

Gross Area: 36.5ha

HU 1: Ground-Based Harvest- 33.6ha NET

WTRA - 2.2ha NET

PAS - 0.7ha

Harvest Plan Map

TA0331-3

North Ritchie

FOREST SERVICE
BRITISH COLUMBIA

BCTS

BC Timber Sales

Kootenay

Date: 12/3/2019	Drawn By: AT	Elevation (min / max): 1040-1180	May require hand fall	Lat/Long: 49° 18' 19" / 118° 07' 26"	Boulder
Mapsheet: 082E 040		Ridge	Cliff	Slope Break	Rock
Existing Cutblock		Existing Road	Proposed Road	Existing Landing	Perm. Landing
Wildlife Tree Retention Area		Existing Trail	Proposed Skid Trail	Steep Slopes >35%	Temp. Landing
OGMA	Non-Merch	Prop. Backspar Trail	Prop. Yarder Trail	SP Plot	Cable
Cutblock Boundary		MFZ	RMZ	Grizzly Bear Mgmt Area	Creek
Bench	Draw	Yarding Direction	Intermediate Structure	Slope and Direction	Prop. Skid Crossing
Station +12	Falling Corner	Perm./Temp Access Licensee Construct			

1.5 RIPARIAN ASSESSMENT						
Block	Riparian I.D. and Class	RMA	SU	Width (m)	SPH Retained	Comments (Indicate if in a Community Watershed)
3	S3 (Dog)	RRZ+RMZ	N/A	40	All	The S3(Dog creek) stream and its RMA are located outside of the harvest area. This development is not located in a Community Watershed.
3	NCD-3-1 to NCD-3-7	N/A	1	N/A	-	NCDs 3-1, 3-2, 3-4, 3-6 and 3-7 are located in the harvest area and have been ribbonned with a 5m MFZ. See Table 2 Below for additional information. NCD-3-3 and 3-5 are located outside of the harvest area. This development is not located in a Community Watershed.
Management Strategies: See Non-Merchantable Section and the Harvest /Operational Constraints Section Below						

Safety Highlights:

In addition to the standard safety hazards and risks associated with all aspects of forest management, the following safety hazard(s) apply to this block and must be enforced and practiced:

- Public Traffic on mainlines from hunters, campers, other recreationalists and local residents.
- Steep slopes in conventional areas.
- Exposed cobbles and boulders are present in some areas.

Remedial Action

- Personnel will be informed of this hazard and signage will be posted near the proposed development when harvesting and road-building activities are being conducted.
- Personnel will be informed of this hazard and these areas will be delineated on the HP map.
- Personnel will be informed of this hazard.

Leave Tree Specifications:

Table 1. - Layer 1 Reserved Timber ¹											
Block	HU	Selection Priority	Species	Size	Stems per Hectare			Distribution ²			
					Target	Minimum	Maximum	S	G	I	R
3	1	<ul style="list-style-type: none">Fd, Lw,Largest diameter stems	Fd, Lw, At, Ac,	Fd, Lw >/=50cm dbh Cw >/=60cm At, Ac >/=20cm dbh	3	Where present and operationally feasible.	10	√	√	√	
Additional Requirements/Notes:											
¹ Refer to Appendix I for Table of Reserve Timber Abbreviations and Definitions ² Distribution Types: S: Single Trees, G: Groups of Trees, I: Irregularly Distributed, R: Regularly Distributed											
Note: Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule “A”, Section 2.00 regarding Dangerous Trees.											
Table2. – Other Reserved Timber ¹											
Non-Merchantable											
Block	HU	Location(s)	Species	Size	Stems per Hectare						
					Target		Minimum				
3	1	MFZ of NCDs	All + Brush Species	<12.5cm dbh	All, where present and where operationally feasible.		All, where present and where operationally feasible.				
Dead Trees to be Stubbed (where Mechanical Falling is utilized)											
Block	HU	Species	Size	Stubbing Height	Stems per Hectare			Distribution ²			
					Target	Minimum	Maximum	S	G	I	R
3	1	All	>/=35cmdbh	3-5m	7	5	10	√	√	√	
Additional Requirements: 1. Stub trees must not pose a hazard to worker safety. 2. In selecting dead trees for stubbing, give selection priority to trees with signs of wildlife use (e.g. cavity nests, holes, and dens).											
Coarse Woody Debris											
Block	HU	Species	Size	M ³ per Hectare		Distribution ²					
				Target	Minimum	S	G	I	R		
3	1	All	Retain CWD and wildlife trees that are representative (spp, age and size) of pre-harvest levels/conditions.	15	10	√	√	√			
¹ Refer to Appendix I for Table of Reserve Timber Abbreviations and Definitions ² Distribution Types: S: Single Stems/Logs, G: Groups of Stems/Logs, I: Irregularly Distributed, R: Regularly Distributed											
Note: Manage CWD levels to pre-harvest levels, except in areas where concentrations are too high for effective planting and/or successful regeneration. Safety is a priority when conducting operations near reserved timber. Refer to TSL Schedule “A”, Section 2.00 regarding Dangerous Trees. As a reference 1 large telephone pole roughly equals 1m3.											

Harvest / Operational Constraints:

- All temporary access structures must be fully rehabilitated upon the completion of harvesting.
- Ground skidding across natural drainage paths should be avoided where practical. If this cannot be avoided, harvesting should be conducted during the drier months of the year, on a compressed snowpack, or effort made to ensure timber is skidded butt-first to minimize potential ground disturbance within such drainage features;
- Bladed or Excavated trails may be required, for safety, in areas with steep slopes and in areas that may require adverse skidding.
- Harvesting and road building activities should be modified or suspended when there is abundant hill slope runoff occurring at the site, which is likely to occur during times such as spring break-up or from prolonged heavy precipitation. This is intended to reduce the likelihood of concentrated or redirected drainage as well as erosion and sediment delivery.
- All proposed and existing road and trail drainage systems should be maintained and kept clear of debris during and subsequent to harvesting operations, including at and downslope of cross-drain discharge locations.
- Excavated or bladed trail construction should be minimized as practical, and avoided in areas of seepage or where shallow subsurface runoff is likely to be intercepted.
- All trails should be fully rehabilitated upon completion of use and concurrent with operations, ideally prior to the next spring freshet. If any trails are to overwinter then additional precautions should be taken including pulling back all watercourse crossings and any potentially unstable fill slopes, and installing frequent waterbars in order to limit the potential for redirected runoff.
- Machine use should be limited to areas where excessive scour, rutting, or compaction is avoidable. This would generally restrict machine use from areas of moderately steep or steeper slopes as well as any localized areas of wet, soft, or very loose soils. Some modified machine use (e.g. hoe-chucking) may be possible in these areas if excessive disturbance is avoidable.
- All natural drainage patterns (including all NCDs as well as dry swales and gullies) should be maintained and left free of excess debris (slash or soil) that could result in a redirection of seasonal surface runoff.
- a 10m wide Management Zone has been ribbonned along the edges of Dog Road located within the harvest area. This is a Grizzly Bear management area where all non-merchantable stems <12.5cm dbh should be reserved, where operationally feasible, and machine traffic should be minimized within this Management Zone.

Kootenay Business Area Field Marking Standards

	Ribbon	Paint
Harvest Boundary	BCTS Block Boundary	
Falling Corners		FC#
WTRA Boundary	Reserve	
Reserve Boundary	Reserve	
Riparian Reserve Zone	Reserve	
Riparian Management Zone	Riparian Mgmt. Zone	
Management Zone	Management Zone	
Treatment Unit Boundary	Treatment Unit Boundary	
Reserve Trees		
Machine Free Zone	//// Machine Free Zone ///	
Cruising	Cruise Line	Plot Trees
Traverse Stations		
SP Plot Location		

	Ribbon	Paint
NCD & Stream Centers	Water Course	
Road P-Line		
Road Center Line	Road Centerline	
Landings	Landing	
Road Right of Way	R/W Boundary	
Road RP		
Culverts	Culvert	
Designated Crossing	Crossing	
Culvert RP Outside Right of Way		
Tail Holds / Guyline / Intermediate Supports		
Skid Trail / Back Spar Trail / Forwarding Trail	///// Trail/////	
Recce Ribbon / D-Line / Skyline Roads	////////////////	

I certify that the work described herein fulfills standards expected of a member of the Association of British Columbia Forest Professionals, and that I did personally supervise the work.

RPF PRINTED NAME

Stefano De Vuono

DATE SIGNED

November 29, 2019

RPF’S SIGNATURE and SEAL

