BCTS
BC Timber Sales
Kamloops

SITE PLAN
KAMLOOPS
BC TIMBER SALES

Report Date 2021/12/15

ORIGINAL

TENURE IDENTIFICATION

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1522	-	SNA6U	BEA6U			Spanish Creek	52 00 08 / 120 28 43

AREA UNDER THE PLAN

GROSS AREA (TAUP)	PAS	NP	WTRA / WTP	RESERVES	OTHER	NAR
114.5	2.8	0.0	19.4	0.0	8.5	83.9

ADDITIONAL COMMENTS

OTHER RESOURCES
SNA6U overlaps both the ESSF wk1 and the ICH mk 3. Due to the high amount of lodgepole pine and lack of rhododendron the entire block will be managed as ICH mk 3. This block and its associated roads are consistent with the 100 Mile House Forest Stewardship Plan (2019-2023) approved February 26, 2020, and amended January 22, 2021 (FSP ID: #816). This Site Plan is prepared for this block and associated roads in accordance with FRPA Sections 10 (1), (2), and (3). SNA6U was originally sold in TSL A93325 as MH8QE. The block was redeveloped as TSL TA1522, Block SNA6U in 2021.

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	7.0
2	10.0	5.0		
3	5.0	5.0		

SU	CRITICAL SITE CONDITIONS THAT AFFECT THE TIMING OF OPERATIONS. AND HOW THEY AFFECT THE TIMING
1	The soil texture in SU1 has been determined to be predominantly Silty Loam. SU1 's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. Gleyed soils were noted 30cm down sections of the block with shallow. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.
2	The soil texture in SU2 has been determined to be predominantly Loam. SU2 's aspect is generally South East with a long, continuous slope averaging 45%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features. This block is consistent with Sections 35 and 36 of FPPR.
3	The soil texture in SU3 has been determined to be predominantly Sandy Clay Loams. SU3 's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is Very high, the soil displacement rating is low and surface erosion rating is moderate. As per Section 35 of FPPR this constitutes a sensitive soil. Gleyed soils were noted 30cm down sections of the block with shallow. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 5% will not be exceeded. Clays are expected around riparian features. This block is consistent with Sections 35 and 36 of FPPR.

RESULTS AND STRATEGIES

RESULT OR STRATEGY		HOW THE STRATEGY OR RESULT APPLIES TO THE SITE or RATIONALE (IF NOT APPLIED)
Cultural Heritage		This development was referred to all potentially affected First Nations as SNA 6U. The First Nations have agreed to conduct a post harvest assessment. BCTS has completed a DDR (Due Diligence Report). SNA6U has not expanded outside of the block boundary and has maintained all original WTRAs and expanded others. If a previously unidentified affected cultural heritage resource is encountered during harvesting , road construction, or mechanical site preparation, operations will cease to the extent necessary to protect the affected cultural heritage resource until a cultural heritage resource evaluation can be carried out. Where a CHR evaluation makes recommendations that have a direct effect on primary forest activities, the recommendations or concerns will be addressed and a CHR Mitigation Strategy will be developed if necessary. If a CHR Mitigation Strategy cannot be agreed upon the FSP holder will obtain advice on how to proceed with implementing a CHR Mitigation Strategy. The block is consistent with Section 5.6 of the FSP.

Invasive Plants		A review of the known location of invasive plants on the Invasive Alien Plant Program (IAPP) database accessed November 15th, 2021 showed no new invasive plants in the area. Canada thistle and bull thistle were noted by field crews within, adjacent and on the road to the block. Since high priority invasive plants, Canada and bull thistle, has been identified in the block, as per the FSP Section 5.11 the following methods are to be employed to reduce the spread of invasive plants: a) Machinery will be washed to remove any observed plant material, or significant accumulations of soil containing plant material, from machinery, prior to relocating the machinery into, or outside the block or road. b) Avoid infected sites in staging, parking, and sorting areas. c) Commence primary forestry activities in un-infested sites before moving to areas with known invasive plants. d) Stripping overburden off gravel pits prior to shipping gravel from the pit. e) If a primary forest activity creates a contiguous opening ≥0.1 ha the FSP holder will ensure that within one year of the activity completion, the portions of area occupied by ditch-lines, cut or fill slopes, bladed skid trails, and deactivated roads which are not reforested, are to be seeded using a seed or forage mixture that meets Canada Common Number 1 standard. f) The FSP holder will seed with a seed or forage mixture that meets or exceeds Canada Common Number 1 Forage Mixtures as defined by the Canada Seeds Act and Regulation or native shrubs: i) At least 90% of the total area exposed in a calendar year that requires seeding, by July 1 of the immediately following calendar year; and ii) The remainder of such exposed area prior to December 31 of the same immediately following calendar year; and g) The Certificate of Seed Analysis must be made available to FLNRORD staff, for review upon request, for a one-year period following the application of the seed to ensure that the batch does not contain High Priority Invasive Species. Any new occurrences of invasive plant sites will be reported to the Ministry of Forests and Range Alien Plant Program (IAPP) within one year of discovery. The block is consistent with Section 5.11 of the FSP.
Landscape Level Biodiversity		The block has a NAR of 83.9ha which is greater than the 60ha maximum for the net area to be reforested as per section 64 (1)(b) of the FPPR. The block is in the Spanish Lake LU, mapped as NDT 1 ESSF wk 1 and the NDT 2 ICH mk 3. SNA6U creates a very large opening >250ha. There is no harvest opportunity in the very large opening in the NDT 1 or NDT 2. SNA6U has been designed to salvage dead Lodgepole pine affected by mountain pine beetle. As per the unreduced cruise compilation composed of 88% Lodgepole pine, and 98% of the pine is gray attack with 1% being gray attack. SNA6U does not have to meet patch requirements set out in section 5.2.1 of the FSP as it is consistent with the exemption set out in 5.2.1 R+S 2a of the FSP. As per FSP, the ICH mk3 has high natural connectivity frequency on upland to upland, cross-elevational and stream riparian. Upland to stream and upland to wetland connectivity have moderate connectivity frequency. Island remnants, wetland complex connectivity have low frequency. There are no wetlands or riparian features associated with this block therefore wetland and riparian connectivity cannot be managed for. WTRA 2, 4, 6, 7, 8, 9, 10 and 11 provide stream riparian connectivity and stream to upland connectivity. All the WTRAs help to provide cross elevational, and island remnants connectivity. This block is consistent with Section 5.2.1 of the FSP. The block is in the Spanish LU with a High Biodiversity Emphasis Option (BEO). The block will maintain biodiversity in accordance with the LU and BEO. The block is consistent with Section 5.2.2 of the FSP. The northern boundary of the block from falling corner FC21 to FC23 is adjacent to transitional OGMA (CAR_RCA_6656). There is no overlap with the OGMA. The block is consistent with Section 5.2.3 of the FSP. Although the block is being managed as ICH the block overlaps mapped section of ESSF an both will be commented on here. SNA6U is located in the Spanish Landscape Unit which has a biodiversity emphasis of high. Based on the latest Seral Stage assessment dated June 18th, 2021 there is 2263ha of surplus of Mature and Old seral stages in the ICH mk3 in the Spanish Landscape Unit but there is 53ha deficit. Based on the latest Seral Stage assessment dated June 18th, 2021 there is 1798ha of surplus of Mature and Old seral stages in the ESSF wk 1in the Spanish Landscape Unit but there is 1451ha deficit of old. There are no old areas in SNA6U. Harvesting of SNA6U will not cause a significant reduction of the Mature + Old seral stage in the ICH or ESSF in the Spanish LU. The block is consistent with FSP section 5.2.4.
Range		Active range tenure RAN077083 overlaps the block. A referral was submitted to the range tenure holder. No feedback has been received to date. Fences and cattle guards are located on the way to the block. If a fence, cattle guard, or other range feature is damaged while accessing the block, the damage to the features will be repaired. As no known natural range barriers were identified that will be rendered ineffective by the proposed development a range mitigation strategy is not required for this block. The block is consistent with FSP Section 5.10.1. No known information has been brought forward indicating a reduction in AUMs as a result of the proposed development. As a result, a range mitigation strategy is not required for this block. The block is consistent with section 5.10.2 of the FSP.

Recreation		There is a guide tenure that overlaps the area (Guide Certificate No. 500953). A referral was submitted to the guide holders and no feedback was received to date. This block overlaps an active trapline (TR0515T001). Referrals were sent to the trapline holders and no feedback was received to date. There are no other backcountry operators or non-buffered trails within or affected by the cutblock. The block is consistent with Section 5.7.1 of the FSP. Currently there are no access plans in the Spanish operating area endorsed by the FLNRORD district manager, or the BCTS Regional Manager that have specified requirements for road density, road use, road location, or road duration. All stakeholders and First Nations have been contacted. At this time no feedback related to permanent access structures has been brought forward. The block is consistent with Section 5.7.2 of the FSP. The block is not located within or adjacent to any known Recreation Sites, Trails, or Interpretive Forests as defined in Section 5.7.3 of the FSP. The block is consistent with section 5.7.3 of the FSP. There are no Buffered trails within or adjacent to the block. The block is consistent with FSP Section 5.7.4. There are no tourism operations or licensed users of crown land that overlap the block except for a guide operator. See Section 5.7.1 for details about the guide referral. For details regarding maintaining a scenic setting refer to the Visuals Objectives Section (5.8) of the FSP. To reduce the impact of air quality on the scenic visual tourism setting, the FSP holder will ensure the implementation of the current practice requirements and/or regulations regarding open burning and air quality. To reduce or minimize impacts on tranquil settings and to incorporate tourism industry needs into access management planning, refer to the results and strategies in the Backcountry Section (5.7.1) of the FSP. The block is consistent with Section 5.9.1 of the FSP. This block does not overlap with an LMZ. The block is consistent with Section 5.9.2 of the FSP.
Riparian Management		SNA6U has 5 large S6 features and 3 small S6 features. There are an additional 3 NCDs associated with the block. All large S6 features have a 10m RRZ applied to them. The RRZ and required basal area retention are met in the WTRAs placed around the features. No additional basal area is required for any of the Riparian features in the block. The management objectives for the riparian features associated with the block will comply with the practice requirements for riparian classes and retention requirements listed in section 5.3.2 of the FSP. See the support document for details on individual streams. This block is consistent with Section 5.3.2 of the FSP.
Soil Management		SU 1 The soil texture in SU1 has been determined to be predominantly Silty Loam. SU1's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. Gleyed soils were noted 30cm down sections of the block with shallow. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features. SU 2 The soil texture in SU2 has been determined to be predominantly Loam. SU2's aspect is generally South East with a long, continuous slope averaging 45%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features. SU 3 The soil texture in SU3 has been determined to be predominantly Sandy Clay Loams. SU2's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is Very high, the soil displacement rating is low and surface erosion rating is moderate. As per Section 35 of FPPR this constitutes a sensitive soil. Gleyed soils were noted 30cm down in sections of the SU. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 5% will not be exceeded. Clays are expected around riparian features. All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to spring freshet. Erosion control measures are required to maintain natural drainage patterns. PAS is calculated at 2.8ha or 2.45% of the gross area. TAS is calculated at 0.1ha or 0.15% of the Net Area to Reforest of SU 1 and 0.21ha or 3.9% of SU 3. There are no TAS features associated with SU 2. This block is consistent with Section 5.1 of FSP and Sections 35 and 36 of the FPPR.

Stand Level Biodiversity		The block is located in the Spanish LU with in the ICH mk3 and ESSF wk 1 BEC zones which has a stand level retention requirement of 6 and 7% of the TSL gross area as specified in Appendix C of the FSP. The block has eleven designated WTRAs totaling 19.4ha or 16.9% of the block gross area which meets the minimum target for the LU/BEC unit. A wind-throw hazard assessment has been completed for the block and the recommendations incorporated into the design of the WTRAs. The WTRAs are designed protect streams, RMAs, steep ground and areas of timber that is dominated by green not beetle affected pine. Timber harvesting will retain a minimum of 4 logs per ha, each being a minimum of 2 m in length and 7.5 cm in diameter at one end. The block is consistent with Section 5.3.1 of the FSP.
Visual Objectives		SNA6U is adjacent to an EVQO polygon but it does not overlap the block. The block is consistent with Section 5.8 of the FSP.
Watersheds/Hydro Assessments		The block is not located within a community watershed. The block is consistent with Section 5.4.1 of the FSP. The block falls within the MaHood Lake watershed. The above-mentioned watershed is not identified as a key watershed in the FSP. The block is consistent with Section 5.4.2 of the FSP. The block is not located in either of the Horsefly River or Deadman Watershed identified as Fishery Sensitive Watersheds in FSP section 5.4.3. The block is consistent with Section 5.4.3.1 and 5.4.3.2 of the FSP.
Wildlife/Endangered Species		None of the animal species at risk (table 11 of the FSP) nor any of the plant species at risk (table 12 of the FSP) were noted during field development work. None of the eco communities at risk (table 13 of the FSP) were identified during field development work in the area. The block is consistent with Section 5.5.1.1 of the FSP. SNA6U is not within a GAR mentioned in Section 5.5.1.2 of the FSP for Mountain Caribou, Badger, Spadefoot Toad or Great Blue Heron. SNA6U is less than 500m from a conditional harvest area for GAR 5-116 Mountain Caribou and less than 1.5km from No Harvest zone GAR 5-117. No signs of Caribou were noted during development pf SNA6U. If any signs of caribou are identified BCTS will engage a QRP to develop a plan to mitigate any effects on Caribou. BCTS will then implement the plan. This block is consistent with section 5.5.1.2, 5.5.1.3, 5.5.1.4 and 5.5.1.5 of the FSP. The block is within high with a small overlap of very high grizzly bear capability area. However it is not near an avalanche track, an avalanche track runout zone, or critical grizzly bear foraging habitat. During pre-harvest field development of the block, no signs of grizzly bear dens, foraging habitat, or permanent geographic features (i.e., esker or cave) were observed. As SNA6U is within high grizzly habitat the following measures will be applied. A) Retain 10m of non-merchatablemerchantable stems and understory along extended use roads, B) All roads from the 7000 Road will be deactivated after the block is planted. C) BCTS will engage with a QRP (Qualified Registered Professional) to assess the amount of berry forage available and will created a detailed brushing prescription that delineates and retains as much existing natural berry production as practicable. D)The minimum intertree distance will be reduced to 1.0m E) Domestic sheep, goats, or cattle will not be used for vegetation management. Although no dens were found, if an active grizzly bear den or den associated with a permanent geographic feature (i.e. esker or cave), is identified or made known during harvesting, road construction, or post-harvest activities, the FSP holder will: a) Establish a no-work/no treatment zone greater than or equal to 2 ha in size which will include the den, and b) Not carry out or authorize primary forest activities within 100 m of the active den site during the period of Oct 15 – May 1. The block is consistent with Section 5.5.2.1 of the FSP. No signs of bighorn sheep or bighorn sheep habitat features were noted during the development of the block. If a bighorn sheep habitat feature is made known pre-harvest the FSP holder will not use or authorize the use of domestic sheep for the purpose of vegetation management within bighorn sheep habitat, or within 16 km of known habitat. If an active habitat feature (lambing area, rutting area, or migration corridor) is found during harvesting, road construction or post-harvest activities, operations will stop and a QRP will develop a management plan to adequately manage the species habitat specific to the encounter. The FSP holder will ensure that the management plan is implemented. The block is consistent with Section 5.5.2.2 of the FSP. At the time of submission of the FSP, no White Pelican WHAs have been established in the 100 Mile House Natural Resource District. No white pelicans were noted during the field development of the block. To ensure that habitat requirements for white pelican are maintained the FSP holder will apply the results and strategies in the Riparian (5.3.2), LMZs (5.9.2), Visual Quality (5.8), Mule Deer (5.5.4.2), Backcountry (5.7.1), Landscape Biodiversity (5.2), and Species at Risk – General (5.5.1.1) sections of the FSP. The block is consistent with Section 5.5.2.3 of the FSP.

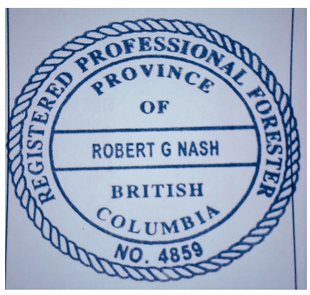
Wildlife/Endangered Species		All riparian features within SNA6U have had fish barriers identified on them in the form of grade barriers. There is no bull trout habitat within SNA6U. No bull trout were noted in the area near SNA6U on habitat wizard accessed November 25, 2021. The block is consistent with Section 5.5.2.4 of the FSP. At the time of submission of the FSP, no Sandhill Crane WHAs have been established in the 100 Mile House Natural Resource District. No sandhill cranes, nest sites, or colonies were noted during the field development of the block. Where an active sandhill crane nest site is made known or identified, the FSP holder will, at the time the nest site is made known or identified: a) Protect the active nest by including it within a WTRA of minimum 2 ha in size centered around the colony nest where practicable, and b) Establish a no-work zone of 400 m around the active nest site during the periods between April 15th and August 15th. The block is consistent with Section 5.5.2.5 of the FSP. No prairie falcons or nest sites were noted during the development of JIAEG. If a nest site is identified or made known during primary forest activities, a minimum 2 ha WTRA will be placed around the nest site where practicable. A 300m no work zone will be established around the nest between March 15 and July 30. This block is consistent with Section 5.5.2.6 of the FSP. Referrals were sent to the licensed trappers in the area. At this time no feedback has been received. The 60 days referral process has expired and BCTS is no longer required to accommodate requests but will accommodate requests within reason. This block is not within a fisher WHA. However, the block is within both Type II habitat areas and as such will be managed for Type II habitat requirements. The following CWD retention is prescribed to provide resting habitat, connectivity and cover: a) One (1) piece/ha of CWD >20 cm in diameter and >10m in length, elevated 25-50cm above ground. b) If encountered, any large diameter deciduous and Douglas-fir trees (denning habitat) and any spruce trees >39cm dbh with broom rust >40cm diameter (resting habitat) are to be retained. There was only a minimal amount of deciduous noted within the block (1% noted in the cruise). c) As the block is >50ha, a minimum of 1 pile/5ha are required or 17 piles. Debris piles are to be >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles are to be located between WTRA's and the block edge to maintain connectivity between standing timber, WTRA's, and any riparian areas. The piles will also be located to maintain a maximum 50m dash distance between cover (standing timber, WTRA's, and debris piles). Actual pile locations may vary but must adhere to the above connectivity conditions. The block is not in a wolverine WHA. A wolverine was noted by development crews during the original block development in 2013. However, no wolverines were noted by field crews during the latest block development activities. If an active Fisher den or resting tree, or a wolverine den or tunnel are identified or made known during harvesting, road construction or post- harvest activities the FSP holder will: a) Establish a no work/no treatment zone greater than or equal to 3 ha is size which will include the habitat feature. b) Not carry out or authorize primary forest activities within 500m of the den or tunnel during the critical breeding season between March 1 and June 15. General furbearer management is also addressed by FSP Obj 5.3.2 (Riparian Areas), Obj 5.2 (Biodiversity-Landscape Level), Obj 5.3 (Biodiversity – Stand level), Obj 5.8 (Visual Quality), Obj 5.7.1 (Backcountry), and Obj 5.9.2 (LMZs). The block is consistent with FSP Sections 5.5.2.7, 5.5.2.8, and 5.5.2.9.
Wildlife/Endangered Species		SNA6U is not within or adjacent to Critical Fish Habitat defined in the FSP. The block is consistent with Section 5.5.3.1 of the FSP. There are no grassland benchmark areas near or overlapping the block. The block is consistent with Section 5.5.3.2 of the FSP. There are no high value wetlands within 1km of SNA6U. There are no MMUs (Moose management Units) overlapping the block. The block is within 500m of several MMUs, and access controls are required to be installed immediately after fiber removal at the beginning of MH 8611.26 and MH 8611.27. The block is consistent with Section 5.5.4.1 of the FSP. The block is not within Mule Deer Winter Range (MDWR). The block is consistent with Section 5.5.4.2 of the FSP. The proposed development is not within one of the Bonaparte or Horsefly River watersheds as defined in Section 5.5.4.3 of the FSP. The block is consistent with Section 5.5.4.3. Access management for wildlife is accomplished by ensuring that Sections 5.5, 5.7.1, 5.5.4.1, 5.5.2.1, 5.5.4.2, 5.9.2, and 5.3.2 are managed for. The block is consistent with these sections and with Section 5.5.5 of the FSP.

STOCKING REQUIREMENTS

SU	NAR	STANDARDS ID #	OTHER PERFORMANCE STANDARDS
1	65.4	1060334	
2	13.1	1060331	
3	5.4	1060337	

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2021 12 15	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Robert Nash	
DATE SIGNED	
2023/05/24	
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.

THE FOLLOWING INFORMATION IS ATTACHED FOR INFORMATION ONLY AND DOES NOT FORM PART OF THE SITE PLAN

SUPPORT DOCUMENT

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1522	-	SNA6U	BEA6U			Spanish Creek	52 00 08 / 120 28 43

ASSESSMENTS

VISUAL IMPACT ASSESSMENT INFORMATION

A visual impact assessment is not required.
Refer to Section 5.8 of the FSP.

PEST INCIDENCE SURVEY INFORMATION

Pest Specific Comments

Pl: IMB Grey Attack 98%
Pl: IMB Green Attack 1%
SX: IBS Grey Attack 20%
SX: IBS Green Attack 21%
Bl: IBB Green Attack 38%

This block was cruised in 2013.

Forest Health Comments

Although the unreduced cruise complilation records 8.3% blow down for Pl, over 50%of the block has since blown down.

ARCHAEOLOGICAL IMPACT ASSESSMENT INFORMATION

No Archaeological Impact Assessment (AIA) or overview assessment (AOA) has been completed or requested. First Nations have agreed to a post havrest assessment.
If a previously unidentified affected archaeological heritage resource is encountered during harvesting , road construction, or mechanical site preparation that is authorized or carried out by the TSM, the TSM will require that the operations cease to the extent necessary to protect the affected archaeological resource until an Archaeological Impact Assessment can be carried out.

TERRAIN STABILITY FIELD AND GULLY ASSESSMENTS INFORMATION

Terrain Stability Comments

A TSA (Terrain Stability Assessment) was completed by Onsite Engineering on April 7, 2013 for Interfor cutblock CP30H SPN 001. CP 30H was sold to BCTS as A93325, which was expired and is now TA1522.
The report covered proposed harvesting of the cutblock and proposed construction of roads. All the sections of roads addressed in this report are built and under road permit. All new roads will do not cross steep ground and do not require a TSA.

The TSA does not expect harvesting to create a significant hydrological change as most of the block is comprised of dead pine , and the main areas of concerns are steep gullies which have been placed in WTRAs. As these areas are outside the block, the recommendations for this block focus on ensuring water is not directed into the gullies and steep slopes in the WTRAs.

The following recommendation were made in the report.
All bladed trails and temporary roads will be fully rehabilitated immediately after harvest. Rehabilitation includes slope recontouring, restoration of all natural drainage paths, and decompaction of any compacted soils including any ditch lines.
Ensure that all drainage's and culverts are open and functioning.
After harvest is completed, all roads will be fully deactivated and all culverts will be removed.

Gully Comments

All large gullies are located in WTRAs. Do not direct water into the gullies. See the terrain Stability section and the TSA report for details.

VEGETATION

The vegetation varies throughout the block. In sections there is minimal herb and shrub structure. In other sections there are areas of pine grass and alder. The pine grass is generally focused in the upper drier of the sections. Alder is generally focused around the riparian features. A post harvest assessment will be conducted.

RIPARIAN ASSESSMENTS

Management Strategies

This block is not in a community watershed. All required basal area retetnion is met in the WTRAs or outside the block for all features.
All large S6 features have a 10m RRZ applied to them. The RRZ and required basal area retention are met in the WTRAs placed around the features.

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
S6-3 Large S6	RRZ		10.0		The RRZ is contained in WTRA-11. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 11 Basal area is retained in the WTRA. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
S6-94 Large S6	RRZ		10.0		The RRZ is contained in WTRA-9. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 9. Basal area is retained in the WTRA. Limit operations in the RMZ. Only cross the stream at the designated skid crossing. Retain groups of healthy understory where possible in groups of 3m or less.
S6-98 Large S6	RRZ		10.0		The RMZ overlaps the harvest area and WTRA 4. Basal area is retained in the WTRA. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
	RMZ		15.0		The RRZ is contained in WTRA-8 and 7. No additional management is required.
S6-100 Large S6	RRZ		10.0		The RRZ is contained in WTRA-6 and 7. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 6 and 7. Basal area is retained in the WTRAs. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
S6-92 S6	RMZ		20.0		The RMA overlaps the with the harvest area and WTRA 4. Basal area is retained in the WTRA. Limit operations in the RMA. Retain groups of healthy understory where possible in groups of 3m or less.
NCD 91 NCD	MSZ		5.0		NCD 91 is a small NCD that connects S6-92 and S6-90. The road crosses the NCD. Avoid decking and operating in the NCD.
NCD 97 NCD	MFZ		8.0		NCD 96 is a small NCD and starts in WTRA 2 before crossing the road and flowing out of the block. The road crosses the NCD. Avoid decking and operating in the NCD.
NCD 96 NCD	MSZ		5.0		NCD 96 is a small NCD and starts in WTRA 2 before crossing the road and flowing out of the block. The road crosses the NCD. Avoid decking and operating in the NCD.
S6-90 S6	RMZ		20.0		A small portion of the RMZ overlaps the block. Retention is met outside the block.
S6-1 Large S6	RRZ		10.0		The RRZ is contained in WTRA-10. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 10. Basal area is retained in the WTRAs. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.

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	H	H	H	15.0	100.0	RSS	
2	H	H	H			NNTD	
3	VH	L	M			NNTD	

COMMENTS

SU 1
The soil texture in SU1 has been determined to be predominantly Silty Loam. SU1's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. Gleyed soils were noted 30cm down sections of the block with shallow. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.

SU 2
The soil texture in SU2 has been determined to be predominantly Loam. SU2's aspect is generally South East with a long, continuous slope averaging 45%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.

SU 3
The soil texture in SU3 has been determined to be predominantly Sandy Clay Loams. SU2's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is Very high, the soil displacement rating is low and surface erosion rating is moderate. As per Section 35 of FPPR this constitutes a sensitive soil. Gleyed soils were noted 30cm down in sections of the SU. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 5% will not be exceeded. Clays are expected around riparian features.

All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to spring freshet. Erosion control measures are required to maintain natural drainage patterns.
PAS is calculated at 2.8ha or 2.45% of the gross area. TAS is calculated at 0.1ha or 0.15% of the Net Area to Reforest of SU 1 and 0.21ha or 3.9% of SU 3. There are no TAS features associated with SU 2.

RESERVE / RETENTION INFORMATION

WTRA / WTP (INSIDE OR ATTRIBUTED TO THE BLOCK)

I.D.#	Area	Description
WTRA	19.4	The WTRAs are designed to protect streams, RMAs, steep ground and areas of timber that are dominated by green not beetle affected pine. They also assist in landscape level connectivity.

GROUP WTRA / WTP AND SITE DEG. CALCULATION (to be retained on the first block of the Permit only)

Block	Gross Cutblock Area	WTRA / WTP	%	BEC	Perm Access	%
SNA6U	114.5	19.4	16.9	ICH/mk/3	2.8	2.4
Total # of Blocks: 1	**114.5**	**19.4**	**16.9**		**2.8**	**2.4**

SUPPORTING INFORMATION

HLP/FSP CONSIDERATIONS

Wildlife/Endangered Species Comments

The design of this harvest area considered Migratory Bird Habitat polygons and the Beneficial Management Practices as outlined in the BCTS Migratory Bird Strategy (2016). Using the migratory bird strategy for reducing incidental take, it was determined that the risk ranking for the block is Rank 3 (Moderate). A Rank 3 rating requires no additional management is required.

If a previously unidentified migratory bird nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations will cease to the extent necessary to protect the affected migratory bird nest until alternative BMPs can be implemented to minimize or prevent the risk of incidental take.
For all other Wildlife species which are covered under section 5.5 of the FSP, refer to the results and strategies Wildlife Sections of the site plan for details.

Range Comments

Active range tenure RAN077083 overlaps the block. A referral was submitted to the range tenure holder. No feedback has been received to date.
Refer to the results and strategies section for details.

Fisheries Comments

SNA6U is not adjacent or within a fisheries sensitive area.
Refer to the results and strategies section for details.

Watersheds/Hydro Assessments Comments

This block is not within a sensitive watershed or key watershed as identified in the FSP.
Refer to the results and strategies section for details.

Sensitive Areas Comments

There are no sensitive areas associated with SNA6U.

Recreation Comments

SNA6U does not overlap any recreation polygons, or trails.
Refer to the results and strategies section for details.

Cultural Heritage Comments

This development was referred to all potentially affected First Nations as SNA 6U. The First Nation Bands have agreed to conduct a post harvest assessment. BCTS has completed a DDR (Due Diligence Report). SNA6U has not expanded outside of the block boundary and has maintained all original WTRAs and expanded others.

If a previously unidentified affected cultural heritage resource is encountered during harvesting , road construction, or mechanical site preparation, operations will cease to the extent necessary to protect the affected cultural heritage resource until a cultural heritage resource evaluation can be carried out. Where a CHR evaluation makes recommendations that have a direct effect on primary forest activities , the recommendations or concerns will be addressed and a CHR Mitigation Strategy will be developed if necessary. If a CHR Mitigation Strategy cannot be agreed upon the FSP holder will obtain advice on how to proceed with implementing a CHR Mitigation Strategy.

Biodiversity Emphasis/L.U. Comments

The block is in the Spanish LU with a High Biodiversity Emphasis Option (BEO). The block will maintain biodiversity in accordance with the LU and BEO.

Other Resources Comments

Guiding License: No. 500953
Trapping License: TR0515T001

A Windthrow Assessment was completed on November 26th, 2021, the wind throw hazard was assessed to be moderate. A Migratory Bird Assessment was completed on November 26th, 2021 and determined that the block is a rank 3. See the Wildlife Supporting Information section and the TSL binder for further information and required actions.

ADDITIONAL COMMENTS:

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2021 12 15	YES

THE FOLLOWING INFORMATION IS ATTACHED FOR INFORMATION ONLY AND DOES NOT FORM PART OF THE SITE PLAN

HARVEST PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1522	-	SNA6U	BEA6U			Spanish Creek	52 00 08 / 120 28 43

SILVICULTURE SYSTEMS

SU	SYSTEM	VARIANT	PHASE	RESERVE	Min BA (m2/ha)	Min Residual Density (sph)
1,2,3	CCRES					

Current Stand Structure/Site Conditions	The current stand structure consists of Pl(81)Cw(8)Sx(6)Fd(3)Bl(2). Net merchantable volume of the stand taken from the unreduced cruise compilation is estimated to be 296/ha with an average height of 24.7m3. Insects have affected 84% of the block.
Silviculture Systems SU Comments	SU-1: The silviculture system for SU1 is clear cut with reserves with a retention strategy focusing on nine WTRAs. SNA6U was designed to utilize ground-based harvesting methods, with skid-to-roadside, utilizing feller-buncher, and rubber-tired grapple skidder. Slopes range between 0-55%, with the average side slope being approximately 37%. Processing and decking can occur roadside on MH 8611.27, MH SNA6U.02 and SNA6U.01. Written safe work procedures, as per Work Safe BC regulations, must be available on site. SU-2: The silviculture system for SU2 is clear cut with reserves with a retention strategy focusing on two WTRAs. SNA6U was designed to utilize ground-based harvesting methods, with skid-to-roadside, utilizing feller-buncher, and rubber-tired grapple skidder. Slopes range between 0-55%, with the average side slope being approximately 45%. Processing and decking can occur roadside on MH SNA6U.05 Written safe work procedures, as per Work Safe BC regulations, must be available on site. SU-3: The silviculture system for SU3 is clear cut with reserves with a retention strategy focusing on one external WTRA. SNA6U was designed to utilize ground-based harvesting methods, with skid-to-roadside, utilizing feller-buncher, and rubber-tired grapple skidder. Slopes range between 0-55%, with the average side slope being approximately 37%. Processing and decking can occur roadside on MH SNA6U.06. Written safe work procedures, as per Work Safe BC regulations, must be available on site.
Min. Characteristics of Leave Trees (Form, Health, Vigour)	Retain 90% of live At (Aspen) and Ep (Birch) over 17.5cm DBH, Retain 90% of live Cw (Cedar) over 17.5cm DBH, Retain 95% of All Fd (Fir) over 62.5cm DBH. Retain healthy undersized conifer(species); poles and saplings to be retained and must be >1.3m in height, have at least 50% live crown, and be in groups of 3 or more stems. Groups must have a radius no larger than 3m and be focused around a snag/stub or leave tree. The licensee may cut a tree that is reserved from cutting if the person authorized by the licensee reasonably believes that; a) the tree represents a safety hazard and a “no work zone” does not need to be established, or b) the tree needs to be felled for block access and/or development. c) the reserve tree has been significantly damaged through harvest. Deciduous stems felled as above are to be left on the block as coarse woody debris. This block is within fisher Type II habitat and requires the following coarse woody debris feature. • 1 single piece of CWD >20 cm in diameter and >10m in length per hectare, elevated 25-50cm above ground. • Retain any Spruce greater than 39cm in diameter with rust brooms. • A minimum of 17 debris piles each being >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles must be located between WTRA's and the block edge to maintain connectivity between standing timber, WTRA's, and any riparian areas. The piles will also be located to maintain a maximum 50m dash distance between cover (standing timber, WTRA's, and debris piles. Ensure these logs are not broken at time of harvesting . Logs may consist of a variety of species and must be evenly distributed across the cut block.

Additional Comments

Harvesting Constraints	**LEAVE TREES** Retain 90% of live At (Aspen) and Ep (Birch) over 17.5cm DBH, Retain 90% of live Cw (Cedar) over 17.5cm DBH, Retain 95% of All Fd (Fir) over 62.5cm DBH. Retain healthy undersized conifer(species); poles and saplings to be retained must be >1.3m in height, have at least 50% live crown, and be in groups of 3 or more stems. Groups must have a radius no larger than 3m and be focused around a snag/stub or leave tree. The licensee may cut a tree that is reserved from cutting if the person authorized by the licensee reasonably believes that; a) the tree represents a safety hazard and a “no work zone” does not need to be established, or b) the tree needs to be felled for block access and/or development. c) the reserve tree has been significantly damaged through harvest. Deciduous stems felled as above are to be left on the block as coarse woody debris. This block is within fisher Type II habitat and requires the following coarse woody debris features . • 1 single piece of CWD >20 cm in diameter and >10m in length per hectare, elevated 25-50cm above ground. • Retain any Spruce greater than 39cm in diameter with rust brooms. • Aminimum of 17 debris piles each being >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles must be located between WTRA's and the block edge to maintain connectivity between standing timber, WTRA's, and any riparian areas. The piles will also be located to maintain a maximum 50m dash distance between cover (standing timber, WTRA's, and debris piles. Ensure these logs are not broken at time of harvesting. Logs may consist of a variety of species and must be evenly distributed across the cut block. SAFETY, SLOPES, AND DECKING Snags and dead standing trees exist within the block. Danger tree assessments must be completed when needed. Slopes in the block are long, and continuous and average of 32% and with steep sections up to 55%. Decking in general is not limited by steep side slopes but in areas are limited by large cut slopes through the cutblock. Hand falling and hoe chucking may be required on the steeper slopes. See the Lidar Map for detailed slope mapping information. MIGRATORY BIRDS SNA6U is a rank 3 classification. No additional management is required. If a previously unidentified migratory bird nest is encountered during harvesting, road construction, or a silviculture activity associated with this Site Plan, operations will require to cease to the extent necessary to protect the affected migratory bird nest until alternative BMPs can be implemented to minimize or prevent the risk of incidental take. GRIZZLY BEAR Retain visual screening consisting of a 10m side section on the road side of all extened use roads (PAS). Screening will be made up of understory and shrubs. RIPARIAN There are 5 Large S6s, 3 small S6s and 3 NCDs associated with SNA6U. All large S6 features have a 10m RMZ applied to them. The RRZ and required basal area retention are met in the WTRAs placed around the features. Retain healthy understory in clumps less than 3m wide within the RMZ. Limit operations in the RMZ.

Harvesting Constraints	INVASIVE PLANTS Canada thistle was noted in the block. a) Machinery will be washed to remove any observed plant material, or significant accumulations of soil containing plant material, from machinery, prior to relocating the machinery into, or outside the block or road. b) Avoid infected sites in staging, parking, and sorting areas. c) Commence primary forestry activities in un-infested sites before moving to areas with known invasive plants. d) Stripping overburden off gravel pits prior to shipping gravel from the pit. If a primary forest activity creates a contiguous opening ≥0.1 ha the FSP holder will ensure that within one year of the activity completion, the portions of area occupied by ditch-lines, cut or fill slopes, bladed skid trails, and deactivated roads which are not reforested, are to be seeded using a seed or forage mixture that meets Canada Common Number 1 standard. e) The FSP holder will seed with a seed or forage mixture that meets or exceeds Canada Common Number 1 Forage Mixtures as defined by the Canada Seeds Act and Regulation or native shrubs: • At least 90% of the total area exposed in a calendar year that requires seeding, by July 1 of the immediately following calendar year; and • ii) The remainder of such exposed area prior to December 31 of the same immediately following calendar year; and f) The Certificate of Seed Analysis must be made available to FLNRORD staff, for review upon request, for a one-year period following the application of the seed to ensure that the batch does not contain High Priority Invasive Species. SOILS Harvest is recommended to take place on dry soils only. The 5% soil disturbance limit may only be exceeded by 5% by temporary access structures that will be fully rehabilitated after harvest. SU Soil Texture / Soil Compaction / Soil Displacement / Surface Erosion / Max Soil Disturbance / Max Soil Disturbance exceed by TAS 1 Sandy Loam / Modeate / Low / Moderate / 10 / 5 2 Loam / High / High / High / 10 / 5 3 Sandy Clay Loam / Very High / Low / Moderate / 5 / 5 ROADS And TERRAIN STABILITY Retain 10m of non-merchantable stems and under-story along all extended use roads. This includes the following roads – the PAS Sections of MH SNA6U.01, and all sections of MH SNA6U.05, and MH8611.27. MH MH8611.26 and MH8611.27 will have access controls installed at the starts of the roads immediately after fiber removal. The following recommendations were made in a TSA for the block. • Ensure that all drainages and culverts are open and functioning. • After harvest is completed, all roads PAS will be fully deactivated and all culverts will be removed. • All temporary roads and temporary roads will be fully rehabilitated immediately after harvest. Rehabilitation includes slope recontouring, restoration of all natural drainage paths, and decompaction of any compacted soils including any ditch lines. Refer to the Road Deactivation map.

SOIL ASSESSMENT

	HAZARD RATINGS			SOIL DISTURBANCE				SOIL CHARACTERISTICS			
								Depth to Unfavorable Subsoil			
SU	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 %	Min (cm)	Max (cm)	Type of Unfavorable Subsoil	Sediment Delivery Risk (Comm. Watershed)
1	H	H	H	10.0	5.0	7.0	25.0	15.0	100.0	Rock/Saturated Soil	
2	H	H	H	10.0	5.0					None Noted	
3	VH	L	M	5.0	5.0					None Noted	

SU	Critical site conditions that affect the timing of operations and how they affect the timing
1	The soil texture in SU1 has been determined to be predominantly Silty Loam. SU1's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. Gleyed soils were noted 30cm down sections of the block with shallow. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.
2	The soil texture in SU2 has been determined to be predominantly Loam. SU2's aspect is generally South East with a long, continuous slope averaging 45%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features. This block is consistent with Sections 35 and 36 of FPPR.
3	The soil texture in SU3 has been determined to be predominantly Sandy Clay Loams. SU3's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is Very high, the soil displacement rating is low and surface erosion rating is moderate. As per Section 35 of FPPR this constitutes a sensitive soil. Gleyed soils were noted 30cm down sections of the block with shallow. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 5% will not be exceeded. Clays are expected around riparian features. This block is consistent with Sections 35 and 36 of FPPR.

SU MANAGEMENT COMMENTS

SU	SU Description
1	SU 1 is defined by the ICH mk3 03 site series. Mountain pine beetle killed lodgepole pine dominates the SU. Shallow rock exists throughout the SU.
2	SU 2 is defined as ICH mk3 01 site series. Mountain pine beetle killed lodgepole pine is constant throughout the SU. Cedar is mixed in the stand throughout the SU.
3	SU 3 is defined by ICH mk3 05 site series. Mountain pine beetle killed lodgepole is constant throughout the SU. The soils in SU 3 are clay soils and defined as sensitive soils.

SOIL MANAGEMENT COMMENTS

Soil Conservation

SU 1

The soil texture in SU1 has been determined to be predominantly Silty Loam. SU1 's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. Gleyed soils were noted 30cm down sections of the block with shallow. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.

SU 2

The soil texture in SU2 has been determined to be predominantly Loam. SU2 's aspect is generally South East with a long, continuous slope averaging 45%. The soil compaction rating is high, the soil displacement rating is high and surface erosion rating is high. As per Section 35 of FPPR this constitutes a non-sensitive soil. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 10% will not be exceeded. Clays are expected around riparian features.

SU 3

The soil texture in SU3 has been determined to be predominantly Sandy Clay Loams. SU2 's aspect is generally South East with a long, continuous slope averaging 37%. The soil compaction rating is Very high, the soil displacement rating is low and surface erosion rating is moderate. As per Section 35 of FPPR this constitutes a sensitive soil. Gleyed soils were noted 30cm down in sections of the SU. Season of harvest is restricted to dry soils only. Harvesting in the winter is not practicable as most of the timber will be under the snow pack. The soil disturbance limit of 5% will not be exceeded. Clays are expected around riparian features.

All access structures will be managed to ensure natural drainage patterns are maintained and erosion measures are installed prior to spring freshet. Erosion control measures are required to maintain natural drainage patterns.
PAS is calculated at 2.8ha or 2.45% of the gross area. TAS is calculated at 0.1ha or 0.15% of the Net Area to Reforest of SU 1 and 0.21ha or 3.9% of SU 3. There are no TAS features associated with SU 2.

Temporary Access

TAS is calculated at 0.1ha or 0.15% of the Net Area to Reforest of SU 1 and 0.21ha or 3.9% of SU3. There are no TAS features associated with SU 2.

All TAS features will be fully rehabilitated after forest operaations. The road will be decompacted including the ditch and recontoured to ensure the natural drainage is restored.

Slope Instability

A TSA (Terrain Stability Assessment) was completed by Onsite Engineering on April 7, 2013 for Interfor cutblock CP30H SPN 001. CP 30H was sold to BCTS as A93325, which was expired and is now TA1522.
The report covered proposed harvesting of the cutblock and proposed construction of roads. All the sections of roads addressed in this report are built and under road permit. All new roads will do not cross steep ground and do not require a TSA.

The TSA does not expect harvesting to create a significant hydrological change as most of the block is comprised of dead pine, and the main areas of concerns are steep gullies which have been placed in WTRAs. As these areas are outside the block, the recommendations for this block focus on ensuring water is not directed into the gullies and steep slopes in the WTRAs.

The following recommendation were made in the report.
All bladed trails and temporary roads will be fully rehabilitated immediately after harvest. Rehabilitation includes slope recontouring, restoration of all natural drainage paths, and decompaction of any compacted soils including any ditch lines.
Ensure that all drainage's and culverts are open and functioning.
After harvest is completed, all roads will be fully deactivated and all culverts will be removed.

RIPARIAN ASSESSMENTS

Management Strategies

This block is not in a community watershed. All required basal area retetnion is met in the WTRAs or outside the block for all features.
All large S6 features have a 10m RRZ applied to them. The RRZ and required basal area retention are met in the WTRAs placed around the features.

Riparian I.D. and Class	RMA	SU	WIDTH (m)	BA or SPH Retained	Comments (Indicate if in a Community Watershed)
S6-3 Large S6	RRZ		10.0		The RRZ is contained in WTRA-11. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 11 Basal area is retained in the WTRA. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
S6-94 Large S6	RRZ		10.0		The RRZ is contained in WTRA-9. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 9. Basal area is retained in the WTRA. Limit operations in the RMZ. Only cross the stream at the designated skid crossing. Retain groups of healthy understory where possible in groups of 3m or less.
S6-98 Large S6	RRZ		10.0		The RMZ overlaps the harvest area and WTRA 4. Basal area is retained in the WTRA. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
	RMZ		15.0		The RRZ is contained in WTRA-8 and 7. No additional management is required.
S6-100 Large S6	RRZ		10.0		The RRZ is contained in WTRA-6 and 7. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 6 and 7. Basal area is retained in the WTRAs. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.
S6-92 S6	RMZ		20.0		The RMA overlaps the with the harvest area and WTRA 4. Basal area is retained in the WTRA. Limit operations in the RMA. Retain groups of healthy understory where possible in groups of 3m or less.
NCD 91 NCD	MSZ		5.0		NCD 91 is a small NCD that connects S6-92 and S6-90. The road crosses the NCD. Avoid decking and operating in the NCD.
NCD 97 NCD	MFZ		8.0		NCD 96 is a small NCD and starts in WTRA 2 before crossing the road and flowing out of the block. The road crosses the NCD. Avoid decking and operating in the NCD.
NCD 96 NCD	MSZ		5.0		NCD 96 is a small NCD and starts in WTRA 2 before crossing the road and flowing out of the block. The road crosses the NCD. Avoid decking and operating in the NCD.
S6-90 S6	RMZ		20.0		A small portion of the RMZ overlaps the block. Retention is met outside the block.
S6-1 Large S6	RRZ		10.0		The RRZ is contained in WTRA-10. No additional management is required.
	RMZ		15.0		The RMZ overlaps the harvest area and WTRA 10. Basal area is retained in the WTRAs. Limit operations in the RMZ. Retain groups of healthy understory where possible in groups of 3m or less.

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION

Current Coarse Woody Debris levels are generally high due to pine blowdown . Post-harvest CWD target is 4m3/ha.
The licensee must retain a minimum of 4 logs per hectare, each being a minimum of 2m in length and 7.5cm (3in.) in diameter.
Ensure these logs are not broken at time of harvesting . Logs may consist of a variety of species and must be evenly distributed across the cut block.
Non-merchantable log grades (firmwood rejects and some dry grade 4) will be left on site. Reserved stems will contribute to future CWD. Any reserve trees that blow down will be left as CWD unless they become infested with insects that pose a forest health risk. All deciduous stems felled for safety, road construction or other operational purposes are to be left on site as CWD.

This block is within fisher Type II habitat and requires the following coarse woody debris features . 1 single piece of CWD >20 cm in diameter and >10m in length per hectare, elevated 25-50cm above ground. A minimum of 17 debris piles each being >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles are to be located between WTRA's and the block edge to maintain connectivity between standing timber, WTRA's, and any riparian areas. The piles will also be located to maintain a maximum 50m dash distance between cover (standing timber, WTRA's, and debris piles). Actual pile locations may vary but must adhere to the above connectivity conditions.
This block is consistent with Section 68 of the FPPR.

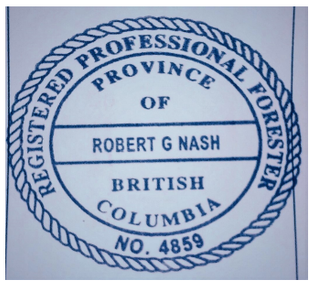
Performance Std. (%) :	100.0	Block Target (%):	100.0	Coarse Woody Debris (m3/ha):	4.0

DEFINITIONS

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2021 12 15	YES

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
Robert Nash	
DATE SIGNED	
2023/06/05	
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.	

THE FOLLOWING INFORMATION IS ATTACHED FOR INFORMATION ONLY AND DOES NOT FORM PART OF THE SITE PLAN

SILVICULTURE PLAN

ORIGINAL

LICENCE #	CP	BLOCK	UBI	OPENING NUMBER	FDU	LOCATION	LATITUDE / LONGITUDE
TA1522	-	SNA6U	BEA6U			Spanish Creek	52 00 08 / 120 28 43

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	67.40	ICH	mk	3	03-100	1,310	37	SE	Upper Slope	30	SIL
2	B	13.68	ICH	mk	3	01-100	1,190	45	SE	Lower Slope	55	L
3	C	5.64	ICH	mk	3	05-100	1,190	37	SE	Lower Slope	15	SCL

STOCKING REQUIREMENTS

ASSESSMENT DATES

Standard Unit	Standards ID	Regen Delay (yrs)	Freegrow Early (yrs)	Freegrow Late (yrs)
1	1060334	7	0	20
2	1060331	4	0	20
3	1060337	4	0	20

Min/Max Elevation Regime: 1120 / 1380

SU : 1 REGENERATION LAYER

PREFERRED SPECIES		Min Ht. (m)	Footnotes
Pli	Lodgepole Pine - Interior	1.4	
Fdi	Douglas Fir - Interior	1.0	

ACCEPTABLE SPECIES		Min Ht. (m)	Footnotes
Cw	Western Red Cedar	0.8	
Sx	Hybrid Spruce (SE x SW)	0.8	
Lw	Western Larch	1.4	

POST SPACING DENSITY(sph)				MAX CONIFEROUS (sph)	
Min		Max		4000	
WELL SPACED TREES (sph)					
Target Pref/Acc		Minimum Pref/Acc		Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
1000		500		400	1.0
Height Relative to Competition (%)					
150					

SU : 2 REGENERATION LAYER

PREFERRED SPECIES		Min Ht. (m)	Footnotes
Fdi	Douglas Fir - Interior	1.4	
Sx	Hybrid Spruce (SE x SW)	1.0	
Pli	Lodgepole Pine - Interior	2.0	

ACCEPTABLE SPECIES		Min Ht. (m)	Footnotes
Bl	Subalpine Fir	1.0	
Lw	Western Larch	2.0	
Cw	Western Red Cedar	1.0	

POST SPACING DENSITY(sph)				MAX CONIFEROUS (sph)	
Min		Max		4000	
WELL SPACED TREES (sph)					
Target Pref/Acc		Minimum Pref/Acc		Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
1200		700		600	1.0
Height Relative to Competition (%)					
150					

SU : 3 REGENERATION LAYER

PREFERRED SPECIES		Min Ht. (m)	Footnotes
Sx	Hybrid Spruce (SE x SW)	1.0	
Pli	Lodgepole Pine - Interior	2.0	

ACCEPTABLE SPECIES		Min Ht. (m)	Footnotes
Cw	Western Red Cedar	1.0	
Bl	Subalpine Fir	1.0	

POST SPACING DENSITY(sph)				MAX CONIFEROUS (sph)	
Min		Max		4000	
WELL SPACED TREES (sph)					
Target Pref/Acc		Minimum Pref/Acc		Minimum Pref	Min Horizontal Dist. Pref/Acc (m)
1200		700		600	1.0
Height Relative to Competition (%)					
150					

OTHER REQUIRED STOCKING INFORMATION

ACTIVITIES

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SILVICULTURE ACTIVITY COMMENTS	
ACTIVITY	COMMENT
Silvicultural Constraints	A post harvest assessment is recommended to determine if brushing or site prep is required . Brushing is not expected to be required over the entire block but is expected to be required where the dead pine has created large openings in the canopy. If brushing or other site prescription is required a QRP (Qualified Registered Professional) will be contacted to created a detailed brushing treatment prescription with the goal of retaining as much existing berry production as possible. Domestic sheep, goats or cattle will not be used for vegetation management. Due to the proximity to caribou habitat if herbicides are going to be used a ground based application will be required to limit the effect by lichen in caribou habitat .
Planting	Planting to is recommended to be a composition of the following species, Pl4Fd2Sx2Cw1Lw1. Seed zones for this block include: Class: A; Zone: PG; Species: Pli Class: A; Zone: PGN; Species: Sx Class: A; Zone: QL; Species: Fd Class B; Zone: QL; Species: All Species Lw: Lw2 for the western half of the block. See the Seed Compliance map for specific location. SNA6U is adjacent to but does not overlap a class A seed zone for White Pine . White pine will only be planted as a class A seed as per Section 7.1.1.14 of the FSP. White Pine will not be planted in SNA6U.

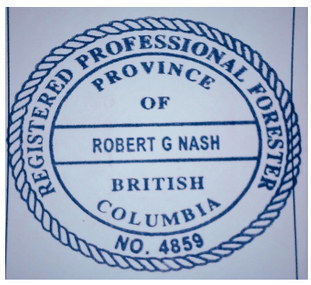
MANAGEMENT STRATEGY

COARSE WOODY DEBRIS MANAGEMENT STRATEGY INFORMATION
Current Coarse Woody Debris levels are generally high due to pine blowldown . Post-harvest CWD target is 4m3/ha. The licensee must retain a minimum of 4 logs per hectare, each being a minimum of 2m in length and 7.5cm (3in.) in diameter. Ensure these logs are not broken at time of harvesting . Logs may consist of a variety of species and must be evenly distributed across the cut block. Non-merchantable log grades (firmwood rejects and some dry grade 4) will be left on site. Reserved stems will contribute to future CWD. Any reserve trees that blow down will be left as CWD unless they become infested with insects that pose a forest health risk. All deciduous stems felled for safety, road construction or other operational purposes are to be left on site as CWD. This block is within fisher Type II habitat and requires the following coarse woody debris features . 1 single piece of CWD >20 cm in diameter and >10m in length per hectare, elevated 25-50cm above ground. A minimum of 17 debris piles each being >3m wide by >5m long by >2m high, with >30% of the pieces being >20cm in diameter and >3m long. Debris piles will be located between WTRA's and the block edge to maintain connectivity between standing timber, WTRA's, and any riparian areas. The piles will also be located to maintain a maximum 50m dash distance between cover (standing timber, WTRA's, and debris piles). Actual pile locations may vary but must adhere to the above connectivity conditions. This block is consistent with Section 68 of the FPPR.

Performance Std. (%):	100.0	Block Target (%):	100.0	Coarse Woody Debris (m3/ha):	4.0

ADMINISTRATION

Amendment number	Date Typed (Yr Mo Dy)	Map Required?
ORIGINAL	2021 12 15	YES

RPF PRINTED NAME	RPF'S SIGNATURE and SEAL
Robert Nash	
DATE SIGNED	
2023/05/24	
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.	

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