



TENURE IDENTIFICATION

AMENDMENT # 4

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A80499	-	4	BG2H4	93N048-303	FDU 4 OLD	Gillis	55 29 29 / 124 32 09

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
86.9	0.7	0.0	21.6	0.0	0.0	64.6

ADDITIONAL COMMENTS

DEFINITIONS (ADD DEFINITIONS AS REQUIRED)
The maximum proposed % PAS indicated below is an increase of 1% over the total proposed road area to account for additional disturbance during access construction. Temporary access structures not located on the SP map may be constructed where required provided that environmental risks are managed, soil disturbance levels are not exceeded, and they are rehabilitated upon completion of harvest activities. TSL A80499 is being managed as a single entry harvest. The intent is to harvest large openings while maintaining adjacent large undisturbed areas. Several large wildlife corridors have been established through TSL A80499 providing access routes between upper and lower areas that are heavily used by caribou. Harvesting is planned for July-August and December-March.

SOIL DISTURBANCE

SU	Max. Allowable Soil Disturbance (%)	Max. Amount TAS May Exceed MASD Prior To Rehab (%)	Max. Allowable Soil Disturbance For Roadside Work Areas (%)	Maximum Permanent Access Structures (%)
1	10.0	5.0	25.0	3.1
SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS, AND HOW THEY AFFECT THE TIMING			
1	If, pending a post harvest inspection, dispersed slash levels are high enough to impede planter(and caribou) access broadcast burning or piling and burning will be used to reduce slash.			

RESULTS AND STRATEGIES

Biodiversity Objectives	
Result or Strategy Description	5.1.1.1.4 - FDU 4 - Old Growth Order - Land Act Section 93.4 Order Establishing Non-Spatial Landscape Biodiversity Objectives in the Mackenzie Forest District dated May 1, 2008, and as amended on September 23, 2010.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Block resides in a LU/LU Group which has spatially defined OGMA's which satisfies the old and old interior forest condition as defined in the Non-spatial Old Growth Order.
Result or Strategy Description	5.1.1.3.1 - all FDU's - ADA/SRA - Order Establishing Land Use Objectives Under Section 93.4 of the Land Act for the Purposes of FRPA- November 21, 2006 (Prince George Timber Supply Area and Mackenzie Timber Supply Area). Order Establishing Land Use Objectives Under Section 93.4 of the Land Act for the Purposes of FRPA- November 21, 2006 (Robson Valley Timber Supply Area).
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The site plan area does not overlap any established ADA/SRA.
Result or Strategy Description	5.1.2.4.4 - FDU 4 - Landscape Biodiversity - FPPR Section 9 and Section 12.4. FPPR. Order Establishing Non-Spatial Landscape Biodiversity Objectives in the Mackenzie Forest District. May 1, 2008
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site Plan is consistent with the Result and Strategy of the FSP. Harvest of block 4 will create a patch of <250.0-ha. It will contribute 86.9-ha to the 250-5000-ha patch size category. The 2013 landscape analyses results show that the future (2017) % of area in the 250-5000-ha patch size category is 49%. The current is 33% and the target is 20-40%. Thus this block is trending away from the target. This block is being harvested to address mountain pine beetle killed timber. See Biodiversity/LU Comments for more details.
Result or Strategy Description	5.1.2.5.1 - all FDU's - Stand Level Biodiversity - FPPR Section 9.1 and Section 12.5(1).
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site Plan is consistent with the FSP as follows: 21.6-ha have been designated as Wildlife Tree Retention Area, which equals 24.9% of the gross block area. Refer to the support document - Biodiversity/LU comments for more details. Additional stand level actions to address FSP section 5.1.2.2.3 (Caribou habitat issues) are referenced in the Wildlife/Endangered Species Comments in the Support Document of the SP.
Result or Strategy Description	FDU 4 - 5.1.1.2.2 - OGMA - Section 93.4 of the Land Act. Spatial Land Use Objectives for part of the Mackenzie Forest District Area, dated September 23, 2010.
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This site plan is consistent with the Spatial Land Use Objectives for part of the Mackenzie Forest District Area, dated Sept. 23, 2010. Block 4 does not overlap with any established Old Growth Management Areas (OGMAs). See supporting information Biodiversity Objectives/LU Comments for more details.

Result or Strategy Description	5.1.1.1.1 - FDU1 - Order Establishing Landscape Biodiversity Objectives for the Prince George Timber Supply Area (dated October 20, 2004) continued under section 93.8 of the Land Act.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.1.1.2 - FDU 2 - Old Growth Order - Order Establishing Provincial Non-Spatial Old Growth Objectives. June 30, 2004. Continued under section 93.8 of the Land Act.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.1.1.3 - FDU 3 - Old Growth Order - Order Establishing Provincial Non-Spatial Old Growth Objectives. June 30, 2004. Continued under section 93.8 of the Land Act.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.1.1.5 - FDU 5 - Old Growth Order - Order Establishing Provincial Non-Spatial Old Growth Objectives. June 30, 2004 established under section 4(1) and (2) of the FPC. Draft Old Growth Management Areas (OGMA) identified for the South Trench Landscape Unit (LU), May 31, 2005 under section 8 of this order.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.1.2.1 - FDU 1 - OGMA - Dome and Slim Landscape Units - October 31, 2002; Humbug Landscape Unit - August 1, 2003. Continued under section 93.8 of the Land Act.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.4.1 - FDU 1 - Landscape Biodiversity - FPPR Section 9 and Section 12.4.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.4.2 - FDU 2 - Landscape Biodiversity - FPPR Section 9 and Section 12.4.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.4.3 - FDU 3 - Landscape Biodiversity - FPPR Section 9 and Section 12.4. FPPR Section 64 and 65 as of January 14, 2008
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.4.5 - FDU 5 - Landscape Biodiversity - FPPR Section 9 and Section 12.4. Order Establishing Provincial Non-Spatial Old Growth Objectives. June 30, 2004
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	FDU 5 - 5.1.1.2.3 - OGMA - Established under FPC 4(1) and (2) Order to Establish the Crescent Spur, Lower Morkill Cushing, Forgetmenot, Upper Morkill, North Trench and Goat Landscape Unit Objectives, January 30, 2006. Order to Establish the East Kinbasket, West Kinbasket, Hugh Allan, Foster and Dawson Landscape Unit Objectives, May 26, 2005. Order to Establish the Kiwa-Tete and Canoe Landscape Unit Objectives, January30, 2006
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Cultural Heritage Resources	
Result or Strategy Description	5.1.2.7.1 - all FDUs - Cultural Heritage Resources - FPPR Section 10(a) and (b).
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	This Site Plan is consistent with the FSP. Communication of proposed development was done during operational planning. No Cultural heritage resources (CHRs) were identified during field work. See Supporting information Cultural Heritage Resources. If a previously unidentified CHR is encountered, by the TSM or Agreement Holder while conducting a forest practice, operations will be modified or cease to the extent necessary to protect the resource, until a cultural heritage resource evaluation can be carried out.
Recreation Resources	
Result or Strategy Description	5.1.3.4.2 - FDU 4 - Recreation - Recreation Resources
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site Plan is consistent with the FSP. See Supporting Information - Recreation Comments.

Result or Strategy Description	5.1.3.4.1 - FDU 1, 2, 3, 5 - Recreation - FRPA Section 181.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Riparian Management	
Result or Strategy Description	5.1.2.3.1 - all FDU's - Riparian - FPPR Sections 8 and 12.3. Riparian Areas Management
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site Plan is consistent with the FSP. Riparian features are present within and adjacent to this block. See Support Document Riparian Assessments for specific strategies.
Result or Strategy Description	5.1.2.3.2 - FDU 5 - Movement Corridors - Established under FPC 4(1), Order to Establish the East Kinbasket, West Kinbasket, Hugh Allan, Foster and Dawson Landscape Unit Objectives, May26, 2005.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.3.3.1 - FDU 1, 2, 3 - Lakeshore Management - No formal Lakeshore Management Zone objectives were established for any of these classified lakes, therefore no result or strategy is required in this FSP.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Soil Objectives	
Result or Strategy Description	5.1.2.1.1 - all FDU's - Soils - FPPR Sections 5 and 12.2
Applies:	YES
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	Limits for permanent access, temporary access, and soil disturbance are listed in the Soil Disturbance section above and in the Soil Assessment of the Harvest Plan. These limits are consistent with Sections 35 and 36 of FPPR. Refer to Critical Site Conditions and Harvest Constraints in the Harvest Plan for specific management strategies that ensure these limits are not exceeded.
Visual Objectives	
Result or Strategy Description	5.1.2.6.1 - FDU 4 - Visual Quality - FPPR section 9.2.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	The Site Plan area does not overlap any EVQOs.
Result or Strategy Description	5.1.3.2.1 - FDU 1, 2, 3, 5 - Visual Quality - FDU 1 - Order for the Establishment of VQOs for the Prince George Forest District. December 7, 2005. Established under Section 7(2) of GAR. FDU 2 - FRPA Section 181. FDU 3 - FRPA Section 181, GAR Section 17. FDU 5 - FRPA Section 181, GAR Section 17.
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Wildlife Objectives	
Result or Strategy Description	5.1.2.2.1 - FDU 1 and 2 - SAR Notice and WHA- FPPR Section 7: Notice - Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Prince George Forest District- December 30, 2004. Order - Wildlife Habitat Area #7-003 - December 15, 2005
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.2.2 - FDU 1, 2, 5 - Mountain Caribou UWR - Order Mountain Caribou Ungulate Winter Range #U7-003. UWR order approved on December 9, 2009 under GAR sections 9(2) and 12(1).
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.2.2.3 - FDU 4 - SAR Section 7 Notices and UWR - FPPR Section 7: Notice A - Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Mackenzie Forest District. December 2004. Notice B - Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Winter Survival of Ungulate Species in the Mackenzie Timber Supply Area. December 2004. Order - Ungulate Winter Range #U7-009. November 24, 2005
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	UWR#U-7-009 is not applicable to the area of this block.

Result or Strategy Description	5.1.2.2.4 - FDU 4 - UWR - Order - Northern Caribou Ungulate Winter Range #U7-001. Original UWR order approved April 7, 2003 and subsequently amended on July 15, 2010 under GAR sections 9(2) and 12(1). Order - Northern Caribou Ungulate Winter Range #U7-007. UWR order approved June 14, 2007 under GAR sections 9(2) and 12(1). Order - Moose, Elk, and Mountain Goat Ungulate Winter Range #U7-017. UWR order approved December 12, 2008 under GAR sections 9(2) and 12(1).
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	UWR#U-7-001 and U-7-017 are not applicable to the area of this block.
Result or Strategy Description	5.1.2.2.5 - FDU 5 - Section 7 SAR Notice - FPPR Section 7: Notice - Indicators of the Amount, Distribution and Attributes of Wildlife Habitat Required for the Survival of Species at Risk in the Headwaters Forest District, December30, 2004
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.
Result or Strategy Description	5.1.3.1.1 - FDU 1 - Mule Deer UWR - FPPR Section 181. Order - Ungulate Winter Range #U7-013 - November 26, 2003
Applies:	NO
How Result or Strategy Applies to the Site (or Rationale if it does not apply)	In FDU 4.

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	64.6	1025898	Approved variation as a result of the caribou assessment. Refer to section 5.1.2.2.3 of the FSP. To ensure that caribou use of the future stand is promoted and that use by moose or deer is discouraged, the following change will be made to the Stocking Standards: - For ESSFmv3 02 and 08 site series pine (Pl) will be preferred and spruce (Sx) will be acceptable. Subalpine fir (Bl) and Aspen (At) will not be acceptable or preferred. - For ESSFmv3 02 and 08 site series the maximum conifer density at free growing will be2500 stems per hectare to ensure suitable crown closure requirements for lichen growth and to ensure stand density is not a barrier to future caribou use. If the maximum density exceeds this level, thinning will be required. All portions of the ESSFmv3 02 and 08 will be treated as per the above standard.

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2008 07 07	YES
1	2014 03 13	NO
Std Amendment Rationale:	The site plan has been amended to bring it in line with the Prince George Business Area FSP amendment #11 January 30, 2012. Results and Strategies, Stocking Standards, Pest Specific Comments, Wildlife Comments, Guide Outfitter addition, season of harvest and Cultural Heritage Resources have all been updated.	
2	2017 01 24	NO
Std Amendment Rationale:	Rehab of some TAS delayed to allow access during planting activities in case of a medical emergency.	
3	2018 09 05	NO
Std Amendment Rationale:	Incorrect application of ungulate winter range legislation.	
4	2018 09 06	NO
Std Amendment Rationale:	Correction to activity requirements based on incorrect assumption of high compaction soil.	

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
DWAYNE ANDERSON	<div><div>Dwayne Anderson RPF5033</div><div>Digitally signed by Dwayne Anderson RPF5033 Date: 2018.09.06 15:41:50 -07'00'</div></div>
DATE SIGNED	
2018/09/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	

Map attached forms an integral part of the site plan.

SUPPORT DOCUMENT

AMENDMENT # 4

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A80499	-	4	BG2H4	93N048-303	FDU 4 OLD	Gillis	55 29 29 / 124 32 09

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION
The block is located in a non-visually sensitive area, a VIA is not required.
PEST INCIDENCE SURVEY INFORMATION
Pest Specific Comments
No Pest Incidence Survey was requested by the District Manager for this area, however mountain pine beetle infested stems occur throughout the block. Proposed harvest area exhibits approximately 2-4% IBM infestation at the time of field work. It is expected that beetle infestation will continue to increase, the strategy is for the removal of all merchantable PI within the block. The red/grey IBM attack as of the summer of 2013 for this block is 47%.
Forest Health Comments
ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION
No archaeology review was requested by the District Manager for this area.No AIA is required If a previously unidentified cultural heritage resource is encountered by the TSM or Agreement Holder while conducting a forest practice, operations will cease or be modified to the extent necessary to protect the resource until a cultural heritage resource evaluation can be carried out.
TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION
Terrain Stability Comments
No TSA is required for this block.
Gully Comments
No gullies exist within nor adjacent to the proposed boundary.
VEGETATION

RIPARIAN ASSESSMENTS					
Management Strategies					
Within 5m of an S4,S5 or S6 stream retain brush species, advanced regeneration, and non merchantable conifers, except at designated stream crossings, or where hand falling is required, when manual brushing to release crop trees, conduct the minimum amount required to meet silvicultural obligations.					
The stream and wetlands in and adjacent to the block boundary are expected to have low windthrow hazard. Within RMZs there are very few stems suitable for retention, therefore the RMZ will be treated the same as the remainder of the block.					
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
S4-2 S4	RMZ	1	30.0		The harvest boundary is located => 20m from the stream, averaging >30m. It is anticipated that the buffer will adequately protect the stream.
W3-all W3	RMZ	1	30.0		The block boundary is located 0-30m from the W3 wetlands (averaging 25m). Within the RMZ there are very few stems suitable for retention, therefore the RMZ will be treated the same as the remainder of the block.
NCD-all UC	RMZ	1	0.0		All operational activities will be conducted to ensure that soil disturbance limits are not exceeded and natural surface patterns are maintained. No further management is required.

SOIL ASSESSMENT							
HAZARD RATINGS				SOIL CHARACTERISTICS			
SU	Soil Comp	Soil Erosion	Soil Disp	Depth To Unfavourable Subsoil		Type of Unfavourable Subsoil	Sediment Delivery Risk (Community Watersheds)
				Min(cm)	Max(cm)		
1	L	H	H	0.0	60.0	SG	
COMMENTS							
Loamy sand soils textures were noted in variable levels throughout the block. Aggressive site preparation and soil disturbance should be minimized to prevent soil desiccation. Boulders and surface rock are evident within the block near FC 22 and south of FC 4. These rocky areas do not contribute significantly to the block area. No management is planned.							

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)						
I.D.#	Area	Description				
W	21.6	PI(SB) 8237-12 2-4 m3/ha CWD				
GROUP WTRA / WTP AND SITE DEG. CALCULATION (to be retained on the first block of the only)						
Block	Gross Cutblock Area	WTRA / WTP	%	BEC	Perm Access	%
Total # of Blocks:						

SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS
Wildlife/Endangered Species Comments
<p>TSL A80499 is being managed as a single entry harvest. The intent is to harvest large openings while maintaining adjacent large undisturbed areas. Several large wildlife corridors have been established through TSL A80499 providing access routes between upper and lower areas that are heavily used by caribou.</p> <p>Harvesting contractors will be instructed to temporarily stop operations when caribou are in the immediate vicinity of the block and for as long as caribou remain in the immediate vicinity of the block as determined by the Ministry of Environment, Ministry of Forests or BCTS Supervisor.</p> <p>If, pending a post harvest inspection, dispersed slash levels are high enough to impede planter(and caribou) access broadcast burning or piling and burning will be used to reduce slash.</p> <p>Moose is rated low for the area. Herbicide use should be considered to minimise brush in the area to maintain this area as low use for moose.</p>
Range Comments
NA
Fisheries Comments
Fish bearing streams are adjacent to the block boundary. The reserve or buffer zones are expected to adequately protect the features. See Section 1.5 for more information.
Watersheds/Hydro Assessments Comments
NA
Sensitive Areas Comments
NA
Recreation Comments
The recreation significance is moderate, and the recreation sensitivity is moderate. Snowmobile use in the area is to be discouraged to reduce the interaction between Caribou and public.
Cultural Heritage Comments
No archaeology review was requested by the District Manager for this area.
Biodiversity Emphasis/L.U. Comments
High / Klawli NDT 2
Other Resources Comments
Trapper License number : TR0728T009 Gude Outfitter: 728G001
ADDITIONAL COMMENTS:
Avalanche Assessments
NA
Connectivity Corridor
Upland to wetland connectivity is rated moderate for this site series in NDT 2.
Consumptive Use Streams
NA
Enhanced Resource Dev. Zones
Klawli General Resource Management Zone # 34.
Fire Maintained Ecosystems
NDT 2: Frequent stand initiating events, return fire interval of 200 years.
Green-Up
No concerns or actions required. The block is consistent with Section 64 (2)(a)(i)(A) of the FPPR.
Grizzly Bear Habitat
Grizzly bear habitat is rated medium for this area.
Old Growth Constraints
There are no constraints on old growth for this LU.

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2008 07 07	YES
1	2014 03 13	NO
Std Amendment Rationale:	The site plan has been amended to bring it in line with the Prince George Business Area FSP amendment #11 January 30, 2012. Results and Strategies, Stocking Standards, Pest Specific Comments, Wildlife Comments, Guide Outfitter addition, season of harvest and Cultural Heritage Resources have all been updated.	
2	2017 01 24	NO
Std Amendment Rationale:	Rehab of some TAS delayed to allow access during planting activities in case of a medical emergency.	
3	2018 09 05	NO
Std Amendment Rationale:	Incorrect application of ungulate winter range legislation.	
4	2018 09 06	NO
Std Amendment Rationale:	Correction to activity requirements based on incorrect assumption of high compaction soil.	

HARVEST PLAN

AMENDMENT # 4

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A80499	-	4	BG2H4	93N048-303	FDU 4 OLD	Gillis	55 29 29 / 124 32 09

SILVICULTURE SYSTEMS

SU	SYSTEM	VARIANT	PHASE	RESERVE	Min BA (m2/ha)	Min Residual Density (sph)
1	CCRES		REMOV			
Current Stand Structure/Site Conditions			SU 1 is composed of PI9BI1 stand. The understorey is patchy with poor form: BI5Sx4PI1 P400 / S600-3500 / R400-10000). SU 1 is comprised of the mostly of the 08 site series (80%). The 02 site series can be found on drier, rocky sites.			
Silviculture Systems SU Comments						
Min. Characteristics of Leave Trees (Form, Health, Vigour)			No leave trees are prescribed. A minimum of 1-3m3/ha of coarse woody debris should be left scattered throughout at a minimum of 4 logs per hectare.			

Additional Comments

Harvesting Constraints	Mechanical falling, conventional rubber tire skidding to roadside. Harvest all merchantable conifer from within the block. The maximum proposed % PAS indicated below is an increase of 1% over the total proposed road area to account for additional disturbance during access construction. Temporary access structures not located on the SP map may be constructed where required provided that environmental risks are managed, soil disturbance levels are not exceeded, and they are rehabilitated upon completion of harvest activities.
Silvicultural Constraints	See planning section 1.6. Areas of rock exist within the block. It is not expected these areas will significantly impact stocking.

SOIL ASSESSMENT

SU	HAZARD RATINGS			SOIL DISTURBANCE				SOIL CHARACTERISTICS			
	Soil Comp.	Soil Erosion	Soil Disp.	Max Allow Soil Dist %	Max Allow Max Amount TAS may exceed MASD prior	Max Allow Perm Access Structures %	MASD for Roadside work areas %	Depth to Unfavorable Subsoil		Type of Unfavorable Subsoil	Sediment Delivery Risk (Comm. Watershed)
								Min (cm)	Max (cm)		
1	L	H	H	10.0	5.0	3.1	25.0	0.0	60.0	Sand and Gravel	
SU	Critical site conditions that affect the timing of operations and how they affect the timing										
1	If, pending a post harvest inspection, dispersed slash levels are high enough to impede planter(and caribou) access broadcast burning or piling and burning will be used to reduce slash.										

SU MANAGEMENT COMMENTS

SU	SU Description
1	SU 1 is composed of PI9BI1 stand. The understorey is patchy with poor form: BI5Sx4PI1 P400 / S600-3500 / R400-10000). SU 1 is comprised of the mostly of the 08 site series (80%). The 02 site series can be found on drier, rocky sites.

SOIL MANAGEMENT COMMENTS

Soil Conservation
Loamy sand soils textures were noted in variable levels throughout the block. Aggressive site preparation and soil disturbance should be minimized to prevent soil desiccation. Boulders and surface rock are evident within the block near FC 22 and south of FC 4. These rocky areas do not contribute significantly to the block area. No management is planned.
Temporary Access
Temporary access structures will be rehabilitated within one(1) year after harvest except where required for emergency access/egress during planting operations, which are to be rehabilitated upon completion of primary silvicultural activities. During the existence of temporary access structures, environmental risk(s) will be managed concurrently and/or immediately after harvest. Temporary access structures not located on the SP map may be constructed where appropriate providing that environmental risks are managed for and minimised and soil disturbance limits are not exceeded.
Slope Instability
No TSA is required for this block.

RIPARIAN ASSESSMENTS					
Management Strategies					
<p>Within 5m of an S4,S5 or S6 stream retain brush species, advanced regeneration, and non merchantable conifers, except at designated stream crossings, or where hand falling is required, when manual brushing to release crop trees, conduct the minimum amount required to meet silvicultural obligations.</p> <p>The stream and wetlands in and adjacent to the block boundary are expected to have low windthrow hazard. Within RMZs there are very few stems suitable for retention, therefore the RMZ will be treated the same as the remainder of the block.</p>					
Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
S4-2 S4	RMZ	1	30.0		The harvest boundary is located => 20m from the stream, averaging >30m. It is anticipated that the buffer will adequately protect the stream.
W3-all W3	RMZ	1	30.0		The block boundary is located 0-30m from the W3 wetlands (averaging 25m). Within the RMZ there are very few stems suitable for retention, therefore the RMZ will be treated the same as the remainder of the block.
NCD-all UC	RMZ	1	0.0		All operational activities will be conducted to ensure that soil disturbance limits are not exceeded and natural surface patterns are maintained. No further management is required.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION			
<p>A minimum of 4 logs per hectare each being a minimum of 2 m in length and 7.5 cm in diameter at one end must be retained scattered throughout the block. There is a commitment as a general objective to maintain a variety of piece sizes randomly distributed across the cutblock. Wood not included in Close Utilisation Standards may be retained on site unless burned for silvicultural, pest control or fire hazard reasons.</p>			
Performance Std. (%) :	Block Target(%):	Coarse Woody Debris (m3/ha):	2.0

DEFINITIONS

Definitions (add definitions as required)
Skid Trail Width- trails are to be an average of 4m clearing width
Low ground pressure (LGP) normally applies only to skidding equipment and is defined as speciality machines such as the KMC flex track or conventional machinery having an operating ground pressure of 6.5psi or less. Ground pressure is calculated by the following formula: Ground pressure = operating weight (lbs) / ground contract area (sq.in.)(GCA). For tracks, the GCA is the width of the track shoe X the length of track on the ground X2. For rubber tired equipment, the GCA is the area of one tire X4.
Regen means - Layers 2 - 4 as defined in the "Establishment to Free Growing Guidebook - Prince George Forest Region" (May 2000)
Advanced regen means - non-merchantable layers 1 and layers 2,3&4 as defined in the "Establishment to Free Growing Guidebook - Prince George Forest Region" (May 2000)
Brush means - any non merchantable deciduous species.
Good quality regeneration must be relatively free of diseases, have at least30% live crown, a conical crown shape, non-chlorotic foliage, exhibit vertical stem growth, and be free of any scarring or wounding.
A log is defined as a cut stem minimum 2m in length and 7.5cm in diameter at 1 end.
Management strategies to accommodate CWD will not compromise close utilisation standards. In accordance with this, retain naturally occurring stubs, existing CWD and unmerchantable logs. Spruce and Balsam fir snags are to be stubbed at2 - 4m above the ground, unless they need to be hand felled.

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2008 07 07	YES
1	2014 03 13	NO
Std Amendment Rationale:	The site plan has been amended to bring it in line with the Prince George Business Area FSP amendment #11 January 30, 2012. Results and Strategies, Stocking Standards, Pest Specific Comments, Wildlife Comments, Guide Outfitter addition, season of harvest and Cultural Heritage Resources have all been updated.	
2	2017 01 24	NO
Std Amendment Rationale:	Rehab of some TAS delayed to allow access during planting activities in case of a medical emergency.	
3	2018 09 05	NO
Std Amendment Rationale:	Incorrect application of ungulate winter range legislation.	
4	2018 09 06	NO
Std Amendment Rationale:	Correction to activity requirements based on incorrect assumption of high compaction soil.	

Print off the PAS/TAS table located as an attachment on the Block Details Screen and attach to this prescription

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
DWAYNE ANDERSON	<div><div>Dwayne Anderson RPF5033</div><div>Digitally signed by Dwayne Anderson RPF5033 Date: 2018.09.06 15:42:22 -07'00'</div></div>
DATE SIGNED	
2018/09/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	

SILVICULTURE PLAN

AMENDMENT # 4

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
A80499	-	4	BG2H4	93N048-303	FDU 4 OLD	Gillis	55 29 29 / 124 32 09

ECOLOGICAL INFORMATION

SU	Ecology Unit	Area	Zone	Subzone	Variant / Phase	Site Series (series - %)	Elevation Avg (m)	Slope Avg (%)	Aspect	Slope Position	Rooting Depth (cm)	Soil Texture
1	a	64.6	ESSF	mv	3	08-80 02-20	1,290	13	S	Lower Slope		LS

STOCKING REQUIREMENTS				
ASSESSMENT DATES				
Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1025898	4		20
Min/Max Elevation Regime: 1230 / 1350				

SU : 1														REGENERATION LAYER									
PREFERRED SPECIES						ACCEPTABLE SPECIES						POST SPACING DENSITY(sph)				MAX CONIFEROUS (sph)							
Species		Min Ht. (m)	Footnotes	Species		Min Ht. (m)	Footnotes	Min	1000	Max	2400	10000											
Pli Sx	Lodgepole Pine - Interior Hybrid Spruce (SE x SW)	1.2 0.6		Bl	Subalpine Fir	0.6		WELL SPACED TREES(sph)						Min Horizontal Dist. Pref/Acc (m)									
								Target Pref/Acc		Minimum Pref/Acc		Minimum Pref											
								1000		500		400		1.0									
														Height Relative to Competition (%)									
																		125					

OTHER REQUIRED STOCKING INFORMATION

ACTIVITIES

SITE PREPARATION	
0.92	aribou road rehab - 0.9216ha (on 8m widths) DA 2017/01/31
SP-ME-EXCAV-MK 2020/06/01	
AREA	TECHNIQUE(S) / LIMITING FACTOR

PLANTING						
PL-FP-CTAIN-MK 2020/06/01 SEASON:						
AREA	PLANTING UNIT	UNIT AREA	SPECIES	COMMENTS	STEMS / HA	TOTAL STEMS
3.2	1	3.2			0	0
	LIMITING FACTORS / COMMENTS					
PL-PL-CTAIN-MK 2019/06/01 SEASON:						
AREA	PLANTING UNIT	UNIT AREA	SPECIES	COMMENTS	STEMS / HA	TOTAL STEMS
64.6	1	64.6			0	0
	LIMITING FACTORS / COMMENTS					

SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT

MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION	
A minimum of 4 logs per hectare each being a minimum of 2 m in length and 7.5 cm in diameter at one end must be retained scattered throughout the block. There is a commitment as a general objective to maintain a variety of piece sizes randomly distributed across the cutblock. Wood not included in Close Utilisation Standards may be retained on site unless burned for silvicultural, pest control or fire hazard reasons.	
Performance Std. (%):	Block Target(%): Coarse Woody Debris (m3/ha): 2.0

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2008 07 07	YES
1	2014 03 13	NO
Std Amendment Rationale:	The site plan has been amended to bring it in line with the Prince George Business Area FSP amendment #11 January 30, 2012. Results and Strategies, Stocking Standards, Pest Specific Comments, Wildlife Comments, Guide Outfitter addition, season of harvest and Cultural Heritage Resources have all been updated.	
2	2017 01 24	NO
Std Amendment Rationale:	Rehab of some TAS delayed to allow access during planting activities in case of a medical emergency.	
3	2018 09 05	NO
Std Amendment Rationale:	Incorrect application of ungulate winter range legislation.	
4	2018 09 06	NO
Std Amendment Rationale:	Correction to activity requirements based on incorrect assumption of high compaction soil.	

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
DWAYNE ANDERSON	<div><div>Dwayne Anderson RPF5033</div><div>Digitally signed by Dwayne Anderson RPF5033 Date: 2018.09.06 15:42:44 -07'00'</div></div>
DATE SIGNED	
2018/09/06	
I certify that I have reviewed this document and, while I did not personally supervise the work described, I have determined that this work has been done to standards acceptable of a Registered Professional Forester.	