do Seepage <2 <2 Admit c Soil Do Seepage 5urface Soil <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	ainage Depth cm G G G G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	II Drained  II Crained  II Crained  II Crained  II Crained  II Crained  II Drained  II Dra
Point  Horizon  Ap  Bt  C  -  -  Topsoil Depth  Point  Morizon  Ap  Bt  C  -  -  Topsoil Depth  Point  Morizon  Ap  Bt  C  -  -  Topsoil Depth  Point  C  -  -  -  -  -  -  -  -  -  -  -  -	25 C9 C9 Depth (cm) 34 42 20+ - - - - - - - - - - - - -	Comments: Landscape SiL SiL CL Cuments: Comments: Comments: Cuments:	Position  Position	Moisture           Dry           Dry           Ory           Ory	Level  Structure (see legend)  FB	Consistency (see legend) SH SH - - - - - - - - - - - - - - - - -	Aspect/Slope % Abundance Aspect/Slope % Aspect/Slop	Northeast Mottles Size West Mottles Size Fine Fine Size Size Size Size Size Size Size	0-0.5 Colour Col	Compaction Gie V/N No No Compaction	Slight ved Colour  Slight  Colour  Slight  Colour  Slight  ved Colour	Surface Soil (%) 	ainage G G G G G G G G G G G G G G G G G G G	Mod. We           Subsoil (%)           <2	III Drained           III Orained

#### Schedule A Assessment GPS Coordinates



Client:	Tourmaline Oil Corp.	Date:	February 12, 2025	Lead:	Riley Milne
Legal(s):	11-36-081-22W6			Assist:	Eric Bicknell

Assessment Point	Northing	Easting
C1	6214775	605574
C2	6214908	605567
С3	6215060	605561
C4	6215060	605724
C5	6215068	605892
C6	6214908	605895
C7	6214905	605730
C8	6214773	605736
С9	6214777	605897
C10	6214707	605892
C11	6214718	605464

#### Schedule A Assessment LEGEND



Soil Te	exture		Structure				
S	Sand		Gr	Granular		Blocky Only:	
Si	Silt		Wd	Wedge		VFB	Very Fine Blocky
с	Clay		PI	Platy		FB	Fine Blocky
L	Loam		Pr	Prismatic		MB	Medium Blocky
ОМ	Organic Matter		Со	Columnar		СВ	Coarse Blocky
Org	Organics		SG	Single Grain		VCB	Very Coarse Blocky
			Ma	Massive		AB	Angular Blocky
			Cl	Cloddy		SAB	Sub-angular Blocky
Aggre	gates					٦	
G	Gravel	С	Cobbles	S	Stones		
vlaste	er Horizon Designato	r mposod or	ranic matorial				
- r	Litter, signity dect	docomposi	ad organic mat	orial			
-	Humic well decom	decompose	ed organic mat	eria			
	Organic noorly dr	iposed orga					
^	Mineral humus ac	cumulation		lav			
¬ ∆R	Transition betwee	$\Delta \mathcal{R} \mathbf{R} \cdot \Delta$	dominates	lay			
30	Transition between	η R & Δ · R	dominates				
3	Addition of CaCO <sub>2</sub>	salts clav	Fe. Al & organ	ic matter. Dev. Soil	structure/co	lour change	
BC	Transition between	n B & C : B d	lominates			inear enange	
2	Parent material, u	haffected b	v soil forming r	processes			
w	Water. found in Cr	vsolic. Orga	anic. or Glevsol	ic soils			
R	Rock	, , ,	· ·				
lowe	Case Suffixes						
C	Buried horizon				n	Na salt, horiz	zon has columnar structure
:	Irreversible cemen	ted horizor	n		р	Disturbed by	/ mans activities
a	Carbonate enrichn	nent, >10 ci	m thick		S	Horizons wit	h salts- gypsum, crystals or veins seen
сс	Cemented pedoge	nic concret	ions		sa	Secondary sa	alt enrichment, horizon >10 cm thick
5	Eluvial horizon				SS	Slickensides	
F	Al & Fe enrichmen	t			t	Illuvial silicat	te clay present
z	Gleyed horizon				u	Horizon disru	upted by physical or fauna present
h	Organic matter en	richment			v	Vetic horizor	n caused by shrink & swell clays
	Indicated failure to	meet limit	ts of suffix it m	odifies	х	Fragpan hori	izon
k	Presence of calcium	n carbonat	e		У	Horizons bro	oken by cryoturbation
n	Modified, slightly a	ltered hori	izon		z	Frozen horiz	on
Dry A	ggregate Strength (C	onsistency	)				
	Loose	Incol	herent; falls ap	art			
c	Soft	Wea	kly coherent, f	ragile; breaks into a	powder und	ler very gentle	pressure
5	1						
Sh	Slightly Hard	Wea	kly resistant to	pressure; easily cru	shed betwe	en thumb & fo	refinger
Sh H	Slightly Hard Hard	Wea Mod	kly resistant to lerately resista	pressure; easily crunt to pressure; cons	ished betwe iderable pre	en thumb & fo ssure between	refinger thumb & forefinger

Eh	Extremely Hard	Very resistant to pressure; unable to break in hands
R	Rigid	Cannot be crushed except by extreme pressure
Moist A	Aggregate Strength (Con	sistency)
L	Loose	Incoherent, falls apart
Vf	Very Friable	Easily crushed when under very gentle pressure; coheres when pressed together
Fr	Friable	Easily crushed under moderate pressure; coheres when pressed together
F	Firm	Crushed under mod pressure between thumb & forefinger; resistance is noticeable
VF	Very Firm	Crushed between thumb & forefinger; strong pressure required
EF	Extremely Firm	Cannot be crushed between thumb & forefinger
Wet Ag	gregate Strength (Consi	stency)
NS	Non-sticky	After pressure, no soil adheres to thumb or forefinger
SS	Slightly Sticky	After pressure, some soil adheres to thumb or forefinger; soil doesn't stretch
S	Sticky	After pressure, soil adheres strongly to thumb or forefinger; stretches somewhat, pulls apart
VS	Very Sticky	After pressure, soil adheres strongly to thumb or forefinger; stretches; pulls apart



## APPENDIX A







## APPENDIX B



Overview of existing approach at crossing 1 and 2.



Overview of the proposed development facing North.



Overview of the proposed development facing Northeast.



Overview of existing approach at crossing 3.



Soil profile at assessment point C1.



North from assessment point C1.



Soil profile at assessment point C2.



Southeast from assessment point C2.



Soil profile at assessment point C3.



East from assessment point C3.



Soil profile at assessment point C4.



Southwest from assessment point C4.



Soil profile at assessment point C5.



West from assessment point C5.



Soil profile at assessment point C6.



Southwest from assessment point C6.



Soil profile at assessment point C7.



North from assessment point C7.



Soil profile at assessment point C8.



Northeast from assessment point C8.



Soil profile at assessment point C9.



Soil profile at assessment point C10.



Southwest from assessment point C10 towards Del Rio Road.



Soil profile at assessment point C11.



South from assessment point C11.