

93m 24 61

ISSAGH01

Ministry of Forests
Integrated Silviculture Information System
Opening Summary

Date: 2001 08 31
Page: 1
Userid: KPOTTING

Region..... RPR Prince Rupert Forest Region
Opening..... 93M 024 0.0 61
Location..... EP124220
Timber Type..... For Forest Licence
Open Cat..... FTHL Status.. APP

District..... DKI Kispiox Forest District
Licence No..... A16831 CP. 242 Bk. 20
Licence..... 00026428 04 SKEENA CELLULOSE INC.
Block Status..... App Approved for Harvesting
TAUP Area(ha).... 39.2 Net. 17.6 FTAS (ha). 39.2

OPENING ADMIN

Geo. Forest District... DKI Kispiox Forest District
Disturbance Type..... L
Previous Stand Type... MAT Timber Type.. HW SX 9 4 1
Timber Supply Bk..... 12C Kispiox TSA Block C
Photo Line No(s).....
UTM: Zone... 00 East... 000000 North... 0000000 NAD.. 83
Treatment Regime Id...
Location Code 1 & 2...
Funding Source..... IA Industrial Appraisal
Last Updated By..... MLSED on 2001 08 28 MLSED ISIS FTP DATA, BILL BOWIE

SP SUMMARY

SP Administration:
Sealed by..... KPOTTING KPOTTING RPF.. Date.. 1999 08 06
Approved by..... KPOTTING KPOTTING Date.. 1999 08 06
For the Manager of Kispiox Forest District
Amendment Number.. Initiated by. on Approved by. on

Area of No Planned Reforestation (ha): Reserve Sum of SU Area (ha): Totals (ha):
Perm. Rook Water Swamp Other NP NC>4ha No Mod. IMH Other NPR Area NAR TAUP FTAS
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 17.6 39.2 39.2

Ecology:

SU	ID	Moisture/Nutrient	Zone		SB		VR		Site		Min		Max		Aspect		Slope		Position	
1	1		ICH	mo	1	01														
2	2		ICH	mo	1	04														

Free Growing Stocking Standards:

SU Layer	NAR Area(ha)	Preferred Species	Acceptable Species	Basal Max Area	Trgt Min	Min	Min	Min	Regen Yr Due	Free Grow Early Yr Due	Free Grow Late Yr Due	Hght Rel to Comp	Regen Method
1	13.9	HW	PLI SX	BL	10000	1200	700	600	2.0	4 2003	9 2008	15 2014	150 % PLANT
2	3.7	HW	PLI SX	BL	10000	1200	700	600	2.0	4 2003	9 2008	15 2014	150 % PLANT

Detrimental Soil Disturbance:

Max Proportion of Total Area Allowed for Permanent Access. 4.8 %
Maximum Allowable Detrimental Soil Disturbance:
Max Forest Floor Disturbance Reduction (cm)
Max Soil Disturbance Pre-Rehab%
Maximum Temporary Access To Be No Planned Rehab%
Rehab%
Rehab%

SU	(%)	(cm)	Disturb% Pre-Rehab%	Access% Rehab%	Rehab%
1			10.0		
2			5.0		

ATU SUMMARY

Denudation:

Result	ATU	Technique	System Variant	Phase	Disturbance	Reserve	Harvest Start	Harvest End	Denuded Area (ha)
R	L1	HV	CCRES	REMOV	L	G	1999 08 20	2001 03 31	39.2

Silviculture:

Result	ATU	Base	Technique	Method	Objectives	Date	P	R	Area	Fund	Project Id
R	E1	PL	PL	CTAIN	CE	2001 05 02	M	M	.1	IA	
R	E2	PL	PL	CTAIN	CE	2001 05 20	M	M	17.6	IA	
R	C1	SU	RG	PLOT	SU CE RG	2001 05 30	M	M	17.6	IA	

Plant Stock Allotment:

ATU	Species	Trees	Request Key	Lot Number
E1	SS	40		04783
E2	SS	18840		04783
E2	PLI	5850		60701

FOREST COVER

SU	Polygon	Area (ha)	L	R	Stk	Age	Age Range	Avg Hght	Ref Yr	Spao Site DBH	Stems/ha	Stems/ha	FG VFS	F	% Data	Site Basal	Basal Rsr
2	4	3.7			NSR PL				2001					N		20 0	G
	1	1.9			NP UN				1999					N		20 0	G
	2	19.7			HAT NAT			29.9	2001		492	7 %	PL	2 %	75	20 0	G
	3	19.7			Species Code/11	8 %	HW	76 %	2001					N	75	20 0	G
1	3	13.9			NSR PL				2001					N		20 0	G

LAND STATUS

NSR Category.

This Opening is Regenerated.. No
This Opening is Free Growing. No
Declared Regen Mat on....
Declared Free Growing on.

Status Date	NP (ha)	NAT (ha)	FOR (ha)	Total	NPL (ha)	PL (ha)	NAT (ha)	Total	ART (ha)	NAT (ha)	Total	IMH (ha)	Other (ha)	Total	FG (ha)
2001 07 31	1.9			1.9				17.6			17.6			19.7	19.7

End of Report

SKEENA CELLULOSE INC. CARNABY LUMBER OPERATIONS

CP 242-20

SILVICULTURE PRESCRIPTION

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENSE	C.P.	BLK.	GROSS AREA (ha)	NP NAT (ha)	NP UNN (ha)	RESERVE AREA (ha)	NET AREA TO BE REFORESTED (ha)
Prince Rupert	Kispiox	Kispiox	A16831	242	20	39.2	0.0	1.9	19.7	17.6
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:
93M024 - 06 /		30BCB92095 #150,151		Suskwa		630-740		C. Harrison		October 6, 1998

Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species ≤ 17.4 centimetres diameter at breast height (1.3 m). Advance regeneration collectively includes all Layer 2, 3, and 4 trees.

Opening Size and Configuration: This opening conforms to the size and location identified in Skeena Cellulose's 1998-2003 Forest Development Plan (FDP) for the Suskwa Chart Area. The northern and southern boundaries follow along existing cutblocks. The eastern boundary is located along the break down Stream A and the western boundary is located to limit block size. Forty-six percent of the area within the block will be retained therefore meeting all adjacency requirements.

Block Access: This block is located approximately 30 km east of Hazelton. Access is gained from the Suskwa and Hamblin FSRs.

LONG-TERM MANAGEMENT OBJECTIVES

Follow the objectives of the Kispiox Land and Resource Management Plan (this block falls within the General Resource Development Zone of the Kispiox Land and Resource Management Plan). General objectives are found in the 1998-2003 Forest Development Plan. Specific long-term objectives for block 20 include:

- **Timber** - harvest timber economically, establish a future crop composed of species ecologically suited to the site, and manage the future stand for a target of $350\text{m}^3/\text{ha}$ on a 80 to 100 year rotation.
- **Water Quality/Fisheries** - maintain water quality in all streams by using machine-free zones and/or basal area retention..

ASSESSMENTS

Type	Completed	Comments
Riparian	Yes	Details specified in 'Water Quality/Fisheries' under 'Other Resources below.
Archaeological	No	There are no known features of cultural or historic significance within this block.
Visual	No	Not required. Management strategies will minimise visual impacts.
Terrain Stability	No	No indicators of slope instability were noted within the block.

SITE DESCRIPTION

Ecological Classification: ICH mcl (as per Land Management Handbook 26, Banner et. al. 1993)

SU	ST	GROSS AREA (ha)	NET AREA (ha)	SITE SERIES	EDAPHIC GRID M/N	SOIL DESCRIPTION									
						SI ¹	SOIL ORDER	HUMUS FORM	LFH (cm)	SOIL HORIZON	DEPTH	SOIL TEXTURE	CF %	DRAINAGE	SEEP DEPTH (cm)
1	A	31.1	13.9	01	3/C	15	Podzol	Mor	8	B1	45+	L-SL	25	Imperfect	20
2	B	8.1	3.7	04,03,01 ₂	5/D	18	Podzol	Moder	4-5	B1 B2	5-10 30-40+	L-SIL L-SIL-SC	10-60	Imperfect	30

¹ Site Index taken from Site Index Estimates By Site Series for Coniferous Tree Species in British Columbia (1997)



Topography:

SU	SLOPE DESCRIPTION						WATERCOURSE SPACING / 100 m
	AVERAGE %	ASPECT	LENGTH	UNIFORM	FAILURES	Gullies > 2m	
1	30	North	Long	Uniform	None	0	<1
2	25	North	Short	Broken	None	0	<1

SITE DISTURBANCE

SU	SOIL DEGRADING PROCESS	HAZARD RATING	CONTROLLING SITE FACTORS
1	Compaction Displacement Surface Erosion	High High High	Slope, Seepage
2	Compaction Displacement Surface Erosion	Very High High High	Slope, Soil texture, Seepage

SOIL DISTURBANCE STANDARDS

Standard Unit *	1			2			TOTAL
Gross Area			31.1			8.1	39.2
NP Nat			0.0			0.0	0.0
Reserve			16.0			3.7	19.7
	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	1.2	0.0	1.2	0.7	0.0	0.7	1.9
Landings (conventional)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Landings (cable)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Area to Reforest			13.9			3.7	17.6
Expected Permanent Soil Dist. Rds & Lndgs (%)							4.8
Excavated/bladed Skid trails	0.3	0.3	0.0	0.0	0.0	0.0	0.0
Potentially Detrimental Dist. (%)			10.0			5.0	

Spur Road Width: 13.5 m
Mainline width: 15.0 m
Skid trail width: 4.0 m

HARVESTING CONSIDERATIONS

SILVICULTURE SYSTEM AND HARVESTING INFORMATION		
SU	SYSTEM	CRITICAL SITE INFORMATION--TIMING AND MANNER OF OPERATIONS
1	Clearcut (patches)	• Moisture and nutrient deficits. Summer harvest during conditions appropriate to meet site disturbance objectives.
2	Clearcut (patches)	• Competing vegetation. Frost/cold air on lower slopes. Very high compaction hazard. Winter harvest on frozen ground and/or a compressible snowpack greater than one metre.

LEAVE TREE SPECIFICATIONS			
SU	SPECIES	SIZE/LAYER(S)	RATIONALE
All	All	<17.5 centimetres DBH	• All windfirm non-merchantable trees within machine free zones and riparian management zones will be left standing unless they must be felled to meet safety or operational constraints.
All	All	Layer 2, 3, 4	• Clumps of hemlock, spruce, and balsam advance regeneration will be left standing if trees exhibit acceptable form and vigour and if it is possible to skid around them.
All	Cottonwood	All	• Leave standing as wildlife trees if found at the time of falling.

Skid Trails: Skid trails will be built within the soil disturbance standards described in this document. There are a number of bladed skid trails located within this block. They will be constructed using either an excavator or a crawler tractor, or a combination of both. Bladed trails will have an average depth of cut of one metre or less and the depth to unfavourable substrate is greater than 1 metre in the areas planned for bladed trails.

Timing of Rehabilitation: All bladed skid trails will be rehabilitated to facilitate regeneration within 1 year of the completion of harvest.

OTHER RESOURCES**Water Quality/Fisheries:**

RIPARIAN CLASSIFICATION							
WATERBODY IDENTITY	STREAM GRADIENT (% by reach)	WITHIN COMMUNITY WATERSHED	FISH PRESENT	FISH SPECIES	STREAM WIDTH OR SIZE (m or ha)	RIPARIAN CLASS	CLASS BASED ON
A	8-15	No	Unknown	Unknown	1.9m	S3	Default
F	44	No	No	Unknown	3.5	S5	Gradient
G	8-15	No	Unknown	Unknown	1.9	S3	Default
C	15-18	No	Unknown	Unknown	1.3m	S4	Default
20D	18-22	No	No	-	1.4m	S6	Gradient
20C	18-22	No	No	-	1.4m	S6	Gradient
20B	15	No	Unknown	Unknown	1.1m	S4	Default
20A	13	No	Unknown	Unknown	0.8m	S4	Default
H	13	No	Unknown	Unknown	0.8m	S4	Default
STAND LEVEL ATTRIBUTES/CONCERNS IDENTIFIED IN HIGHER LEVEL PLANS OR FIELD ASSESSMENT: Streams 20C, 20D and F have been classified as non fish-bearing streams due to gradients greater than 18%. The remaining streams have gradients less than 18% and have not been assessed for fish presence and are therefore classified as fish bearing by default.							
RIPARIAN MANAGEMENT							
WATERBODY IDENTITY	RIPARIAN CLASS	RMA (m)	RMZ (m)	RRZ (m)	RMZ MANAGEMENT		
A	S3	40	20	20	The stream is located a minimum of 70 metres from any harvesting boundary within the block.		
F	S5	30	30	0	The stream is located a minimum of 20 metres from any harvesting boundary within the block. Where operationally feasible, and adhering to WCB safety guidelines, retain all non merchantable conifers, all deciduous stems and conifer stems less than 30 cm DBH within the RMZ.		
G	S3	40	20	20	The stream is located a minimum of 20 metres from any harvesting boundary within the block. Where operationally feasible, and adhering to WCB safety guidelines, retain all non merchantable conifers, all deciduous stems and conifer stems less than 30 cm DBH within the RMZ.		
C	S4	30	30	0	The stream is located adjacent to harvest unit P4. It will be protected by a minimum 10 metre machine free zone. Where operationally feasible, and adhering to WCB safety guidelines, retain all non merchantable conifers, all deciduous stems and conifer stems less than 30 cm DBH within the RMZ.		
20D	S6	20	20	0	Located a minimum of 20 metres from any harvesting boundary within the block.		
20C	S6	20	20	0	Located within an area of 'no harvest' and no other management is prescribed.		
20B	S4	30	30	0	Located within an area of 'no harvest' and no other management is prescribed.		
20A	S4	30	30	0	The portion of this stream located within harvest unit P5 is protected by a minimum 10 metre machine free zone. It will be crossed at the designated skid bridge only. Where operationally feasible, and adhering to WCB safety guidelines, retain all non merchantable conifers, all deciduous stems and conifer stems less than 30 cm DBH within the RMZ. The remaining portion of the stream flows within the 'no harvest' portion of the block and requires no special management.		
H	S4	30	30	0	The portion of this stream located within harvest unit P5 is protected by a minimum 10 metre machine free zone. It will be crossed at designated skid bridges only. Where operationally feasible, and adhering to WCB safety guidelines, retain all non merchantable conifers, all deciduous stems and conifer stems less than 30 cm DBH within the RMZ. The remaining portion of the stream flows within the 'no harvest' portion of the block and requires no special management.		
Trees will be felled away from streams wherever possible. However, trees may have to be felled across streams where dictated by the lean of the tree and/or concerns for worker safety. Stems will be long-lined out of the MFZs. Any introduced debris that will impede streamflow will be removed manually or mechanically. Streams will be crossed on the road or at designated skid bridge locations only.							

Culverts will be installed and maintained to ensure that patterns of downslope drainage are not significantly altered. Skid bridges will be removed after harvest.

Visual: This block is rated as 'Not Visible' under the 1998 landscape inventory completed by the Kispiox Forest District. The impact this block will have on the visual landscape will be minimized by retaining approximately 46% of the area within the block.

Wildlife/Biodiversity Stand Level Attributes: Two game trails were observed within the block. One adjacent to patch 2 and one within patch 2. 1:250,000 scale wildlife habitat suitability mapping completed for the Kispiox LRMP rates this area as low for goat, low for deer, moderately high for grizzly and moose habitat suitability. 46% of the area of the block will be retained. Leave trees which provide shelter and cover for wildlife will also provide vertical and horizontal stand structure attributes which will aid in the maintenance of stand level biodiversity. Harvesting is expected to increase the area's capability to provide forage and browse habitat for moose, bear and deer.

Reserves: Area reserved for 'no harvest' makes up approximately 46% of the block. This area is representative of the current stand, is concentrated along the streams and has large patches of windthrow within it.

Coarse woody debris: Retention of non-merchantable conifers and harvesting residue, together with the area of 'no harvest', will provide woody debris in both the short and long term at the stand level.

Traplines/Guide Territories: This area lies within Trapline 0608T032 and Guide Territory 630G002. Prior to commencement of logging operations, the holders of the above licenses will be notified of Skeena Cellulose's intent to harvest this area.

Mining Claims: No mining claims or survey lines were noted in the area.

Cultural Heritage: This block lies within the claimed traditional house of Gyetm. No aboriginal activities were noted in this block. If historical sites are found during the course of logging, activities will cease until an assessment of the site is completed and recommendations implemented.

REFORESTATION

Free-Growing Stocking Standards:

SU	NET AREA (ha)	SPECIES		TARGET Prefer Accept (WSsph)	Minimum Prefer Accept (WSsph)	Minimum Prefer (WSsph)	Regen Delay (yrs)	Early (yrs)	Late (yrs)	Min Ht (m) ¹	Crop Height vs. Comp %	Max Density (sph)	Post Spacing	
		Preferred	Acceptable										Maximum (WSsph)	Minimum (WSsph)
1	13.9	Hw, Pl, Sx	Bl	1200	700	600	4	9	15	1.0	150	10000	1800	700
2	3.7	Sx	Hw, Pl, Bl	1200	700	600	4	9	15	1.0	150	10000	1800	700

Minimum inter-tree spacing = 2.0 m

¹ Free-growing height for all species but pine (Pl minimum height = 2.0 m)

Pest Considerations:

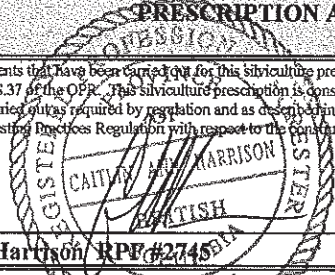
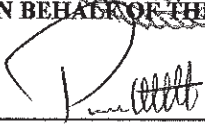
SU	PEST NAME	PEST CODE	SIGNIFICANCE	TREATMENT METHOD
All	<i>Phellinus pini</i>	DDP	≈15%	none required
All	<i>Echinodontium tinctorium</i>	DDE	≈30%	none required

Echinodontium tinctorium and *Phellinus pini* will not pose problems in the future stand, as typically result in significant volume losses only in mature forests. Pest damage in the future crop will be assessed at the future survey stage.

If pest surveys indicate significant mortality will occur on this site, spacing densities will be increased to a maximum of 2000 stems per hectare.



PRESCRIPTION ATTACHMENTS AND APPROVAL

PRESCRIPTION ATTACHMENTS	# OF PAGES	PRESCRIPTION APPROVAL
		Any assessments that have been carried out for this silviculture prescription have followed the required procedures as described in S.37 of the OPR. This silviculture prescription is consistent with the results of any and all assessments that have been carried out as required by regulation and as described in this document. This document complies with the Timber Harvesting Practices Regulation with respect to the construction of bladed trails.
Ecosystem Map	1	
Standards Unit Map	1	
		Caitlin Harrison RPF #2745 97/07/01 Date
		SIGNATURE OF LICENSE HOLDER OR PERSON AUTHORIZED TO SIGN ON BEHALF OF THE HOLDER:
		 July 22/99
		Signing Authority Date
		GOVERNMENT APPROVAL OF PRESCRIPTION:
		 Aug. 6/99
TOTAL NUMBER OF ATTACHMENT PAGES:	2 A	District Manager's Signature Date



SILVICULTURE PLAN**Site Preparation:**

SU	SITE PREPARATION – PREFERRED	TIMING	SITE PREPARATION – ALTERNATIVE
1	Hand screef and direct plant	H+1	Patch scarify and/or piling
2	Hand screef and direct plant	H+1	Patch scarify and/or piling

Reforestation:

SU	NET AREA (ha)	REGEN METHOD	SPECIES	STOCK TYPE & AGE	SOW (gr)	PLANT (gr)	STEMS/ha	AMOUNT (k)
1	13.9	Plant	PI	PCT 415B 1+0	H	H+1	700	9.7
			Sx	PSB 415B 1+0	H	H+1	700	9.7
2	3.7	Plant	Sx	PSB 415B 1+0	H	H+1	1400	5.2
Total								24.6

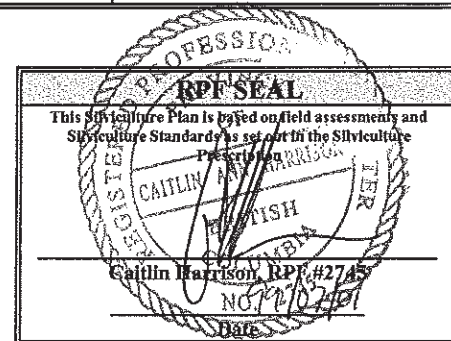
SU1: Plant with a mixture of pine PCT 415B 1+0 and spruce PSB 415B 1+0 stock at harvest plus one year. Plant pine on the 01 site series only. S.U. 2: Plant with spruce PSB 415B 1+0 stock at H+1. Elevated microsites are preferred.

A regeneration survey will be conducted at harvest plus three years. Blocks will be surveyed using the even-aged survey methodology and patches of advance regeneration will be tallied as acceptable well-spaced trees if they are acceptable Layer 2, 3, or 4 trees. Layer 1 trees will be tallied as ghost trees and will not contribute to the stocking of the site. If the survey indicates a density that is not achieving the stocking standard guidelines, fill planting will be conducted at harvest plus four years. A free growing survey will be conducted at harvest plus nine years.

Any alternatives consisting of changing the species composition and/or stock types of the seedlings prescribed are acceptable, provided that any changes adhere to the free growing standard guidelines specified for the site, and the changes to the stock types are not below those specified above.

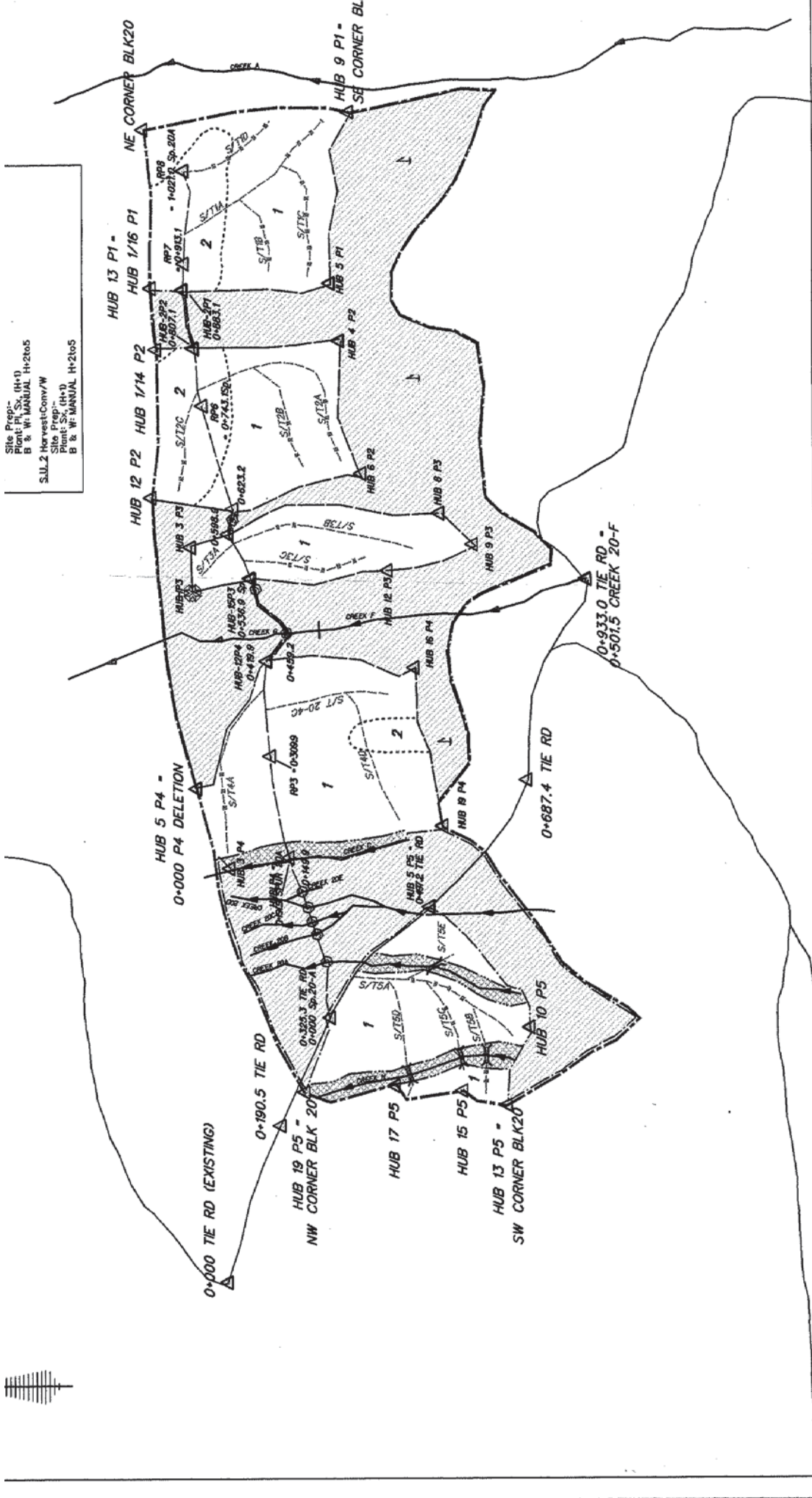
Brushing and Weeding:

SU	BRUSH HAZARD	BRUSH SPECIES (% cover / height cm)	PREFERRED TREATMENT	ALTERNATIVE TREATMENT	TIMING
1	Medium	<i>Epilobium angustifolium</i> , <i>Vaccinium</i> spp., <i>Populus</i> spp., <i>Betula papyrifera</i> , <i>Salix</i> spp.	Manual	Chemical	H + 2 to 5 years
2	Very High	<i>Populus</i> spp., <i>Betula papyrifera</i> , <i>Salix</i> spp., <i>Rubus parviflorus</i> , <i>Lonicera involucrata</i> , <i>Athyrium filix-femina</i> .	Manual	Chemical	H + 2 to 5 years





Site Prep:
B & W: MANUAL H-2to5
S.U. 2 Harvest/Conv/W
Site Prep:
B & W: MANUAL H-2to5





Region..... RPR Prince Rupert Forest Region
Opening..... 93M 024 0.0 61
Location..... EPI24220
Tenure Type. For Forest Licence
Open Cat.... FTML Status.. APP

District..... DK1 Kispiox Forest District
Licence No..... A16831 CP. 242 Blk. 20 Mark. EPI242
Licence..... 00026428 04 SKEENA CELLULOSE INC.
Block Status.... App Approved for Harvesting
TAUP Area(ha).... 39.2 Nat. 17.6 FTAS (ha). 39.2

OPENING ADMIN

Geo. Forest District.. DK1 Kispiox Forest District
Disturbance Type..... L
Previous Stand Type... MAT Timber Type.. HW SX 9 4 1
Timber Supply Blk..... 12C Kispiox TSA Block C
Photo Line No(s).....
UTM: Zone.. 00 East... 000000 North.. 0000000 NAD.. 83
Treatment Regime Id...
Location Code 1 & 2...
Funding Source..... IA Industrial Appraisal
Last Updated By..... MLSEDY on 2001 07 27 MLSEDY ISIS FTP DATA, BILL BOWIE

SP SUMMARY

SP Administration:

Sealed by..... RPF.. Date..
Approved by..... KPOTTING KPOTTING Date.. 1999 08 06
For the Manager of Kispiox Forest District
Amendment Number.. Initiated by. on Approved by. on

Area of No Planned Reforestation (ha): Reserve
Perm. Rock Water Swamp Other NP NC>4ha No Mod. IMM Other NPR Area Sum of SU Area (ha): Totals (ha):
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 17.6 NAR TAUP FTAS
39.2 39.2

Ecology:

SU	ID	Moisture/Nutrient	Zone	SB	VR	Site	Min	Max	Avg	Aspect	Min	Max	Avg	Position
1	1		ICH	mo	1	01			700					
2	2		ICH	mo	1	04			700					

Free Growing Stocking Standards:

SU Layer	NAR Area(ha)	Preferred Species	Acceptable Species	Basal Max Area Dan	Trgt Min	Min Pref	Min Hor	Regen Yr Due	Early Yr Due	Late Yr Due	Hght Rel to Comp	Regen Method
1	13.9 HW	PLI SX	BL	10000	1200	700	600	2.0	4 2003	9 2008	15 2014	150 % PLANT
2	3.7 SX	HW	PLI BL	10000	1200	700	600	2.0	4 2003	9 2008	15 2014	150 % PLANT

Detrimental Soil Disturbance:

Max Proportion of Total Area Allowed for Permanent Access. 4.8 %

Maximum Allowable Detrimental Soil Disturbance:

SU	Max Forest Floor Disp (%)	Max Forest Floor Reduction (cm)	Max Soil Disturb Disturb%	Max Soil Disturb Pre-Rehab%	Maximum Temporary Access Total Access%	To Be Rehab%	No Planned Rehab%
1							
2			10.0	5.0			

ATU SUMMARY

Denudation:

Result ATU	Technique	System Variant	Phase Disturbance	Reserve	Harvest Start	Harvest End	Denuded Area (ha)
R	L1	HW	CCRES	REMOV	L	G	1999 08 20 2001 03 31 39.2

Silviculture:

Result ATU	Base	Technique	Method	Objectives	Date	P	R	Area	Fund	Project Id

LAND STATUS

NSR Category.

This Opening is Regenerated.. No
This Opening is Free Growing. No

Declared Regen Mat on....
Declared Free Growing on.

Status Date	UNW + NAT + FOR = Total	NPL + PL + NAT = Total	ART + NAT = Total	IMM (ha) + NAT = Total	MAT + NC BR = Total	FG (ha) NOR

End of Report

No FC info

93M024-61

01

Ministry of Forests
Integrated Silviculture Information System
Opening Summary

Date: 2001 07 31
Page: 1
Userid: KPOTTING

n..... RPR Prince Rupert Forest Region
ng..... 93M 024 0.0 61
ion..... EPI24220
a Type.. For Forest Licence
Cat..... FTML Status.. APP

District..... DKI Kispiox Forest District
Licence No..... A16831 CP. 242 Bk. 20 Mark. EPI242
Licence..... 00026428 04 SKEENA CELLULOSE INC.
Block Status.... App Approved for Harvesting
TAUP Area(ha).... 39.2 Nat. 17.6 FTAS (ha). 39.2

OPENING ADMIN

Geo. Forest District.. DKI Kispiox Forest District
Disturbance Type..... L
Previous Stand Type... MAT Timber Type.. HW SK 9 4 1
Timber Supply Bk..... 12C Kispiox TSA Block C
Photo Line No(s).....
UTM: Zone... 00 East... 000000 North.. 0000000 NAD.. 83
Treatment Regime Id...
Location Code 1 & 2...
Funding Source..... IA Industrial Appraisal
Last Updated By..... KPOTTING on 2001 07 31 POTTINGER, KATE

SP SUMMARY

SP Administration:

Sealed by..... RPF.. Date..
Approved by..... KPOTTING KPOTTING Date.. 1999 08 06
For the Manager of Kispiox Forest District
Amendment Number.. Initiated by.. on Approved by.. on

Area of No Planned Reforestation (ha): Reserve
Perm. Rock Water Swamp Other NP NC>4ha No Mod. IMH Other NPR Area Sum of SU Area (ha): Totals (ha):
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 17.6 TAUP 39.2 FTAS 39.2

Ecology:

Stratum	ID	Moisture/Nutrient	BGC Information				Elevation		Slope		Position		
SU	ID		Zone	SB	VR	Site	Min	Max	Avg	Min	Max	Avg	Position
1	1		ICH	mo	1	01			700				
2	2		ICH	mo	1	04			700				

Free Growing Stocking Standards:

SU Layer	NAR Area(ha)	Preferred Species	Acceptable Species	Basal Max Area Dan	Trst Min	Min Pref	Min Hor	Regen Yr Due	Early Yr Due	Late Yr Due	Hght Rel	Regen Method	
1	13.9 HW	PLI SX	BL	10000	1200	700	600	2.0	4	2003	9	2008	15
2	5.7 SX		HW PLI BL	10000	1200	700	600	2.0	4	2003	9	2008	15

Detrimental Soil Disturbance:

Max Proportion of Total Area Allowed for Permanent Access. 4.8 %
Maximum Allowable Detrimental Soil Disturbance:
Max Forest Floor Max Max Soil Maximum Temporary Access
Disp Reduction Soil Disturb Total To Be No Planned
SU (%) (cm) Disturb% Pre-Rehab% Access% Rehab% Rehab%

1												
2												

ATU SUMMARY

Denudation:

Result ATU	Technique	System Variant	Phase Disturbance	Reserve	Harvest Start	Harvest End	Denuded Area (ha)
R	L1	HW	CCRES	REMOV	L	G	1999 08 20 2001 03 31 39.2

Silviculture:

Result ATU	Base	Technique	Method	Objectives	Date	P	R	Area	Fund	Project Id
------------	------	-----------	--------	------------	------	---	---	------	------	------------

FOREST COVER

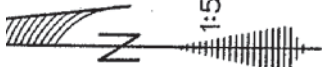
SU	Polygon	Area (ha)	L	R	Stock	Age	Avg Hght	Ref Yr	Spec DBH	Stems/ha	F	% Data	S	Site	Basal
2	4	3.7			NSR PL	2001									
	1	1.9			NP UNN	1999									
	2	19.7			1 MAT NAT	2001	29.9		7 %	492	7 %	PL	2 %	20 0	G
	3	13.9			NSR PL	2001								20 0	G

LAND STATUS

NSR Category. This Opening is Regenerated.. No Declared Regen Met on....
This Opening is Free Growing. No Declared Free Growing on.

Status Date	UNN + NAT + FOR = Total	NPL + PL + NAT = Total	ART + NAT = Total	MAT + NC BR = Total	FG (ha) NOR
2001 07 31	1.9	1.9	17.6	19.7	19.7

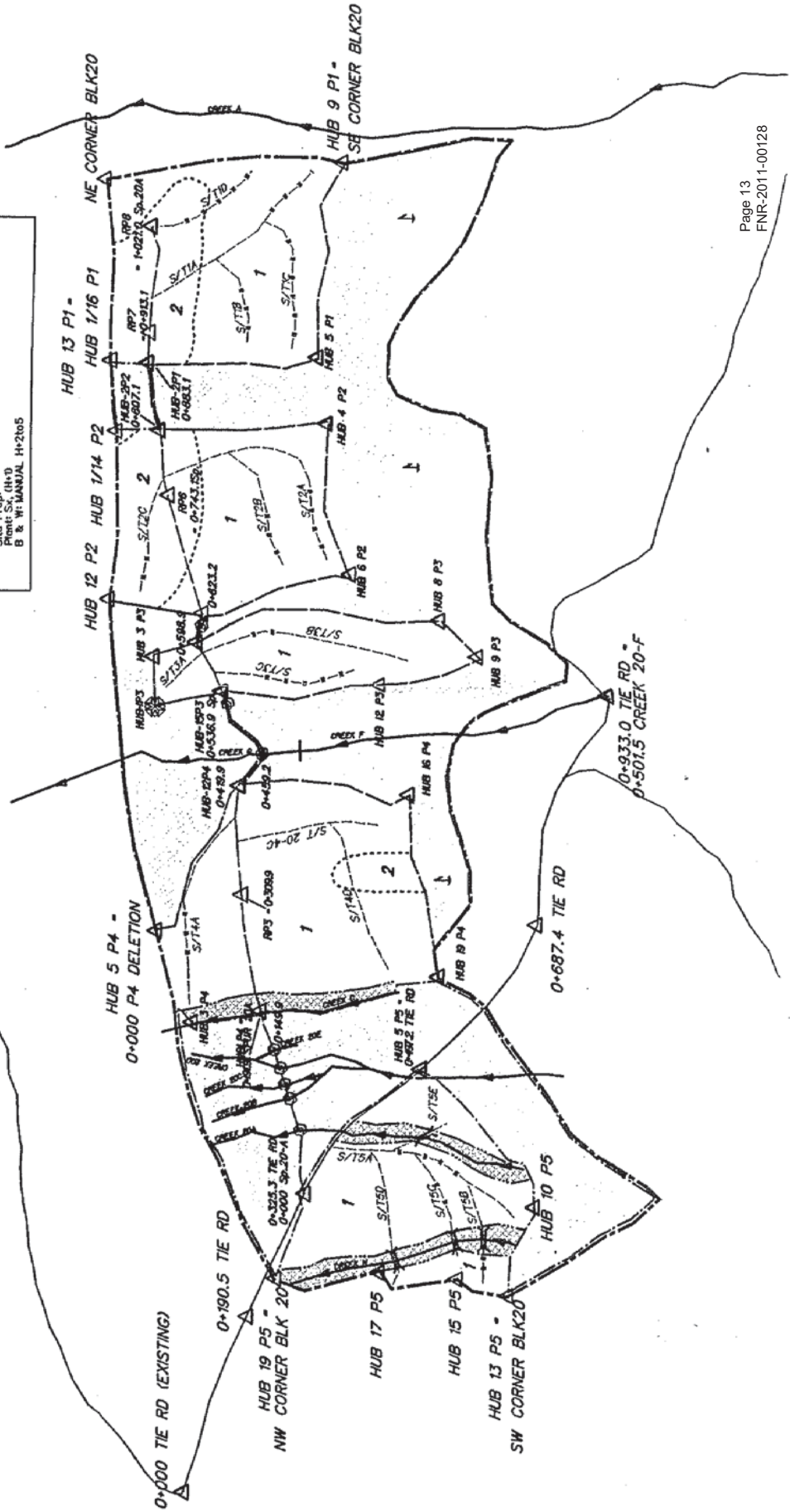
End of Report



Scale 1:5000

⊕ L 99/01
P01

Net area used to be Reformed	13.9	3.7	17.6
Site Disturb (D)	-	-	4.8
Forest Floor Displacement (Z)	-	-	-
Site Disturbance (Impervious) %	10	5	-
Site Sensitivity			
Composition	H	VH	
Displacement	H	H	
Mass Wasting	-	-	
Surface Erosion	H	H	
For. Floor Dist.	-	-	
Treatment Schedule:			
S.U.1 Harvest/Conv/S			
Site Prep:			
Plant P1 Sx (H+I)			
B & W MANUAL H-2to5			
S.U.2 Harvest/Conv/W			
Site Prep:			
Plant Sx (H+I)			
B & W MANUAL H-2to5			





MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
PRE-HARVEST OBLIGATION DEFINITION -- FORM 'A'

A. TENURE

OBLIGATION		LICENCE NO.	LICENSEE	C.P.	PREVIOUS TIMBER TYPE		DATE SP APPROVED		YRS TO HVT	TAUP (ha)	MAXIMUM ALLOWABLE PERMANENT ACCESS (%)	NET AREA TO BE REFORESTED (ha)			
TIMBER MARK	BLOCK				1 SPEC	2 SPEC	CL	INDEX	Y	M	D				
EP1242	20	FL-A16831	SKEENA CELLULOSE INC.	242	MAT	HW	SX	941	M	20	C	9 9 0 8 0 6	39.2	48	17.6

B. SP

SU	LAY FR	NET AREA (ha)	BIOGEOCLIMATIC		SITE	REGENERATION METHOD	TARGET STOCKING (wvs / ha)	STOCK MINIMUM (wvs / ha)	MIN. HORIZ (m)	BASAL AREA (m ² / ha)	PREFERRED SPECIES					ACCEPTABLE SPECIES			MAX. CONIFER (sl / ha)	REGEN. DELAY (yrs)	FG (yrs)	
			ZONE	SUBZONE							ICH	mc1	01	PLANT	1	2	3	4			5	1
1		13.9					1200	700	600	2.0	0	HW	PL	SX			BL		10000	4	9	15
HT. RELATIVE TO COMP. % CM RES. TYPE G																						
2		3.7					1200	700	600	2.0	0	SX				HW	PL	BL	10000	4	9	15
HT. RELATIVE TO COMP. % CM RES. TYPE G																						

C. ADMINISTRATION

REG.	DIST.	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE	Y	M	D	REVIEWED BY
PR	KI	93M 024 0061	ANDRE ROY	(250) 842-5399	9 9 0 8 2 4				Kate Pattinson 99/08/27

MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B' SECTION 35

A.

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES			GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM			

B.

SILVICULTURE																							
OBLIGATION		ACTIVITY			OBJECTIVES			FUNDING			COMPLETION DATE			NET AREA			RESP			OPENING NO.			
TIMBERMARK	BLOCK	BASE	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM	NUMBER	SPECIES	SEEDLOT	NUMBER	SPECIES	SEEDLOT	NUMBER	SPECIES	SEEDLOT	NUMBER	SPECIES	NUMBER	
EP1501	8	SU	RG	PLOT	SU	RG	CE	IA	1999	9						25.8		L			93M 045 / 0041		
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER

C. ADMINISTRATION

PREPARED BY	TELEPHONE	DATE			REVIEWED BY			DATE			REGION	DISTRICT
		Y	M	D				Y	M	D		
Andre Roy	250-842-5399	1999	12	10	<i>Keto Pottinger</i>			919	12	11	PR	KI

MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
FOREST COVER DEFINITION -- FORM 'C' SECTION 35

A.

OBLIGATION		OPENING NO.	PREPARED BY	TELEPHONE NO.		DATE		
TIMBERMARK	BLOCK					Y	M	D
EP1501	8	93M 045/0041	Andre Roy	250-842-5399		1999	12	10

B.

S	T	R	A	R	A	N	K	AREA (ha)	STOCKING		SPECIES COMPOSITION								AGE PLT. (yrs)	HEIGHT (0.1 m)	CRWN CLOSE (%)	REF. YEAR	SITE		DENSITY (stems/ha)	WELL- SPACED (stems/ha)	FREE- GROWING (stems/ha)	RES. TYPE	BASAL AREA (m2/ha)	PEST INFESTATION					
									STATUS	TYPE	SPECIES	%	SPECIES	%	SPECIES	%	SPECIES	%					SPECIES	%						CL	INDEX	CODE	%	CODE	%
1	I							2.3	NP	UNN										1997															
	S								NP	UNN																									
2	I							6.3	MAT	NAT	HW	100						250	25.0	50	1997	M	20												
	S								MAT	NAT																									
3	I							11.0	IMM	ART	SX	60	BL	30	HW	10	3	2	0.3	1	1999	L	12												
	S								IMM	ART	SX	73	BL	27			3	2	0.3		1999	L	12		1140										
4	I							13.3	IMM	ART	SX	50	BL	40	HW	10	3	2	0.3	1	1999	L	12												
	S								IMM	ART	SX	65	BL	35			3	2	0.3		1999	L	12		1180										
5	I							1.5	IMM	ART	SX	50	BL	50			3	2	0.3	1	1999	L	15												
	S								IMM	ART	SX	65	BL	35			3	2	0.3		1999	L	15		1200										

Reopen Delay Set 1997/08

C. ADMINISTRATION

REVIEWED BY	DATE	REGION	DISTRICT
Kate Pottinger	8/9/12/15	PR	KI

D.

RPF SIGNATURE AND SEAL	
Andre Roy RPF SIGNATURE	3712 RPF NO.
Dec 10/99 DATE	

CP: 501 Blk: 8
Location: Natlan

Gross Area: 34.4 ha
Net Area Reforested: 25.8 ha
Area Surveyed: 25.8 ha

Field Work: SM/NR
Drawn by: DM
Date Drawn: 1/12/99

Survey Type: Stocking
Scale: 1:5000

**Skeena
Cellulose
Inc.**



**Backwoods
Contracting**

Legend

- Block Boundary
- - - Internal boundary
- - - Standard Unit Boundary
- - - Main Road
- - - Spur Road
- - - Trail
- - - Landing
- - - Creek
- > 3 WS Trees
- 0-3 WS Trees

Regen Delay Survey Plot Map

SU	Area	Status	Treatment Recommendations
1	11.0 ha	SR	Stocking survey 2002.
2	13.3 ha	SR	Stocking Survey 2002.
3	1.5 ha	SR	Stocking Survey 2002.

Biogeoclimatic Subzone: ESSFvv

Standard Unit 1

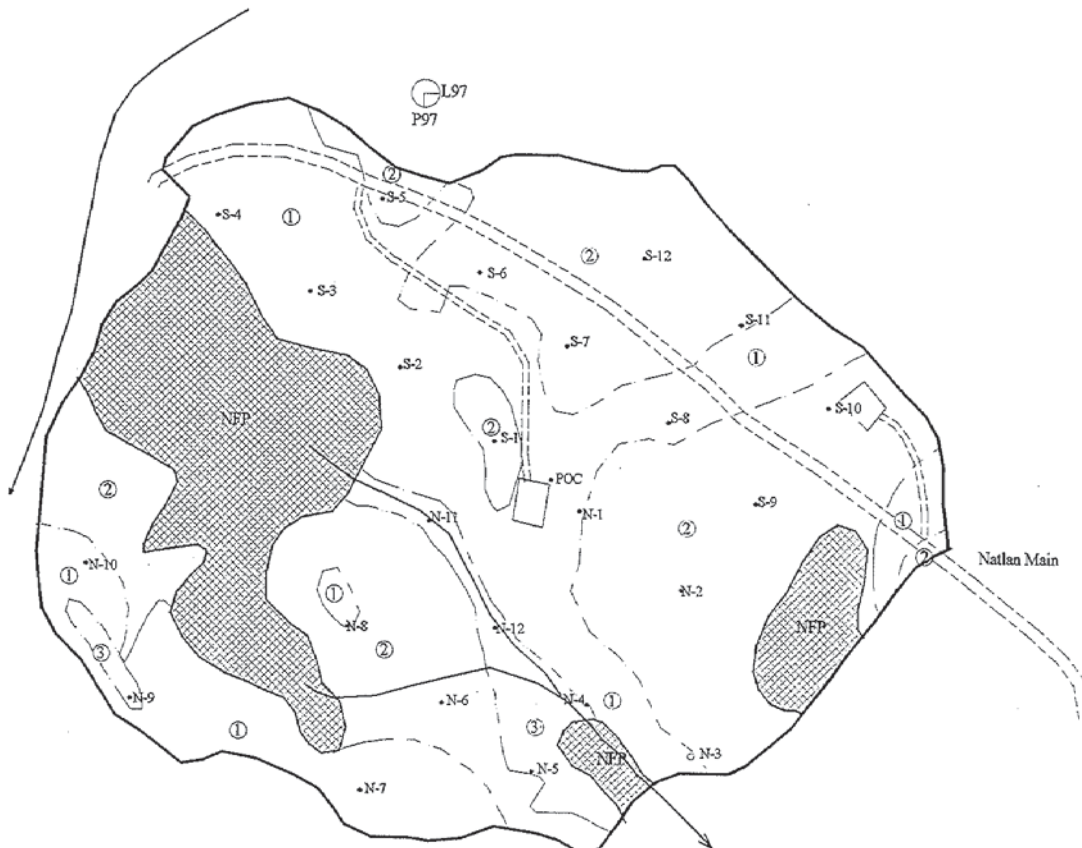
Inv: Sx6B13Hw1-2-3-12-1-2180
Silv: Sx73B127-2-3-12-1140
Total Conifers: 2180
Well-spaced preferred: 1140

Standard Unit 2

Inv: Sx5B14Hw1-2-0.3-12-1-2280
Silv: Sx65B135-2-0.3-12-1180
Total Conifers: 2280
Well-spaced preferred: 1180

Standard Unit 3

Inv: Sx5B15-2-0.3-15-1-2200
Silv: Sx59B141-2-0.3-15-1200
Total Conifers: 2200
Well-spaced preferred: 1200



CP: 501 Blk: 8
 Location: Natlan
 Gross Area: 34.4 ha
 Net Area Reforested: 25.8 ha
 Area Surveyed: 25.8 ha

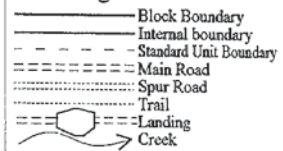
Field Work: SM/NR
 Drawn by: DM
 Date Drawn: 1/12/99

Survey Type: Stocking
 Scale: 1:5000

**Skeena
 Cellulose
 Inc.**

**Backwoods
 Contracting**

Legend



Standard Unit Map

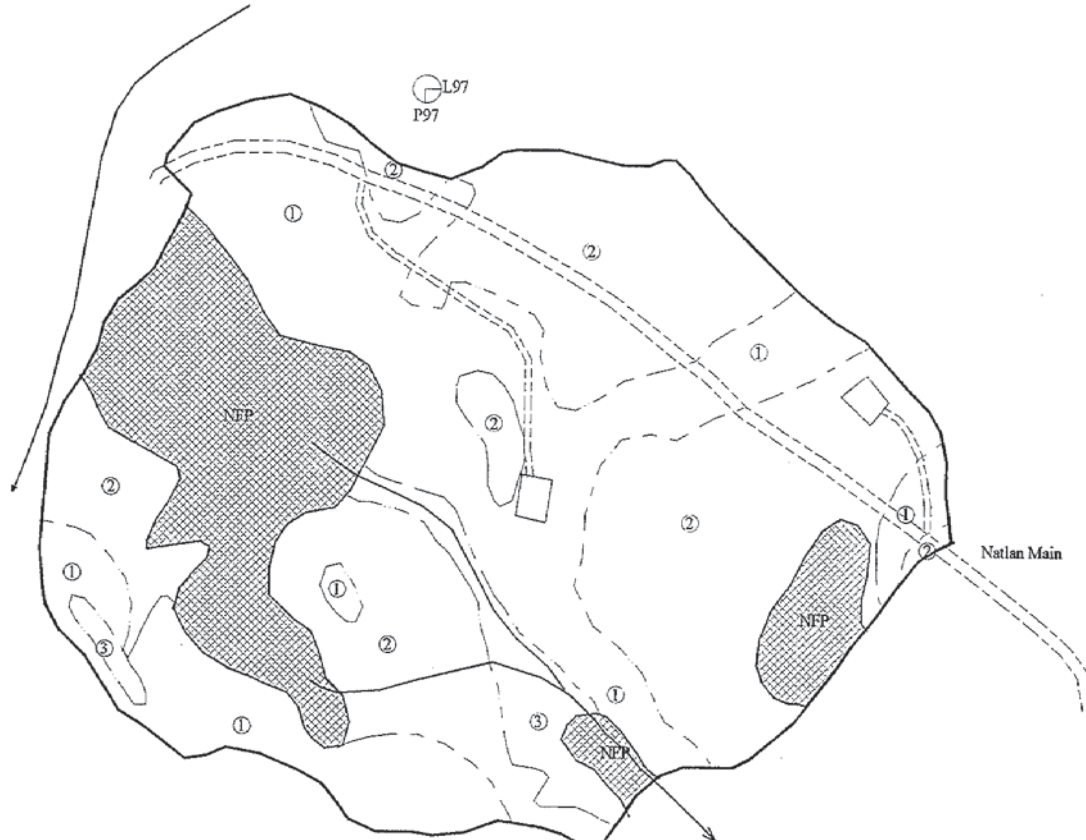
SU	Area	Status	Treatment Recommendations
1	11.0 ha	SR	Stocking survey 2002.
2	13.3 ha	SR	Stocking Survey 2002.
3	1.5 ha	SR	Stocking Survey 2002.

Biogeoclimatic Subzone: ESSFvv

Standard Unit 1
 Inv: Sx6B13Hw1-2-3-12-1-2180
 Silv: Sx73B127-2-3-12-1-1140
 Total Conifers: 2180
 Well-spaced preferred: 1140

Standard Unit 2
 Inv: Sx5B14Hw1-2-0.3-12-1-2280
 Silv: Sx65B135-2-0.3-12-1-1180
 Total Conifers: 2280
 Well-spaced preferred: 1180

Standard Unit 3
 Inv: Sx5B15-2-0.3-15-1-2200
 Silv: Sx59B141-2-0.3-15-1-1200
 Total Conifers: 2200
 Well-spaced preferred: 1200



Ministry of Forests
Integrated Silviculture Information System
Opening Summary

Region..... RPR Prince Rupert Forest Region	District..... DKI Kispiox Forest District
Opening..... 93M 045 0.0 41	Licence No..... A16831 CP. 501 Blk. 8
Location.... EP15018	Licensee..... 00026428 04 SKEENA CELLULOSE INC.
Tenure Type. For Forest Licence	Block Status.... Sil Silviculture
Open Cat.... 22-3 Status.. APP	TAUP Area(ha)... 34.4 Net. 25.8 FTAS (ha)

Opening Admin

Geo. Forest District.. DKI Kispiox Forest District	Multi-Tenure....
SP Approval Date..... 1996 05	SP Exempt.....
Disturbance Type..... L	
Declared Regen Delay... 1997	Actual Sale Dat
Prescribe Free GR: Early 2012 Late..... 2017	Actual Harvest
Previous Stand Type... MAT Timber Type.. BL SX 9 4 1	Actual Silv Han
Timber Supply Blk.... 12C Kispiox TSA Block C	
Seed Planning Zone....	
Photo Line No(s).....	
UTM: Zone.. 00 East... 000000 North.. 0000000 NAD.. 83	
Treatment Regime Id...	
Admin Zone.....	
Location Code 1.....	
Location Code 2.....	
Funding Source..... IA Industrial Appraisal	
Last Updated By..... KPOTTING POTTINGER, KATE	Date... 1999 12
Cross Reference.....	

SP Admin

Perm.	Rock	Water	Swamp	Other	NP NC>4ha	No Mod.	IMM	Other	NPR Area
2.3						6.3			
Sealed by.....									RPF..
Approved by..... KPOTTING KPOTTING									Date..
For the Manager of Kispiox Forest District									Date.. 1996 05 28
Amendment Number..									Date..
Initiated by..									

Ecology:

Stratum			*-- BGC Information --*				*-- Elevation --*			*-- Aspect --*	
SU	ID	Moisture/Nutrient	Zone	SB	VR	Site	Min	Max	Avg	Aspect	Min
1	1		ESSF	wv		01			1055	NE North E	
2	2		ESSF	wv		05			1055	NE North E	
3	3		ESSF	wv		06			1055	E East	

Free Growing Stocking Standards:

						----- WSS/ha -----					*-- Free Grow --*		
SU	Layer	NAR Area (ha)	Preferred Species	Acceptable Species	Basl Max Area Den	Trgt	Min	Min Pref	Min Hor	Regen Yr Due	Early Yr Due	Late Yr Due	
1		10.7	BL SE PLI	HM	5000	1200	700	600	2.0	7 2004	15 2012	20 2017	
2		13.6	BL SE	PLI	5000	1200	700	600	2.0	4 2001	12 2009	20 2017	
3		1.5	BL SE	PLI	5000	1200	700	600	2.0	4 2001	12 2009	20 2017	

Site Sensitivity:

SU	Mass Wasting	Soil Compaction	Soil Erosion	Soil Displacement	Floor Reduction
1					
2					
3					

Detrimental Soil Disturbance:

Max Proportion of Total Area Allowed for Permanent Access. 6.7 %

Maximum Allowable Detrimental Soil Disturbance:

SU	Max Forest Floor Disp (%)	Floor Reduction (cm)	Max Soil Disturb% Pre-Rehab%	Max Soil Disturb	Maximum Temporary Access Total Access%	To Be Rehab%	No Planned Rehab%
1	25.0		10.0				
2			25.0				

ATU Summary

DENUDATION

Result	ATU	Technique	System	Variant	Phase	Disturbance	Reserve	Harvest Start	Harvest End	Denuded Area (ha)
R	L1	HV	CLEAR		REMOV	L	G	1997 01 01	1997 04 01	34.4

SILVICULTURE

Result	ATU	Base	Technique	Method	Objectives	Date	P	R	Area	Fund	Project Id.
R	E1	PL	PL	CTAIN	CE	1997 08 01	M	M	25.8	IA	
		Species.	SX	No of Trees.	28680	Request Key.				Lot Number.	40008
		Species.	BL	No of Trees.	21210	Request Key.				Lot Number.	40007
R	C1	SU	RG	PLOT	SU	1999 09 01	M	M	25.8	IA	

Forest Health Observation

Observation Date	Base	Technique	Method	Polygon	Layer	SU	Agent Code	Description	(%) Incid	Incidence Area (ha)
---------------------	------	-----------	--------	---------	-------	----	---------------	-------------	--------------	------------------------

Detrimental Soil Disturbance Results

Observation Date	PAS	SU	Base	Technique	Method	*-- Soil Disturbance --*	*-- Forest
						Y/N	Area

Forest Cover

SU	Polygon	Area (ha)	L Y	R A	Stock Sts/Typ	*--- Age ---*	Avg Avg Plt	Ref Yr	Spec Site DBH	*--- Stems/ha ---*	F FG	% VFS	Data G	S CC	C CL	O O	C C
	1	2.3			NP UNN			1997			N						
	2	6.3			MAT NAT	250	25.0	1997	M	350	N						
1	3	10.7			IMM ART	3 1	.3	1999	L 1	2180	N				7	0	0
1	3	10.7	S		IMM ART	3 1	.3	1999	L 1	1140	N				7	0	0

Ministry of Forests
Integrated Silviculture Information System
Opening Summary

Region..... RPR Prince Rupert Forest Region
Opening..... 93M 045 0.0 41
Location.... EP15018
Tenure Type. For Forest Licence
Open Cat.... 22-3 Status.. APP

District..... DKI Kispiox Forest District
Licence No..... A16831 CP. 501 Blk. 8
Licensee..... 00026428 04 SKEENA CELLULOSE INC.
Block Status.... Sil Silviculture
TAUP Area(ha)... 34.4 Net. 25.8 FTAS (ha)

SU	Polygon	Area (ha)	L Y	R A	Stock Sts/Typ	*--- Age ---*	Avg Plt	Range	Avg Hght	Ref Yr	Spec Site DBH	*--- Stems/ha ---*	WS	FG	VFS	F G	% Data	S C
2	4	13.6			IMM ART	3 1			.3	1999	L 1	2280				N	7	0 0
2	4	13.6	S		IMM ART	3 1			.3	1999	L 1	1180				N	7	0 0
3	5	1.5			IMM ART	3 1			.3	1999	L	2200				N	7	0 0
3	5	1.5	S		IMM ART	3 1			.3	1999	L	1200				N	7	0 0

=====
Land Status

NSR Category.

This Opening is Regenerated.. Yes Declared Regen Met on..
This Opening is Free Growing. No Declared Free Growing o

Status Date	*----- NP (ha) -----*	*----- NSR (ha) -----*	*----- SR (ha) -----*	Total Gross Area (ha)
	UNN + NAT + FOR = Total	NPL + PL + NAT = Total	ART + NAT = Total	
1999 12 15	2.3		25.8	34.4
1997 09 17	2.3	25.8	6.3	34.4

End of Report

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

SILVICULTURE

OBLIGATION		BLOCK		ACTIVITY		OBJECTIVES		FUNDING		COMPLETION DATE		NET AREA TREATED (ha)		RESP.		OPENING NO.	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 501	SX	28680	40007	PL	CTAIN	CE			IA	1997/08		25.8	L			93M045 041	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 651	SX	4310	40009	PL	CTAIN	CE			IA	1997/08		13.6	L			93M081 010	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 651	SX	840	40006	PL	CTAIN	CE			IA	1997/08		1.8	L			93M081 -11	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 702	SX	20650	40009	PL	CTAIN	CE			IA	1997/08		32.1	L			93M061 -58	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 310	SX	2845	14599	PL	CTAIN	CE			IA	1997/08		3.0	L			93M025 -5	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
EP1 357	PI	10800		PL	CTAIN	CE			IA	1997/08		9.2	L			1038070-82	
OBLIGATION																	
TIMBERMARK	SPECIES	NUMBER PLANTED	SEEDLOT	TECH.	METHOD	1	2	3	SOURCE	YEAR	MONTH <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td> <td>SPECIES</td> <td>NUMBER PLANTED</td> <td>SEEDLOT</td>	SPECIES	NUMBER PLANTED	SEEDLOT	SPECIES	NUMBER PLANTED	SEEDLOT
14630	PI			PL	CTAIN	CE			IA	1997/08			L				

B. ADMINISTRATION

PREPARED BY	TELEPHONE NO.	DATE	DATE	REGION	DISTRICT
BRENDA BIRD	842-5399	29-Oct-97	29-Oct-97		
REVIEWED BY			DATE	REGION	DISTRICT
KAP			DATE		
ENTERED MLSIS					

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

A.

OBLIGATION		DIST SILVICULTURAL SYSTEM		VARIANT	CUT PHASE	RES TYP	HARVEST DATES				GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBER MARK	BLOCK	DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYP	STARTED YEAR	MONTH	COMPLETED YEAR	MONTH		
EP1617	19	L	CLEARCT		REMOV	G	1997/01		1997/03		25.3	93M091 0.0 004
EP1617	18	L	CLEARCT		REMOV	G	1996/11		1997/03		47.3	93M091 0.0 003
EP1616	14	L	CLEARCT		REMOV	G	1997/01		1997/02		24.6	93M0710.0 007
EP1614	12	L	CLEARCT		REMOV	N	1996/07		1997/01		51.0	93M.091
EP1614	11	L	CLEARCT		REMOV	N	1996/06		1997/01		53.0	93M0910.0 001
EP1388	89	W	CLEARCT		SALVW	N	1997/05		1997/06		10.1	103P060
EP1501	08	L	CLEARCT		REMOV	G	1997/01		1997/04		34.4	93M045 041
EP1501	09	L	CLEARCT		REMOV	G	1996/11		1997/04		37.0	93M045
EP1611	06	L	CLEARCT		REMOV	N	1993/12		1997/06		51.0	93M081 0.0 002
EP1612	15	L	CLEARCT		REMOV	G	1996/01		1997/01		42.0	93M0800.0 006
EP1702	17	L	CLEARCT		REMOV	G	1997/01		1997/06		36.2	93M061
EP1651	03	L	CLEARCT		REMOV	G	1997/01		1997/06		48.2	93M081 010
EP1370	09	L	CLEARCT		REMOV	G	1996/11		1997/02		26.4	103P0700.0 085
EP1361	69	L	CLEARCT		REMOV	G	1996/05		1997/05		32.0	093M051
EP1361	63	L	CLEARCT		REMOV	G	1996/11		1997/02		28.3	103P080
EP1241	06	L	CLEARCT		REMOV	N	1996/07		1997/03		41.5	
EP1310	17	L	CLEARCT		REMOV	G	1996/07		1997/07		18.7	93M025 *
EP1310	16	L	CLEARCT		REMOV	N	1997/04		1997/08		8.4	93M024
EP1172	14	L	CLEARCT		REMOV	G	1996/08		1997/07		21.2	93L091 0.0 004
EP1172	13	L	CLEARCT		REMOV	G	1996/07		1997/07		34.5	93L091 0.0 003
EP1651	08	L	CLEARCT		REMOV	N	1997/01		1997/02		16.8	93M081
EP1145	26	L	PATCHCT	PATCH	REMOV	G	1997/02		1997/03		26.8	103P.30
EP1502	10	L	PATCHCT	PATCH	REMOV	U	1996/11		1997/01		92.6	93M045

B. ADMINISTRATION

PREPARED BY BRENDA BIRD	TELEPHONE NO. 842-5399	DATE 10-Sep-97	REVIEWED BY K. Pattungu	DATE 97/09/15	REGION	DISTRICT
			ENTERED-MLSIS			

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM C

A.

OBLIGATION	BLOCK	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE
EP1 E01	08	93M045 041 ✓	BRENDA BIRD	842-5399	10-Sep-97

B.

STRA	LAYER	RANK	AREA (ha)	STOCKING	STATUS	TYPE	REF. YR	SITE	RES	BASAL AREA (m ³ /ha)
								CL	INDEX	
100			25.8	NSR	PL	97	97	97	97	97
100			2.3	NP	UNN	97	97	97	97	97
100			6.3	MAT	NAT	97	97	97	97	97

- site class missing
- Res Type missing

MAT Nat live missing:
Spp - H/w 100
250 yrs old.
350 stems/ha.

C. ADMINISTRATION

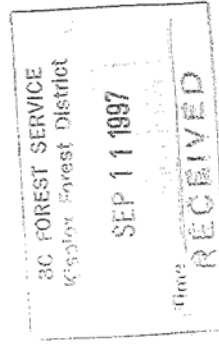
REVIEWED BY	DATE	REGION	DISTRICT

ENTERED MLSIS
K. Pittman
97/09/17
DATE

D.

RPF SIGNATURE AND SEAL	RPF SIGNATURE	RPF NO.
97-SEPT-10	2363	
DATE		

11





F.L. A16831
C.P. 501
Blk. 8

Gr. Area 34.4ha
Net Area 25.8ha

NP Nat. 0.0 ha
NPUNN 2.3 ha

Chart: Natlan
Location: Natlan M/L

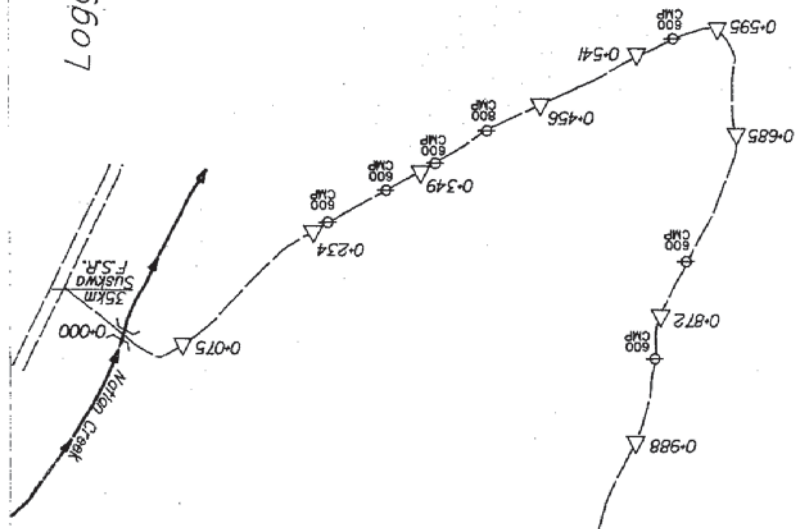
LEGEND:

- Roads (Built)
- Roads (Located)
- Culverts
- Landings (Conv/Cable)
- Skid/BS Trail
- Skid Bridge
- Skid Direction
- Block Boundary
- Harvest Sys. Bdy.
- Timber Type Line
- Slope (Percent)
- Contours
- Creek (Persistent)
- Creek (Ephemeral)
- Embankment
- Break
- Ridge
- Gully
- Rock
- Swamp
- Tree Swamp
- Non-commercial
- Blowdown
- Slide
- Slash Pile
- NCC, NP, Br

History

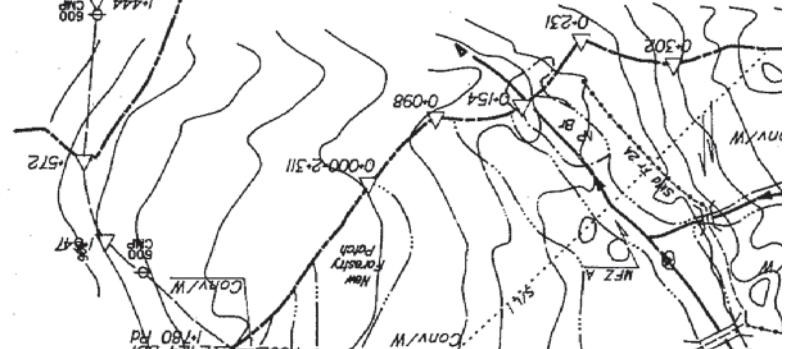
Site Prep. Page 26
FNR-2011-00128
Stand Tending
Disturbance

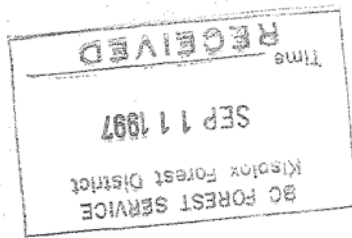
Logging Plan Map



Note:
Station 2+327 to 2+498
is Proposed Road Extension
Bladed Skid Trail

Scale 1:5000





A

OBLIGATION		DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYP	DENUDATION				GROSS CROSS AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YEAR	MONTH	COMPLETED YEAR	MONTH		
EPI 617	19	L	CLEARCT		REMOV	G	1997/01		1997/03		25.3	93M091 0.0 004
EPI 617	18	L	CLEARCT		REMOV	G	1996/11		1997/03		47.3	93M091 0.0 003
EPI 615	14	L	CLEARCT		REMOV	G	1997/01		1997/02		24.6	93M0710.0 007
EPI 614	12	L	CLEARCT		REMOV	N	1996/07		1997/01		51.0	93M 091
EPI 614	11	L	CLEARCT		REMOV	N	1996/06		1997/01		53.0	93M0910.0 001
EPI 388	89	W	CLEARCT		SALW	N	1997/05		1997/06		10.1	103P060
EPI 501	08	L	CLEARCT		REMOV	G	1997/01		1997/04		34.4	93M045 041
EPI 501	09	L	CLEARCT		REMOV	G	1996/11		1997/04		37.0	93M045
EPI 611	06	L	CLEARCT		REMOV	N	1993/12		1997/06		51.0	93M081 0.0 002
EPI 612	15	L	CLEARCT		REMOV	G	1996/01		1997/01		42.0	93M0800.0 006
EPI 702	17	L	CLEARCT		REMOV	G	1997/01		1997/06		36.2	93M061
EPI 651	03	L	CLEARCT		REMOV	G	1997/01		1997/06		48.2	93M081 010
EPI 370	09	L	CLEARCT		REMOV	G	1996/11		1997/02		26.4	103P0700.0 085
EPI 361	69	L	CLEARCT		REMOV	G	1996/05		1997/06		32.0	093M051
EPI 361	63	L	CLEARCT		REMOV	G	1996/11		1997/02		28.3	103P080
EPI 241	06	L	CLEARCT		REMOV	N	1996/07		1997/03		41.5	
EPI 310	17	L	CLEARCT		REMOV	G	1996/07		1997/07		18.7	93M025
EPI 310	16	L	CLEARCT		REMOV	N	1997/04		1997/06		8.4	93M024
EPI 172	14	L	CLEARCT		REMOV	G	1996/08		1997/07		21.2	93L091 0.0 004
EPI 172	13	L	CLEARCT		REMOV	G	1996/07		1997/07		34.5	93L091 0.0 003
EPI 651	08	L	CLEARCT		REMOV	N	1997/01		1997/02		16.8	93M081
EPI 145	28	L	PATCHCT	PATCH	REMOV	G	1997/02		1997/03		26.8	103P 30
EPI 502	10	L	PATCHCT	PATCH	REMOV	U	1996/11		1997/01		92.6	93M045

B. ADMINISTRATION

PREPARED BY BRENDA BIRD	TELEPHONE NO. 842-5399	DATE		DISTRICT 	
		D	M		
		10-Sep-97			
REVIEWED BY <i>K. Hargan</i>		REGION 	DATE		DISTRICT
			D	M	
			97-09-15		
		ENTERED MARSIS		DISTRICT 	

Memorandum

DATE: 02/24/97
TO: Ron Cotton
FROM: Marguerite Veenstra
RE: CP 501 block 8 amendment
CC: Eagan Wuth

opening # 93M 04S 041

Dear Ron:

Here is the amendment for CP 501 block 8, as requested by John McNutt. Please note that as well as the addition of bladed skid trail, landing 2 has been deleted, thus lowering the permanent disturbance on the block.

If you have any questions, please call. John will be back on Thursday, Feb 27.

Sincerely,



Marguerite Veenstra

Less than 2.1 is a ha
How 24 amendment
only?

B O B < 0.1 ha
of Bladed Trail Approvable
based on Field Inspection by
Eagan Wuth is SP Amendment
Still Required?
He.

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

AMENDMENT

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK	GROSS AREA	NP NAT (ha)	NP UNN (ha)	RES AREA (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	8	34.74	0.0	2.3	6.3	0.0	25.8
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M045-93M044		BC92085 177-178		Natlan ML		980-1130		T. Johnson		July 20, 1995	

93M 045 041

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species ≤ 17.4 centimetres diameter at breast height (1.3 m). Advance regeneration includes all layer 2, 3, and 4 trees.

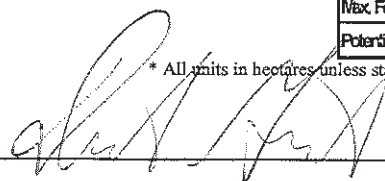
COMMENTS:

Landing 2 will not be built, thus Landing 1 will not require rehabilitation for permanent disturbance to remain under 7%.
0.1 ha of bladed skid trail has been added due to steep terrain. Due to the high surface erosion hazard, all excavated trail will be rehabilitated, which will consist of removing any temporary drainage structures, cross-ditching the running surface at spacings determined by trail gradients and surface erosion hazard, and decompacting the running surface. Upon completion of rehabilitation, the running surface and cut fill slopes will be seeded with a grass-legume mix, and planted with conifer (preferably pine).

Soil disturbance figures for this block are revised as follows:

Standard Unit*	1			2			3			TOTAL
Gross Area			126			166			52	344
NP Natural			0.0			0.0			0.0	0.0
NCBR			0.0			0.0			0.0	0.0
Reserve Area			0.4			22			37	63
	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	0.9	0.0	0.9	0.8	0.0	0.8	0.0	0.0	0.0	1.7
Landings (conventional)	0.3	0.0	0.3	0.3	0.0	0.3	0.0	0.0	0.0	0.6
Landings (roadside areas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavated Skid/Backspear Trails	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Area to Reforest			11.0			13.3			1.5	25.8
Soil Dist. Rds & Landings (%)			-			-			-	67
Excavated Skid/Backspear Trails	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Skid/Backspear Trail Area			1.0			0.5			0.1	1.6
Other Detrimental Disturbance			0.1			0.1			0.0	0.2
Max. Forest Floor Displacement (%)			25.0			30.0			25.0	
Potentially Detrimental Dist. (%)			10.0			4.5			3.3	6.8

* All units in hectares unless stated otherwise. Spur Road Width = 13.5 m, Excavated/Bladed Skid Trail Width = 4.0 m


David Gill, Repap BC, Carnaby Operations


District Manager, Kispiox Forest District

97/03/11



Memorandum

DATE: 02/24/97

TO: Ron Cotton

opening # 93M 045 041

FROM: Marguerite Veenstra

RE: CP 501 block 8 amendment

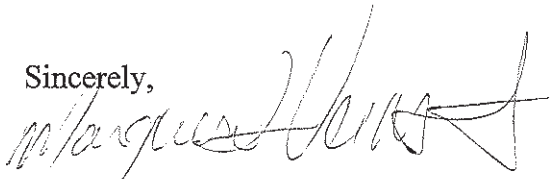
CC: Eagan Wuth

Dear Ron:

Here is the amendment for CP 501 block 8, as requested by John McNutt. Please note that as well as the addition of bladed skid trail, landing 2 has been deleted, thus lowering the permanent disturbance on the block.

If you have any questions, please call. John will be back on Thursday, Feb 27.

Sincerely,



Marguerite Veenstra

Less than 0.1 ha
How 2 amendment
only?

B0B < 0.1 ha
of Bladed Trail Approvable
based on Field Inspection by
Eagan Wuth is SP Amendment
Still Required?
ll.

F.L. A16831
C.P. 501
Blk. 8

Gr. Area 34.4ha N Nat. 0.0 ha
Net Area 25.8ha N UNN 2.3 ha

Chart: Nation
Location: Nation 1/L

LEGEND:

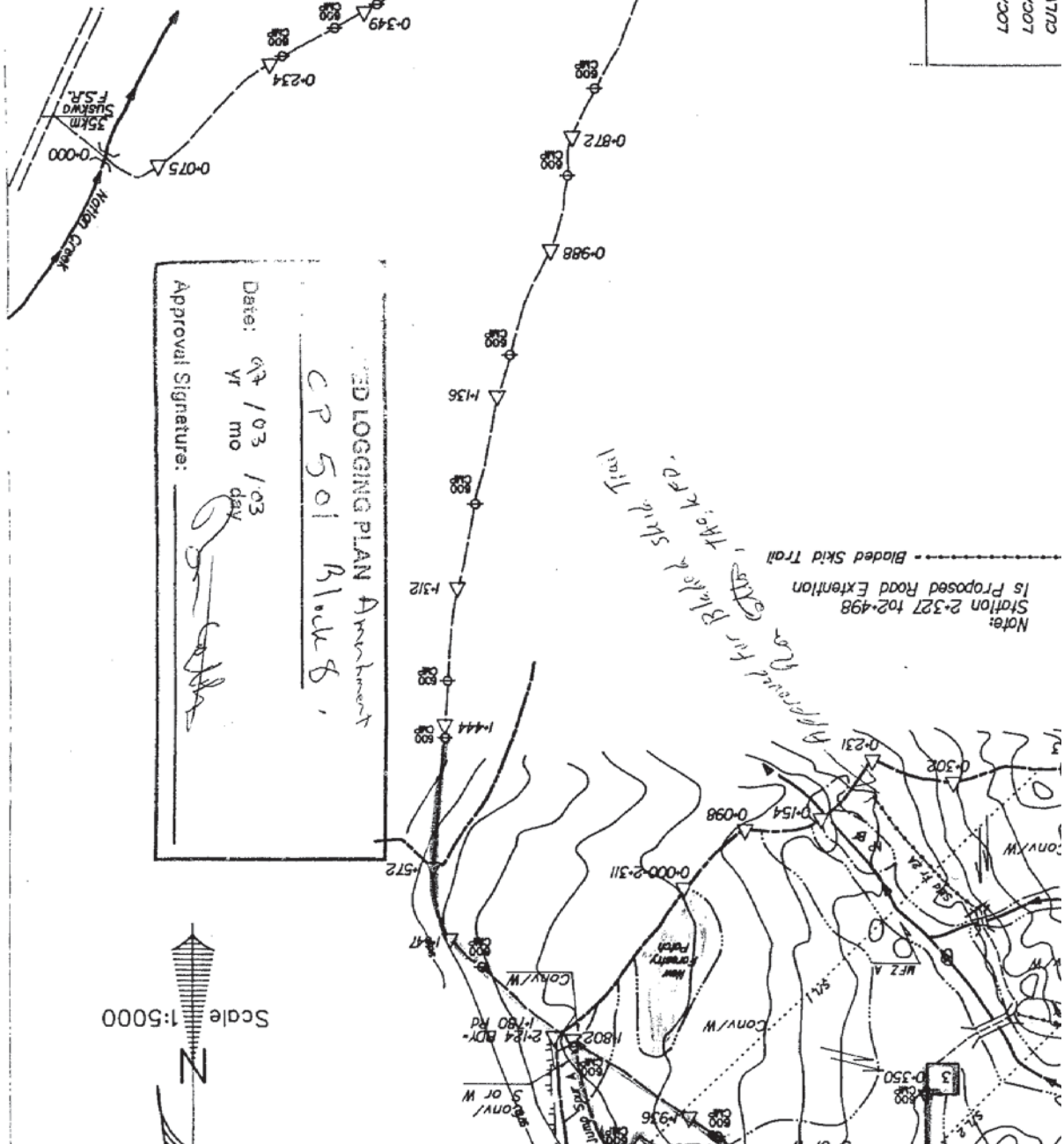
- Roads (Built)
- Roads (Located)
- Culverts
- Landings (Conv/Cable)
- Skid/BS Trail
- Skid Bridge
- Skid Direction
- Block Boundary
- Harvest Sys. Bdy.
- Timber Type Line
- Slope (Percent)
- Contours
- Creek (Persistent)
- Creek (Ephemeral)
- Embankment
- Break
- Ridge
- Gully
- Rock
- Swamp
- Tree Swamp
- Non-commercial
- Blowdown
- Slide
- Slash Pile

History

Page 519 Prep
Stand T-519-2400128urbance
Regen.

Logging Plan Map

FILE COPY



Date: 07/03/03
 yr mo day
 Approval Signature:
 CP 501 Block 8
 LOGGING PLAN Amendment

Scale 1:5000

LOGGING PLAN

LOCATED ROAD
 LOCATED LANDINGS
 CULVERT

Note:
 Station 2-327 to 2-498
 is Proposed Road Extension
 Bladed Skid Trail

opening # 93M 045 041

MEMORANDUM

DATE: December 1, 1996
TO: Ron Cotton/Bob Phipps
FROM: Dave Gill
RE: S.P. Repap Carnaby C.P. 501 - 8

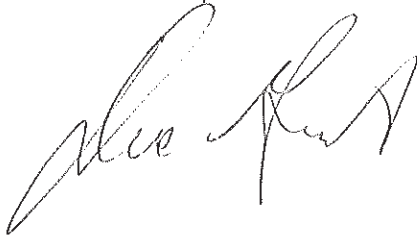
Bob,

Just a little housekeeping item with respect to the SP for CP 501-08.

Some of the text is inconsistent with the Site Disturbance Table. The table states three landings of 0.3 ha. each, with one landing in SU 2 being rehabilitated. I've initialed the inconsistent landing sizes found in the text on pages 4 and 5.

Please replace with these pages.

Thanks,



Pages inserted in
approved SD Document



97 97/01/10

opening #

93M 045 041

MEMORANDUM

DATE: December 1, 1996
TO: Ron Cotton/Bob Phipps
FROM: Dave Gill
RE: S.P. Repap Carnaby C.P. 501 - 8

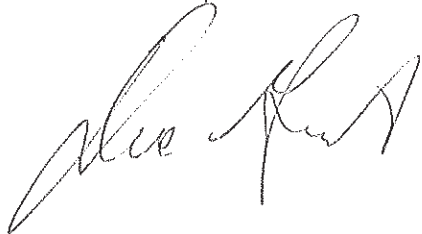
Bob,

Just a little housekeeping item with respect to the SP for CP 501-08.

Some of the text is inconsistent with the Site Disturbance Table. The table states three landings of 0.3 ha. each, with one landing in SU 2 being rehabilitated. I've initialed the inconsistent landing sizes found in the text on pages 4 and 5.

Please replace with these pages.

Thanks,



Pages inserted in
approved SP Document



97 97/01/10

INVOICE

A. TENURE

OBLIGATION		LICENCE NO.	C.P.	STAND TYPE	PREVIOUS		C.P.			DATE SP. APPROVED	YRS GROSS BLOCK TO AREA (ha)	YRS ALLOWABLE PERMANENT ACCESS (%)	NET AREA TO BE REFORESTED (ha)		
TIMBERMARK	BLOCK				1 SPECIES	2 SPECIES	TIMBER TYPE	SITE						CL.	INDEX
EP1501	08	A16831	501	MAT	B1	SX	941	M	13	C	96/05/28	0	34.4	6.7	25.8

RES. TYPE	TREE SIZE	FQ (yr)	MAX. DENS. (t/ha)	ACCEPTABLE SPECIES						PREFERRED SPECIES	BIASAL AREA (m ² /ha)	MIN. MINIMUM (wz/ha)	STOCK MINIMUM (wz/ha)	TARGET STOCKING (wz/ha)	REGENERATION METHOD	SITE SERIES	BIOGEOCLIMATIC ZONER	SU LAY- NET AREA (ha)	SU ER		
				EARLY		LATE		Hm	Bl											Se	Pl
				DELAY	7	15	20														
G	80	125	5000									2.0	600	700	1200	PLANT	01	ESSFw	10.7	1	

TEST CODE/NO						ASPECT	MAX ALLOWABLE TOTAL DIST. (%)	MAX TOTAL FOR FLOOR DISPL. (%)	MAX TOTAL FOR FLOOR REDUCTION (cm)
CODE	%	CODE	%	CODE	%				
						AVERAGE ELEVATION (m)			

[illegible][illegible][illegible]

PIST CODE %				ASPECT	MAX. TOTAL ALLOWABLE TOTAL DIST. (%)	MAX. TOTAL FOR FLOOR REDUCTION (cm)
CODE	%	CODE	%			

REGION	DISTRICT	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY
		93 M 045 041	SHANNON SPENCE	842-5399	D M Y 09-Aug-86	

mc
ENTERED MILES
DATE 96/8/30.

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM A

A. TENURE

TIMBERMARK	BLOCK	OBLIGATION	LICENCE NO.	C.P.	STAND TYPE	PREVIOUS			DATE SP APPROVED	YRS TO HVT			GROSS BLOCK AREA (ha)	MAXIMUM ALLOWABLE PERMANENT ACCESS (%)	NET AREA TO BE REFORESTED (ha)
						1 SPECIES	TIMBER TYPE	SITE CL INDEX		Y	M	D			
EP1 501	08		A16831	501	MAT	BI	SX	941 M 13 C	96/05/28	0			34.4	6.7	25.8

B. SP

SU LAY: NET AREA (ha)	EX	BIOGEOCLIMATIC ZONE/SUBZONE/VARIANT	SITE SERIES	REGENERATION METHOD	STOCK MINIMUM (vs/ha)	TARGET STOCKING (vs/ha)	MAX. ALLOWABLE TOTAL DIST. (%)	ASPECT	AVERAGE ELEVATION (m)	MIN. HORIZ. REDUCTION (m)	MAX. TOTAL FOR FLOOR REDUCTION (m)	MIN. HORIZ. REDUCTION (m)	MAX. TOTAL FOR FLOOR REDUCTION (m)	BASAL AREA (m ² /ha)	PREFERRED SPECIES			MAX. DENS. (m ² /ha)	REGEN. DELAY	FO (yrs)			TREE SIZE	RES. TYPE
															1	2	3			EARLY	LATE	EARLY	LATE	
1	10.7		01	PLANT	700	1200	10.0	NE	1055	600	2.0	600	2.0		BI	Se	PI	5000	7	15	20	125	80	G
CODE % CODE % CODE % MAX. ALLOWABLE TOTAL DIST. (%) ASPECT AVERAGE ELEVATION (m)																								
2	13.6		05	PLANT	700	1200	5.0	NE	1055	600	2.0	600	2.0		BI	Se	PI	5000	4	12	20	125	80	G
CODE % CODE % CODE % MAX. ALLOWABLE TOTAL DIST. (%) ASPECT AVERAGE ELEVATION (m)																								
3	1.5		06	PLANT	700	1200	4.7	E	1055	600	2.0	600	2.0		BI	Se	PI	5000	4	12	20	125	80	G
CODE % CODE % CODE % MAX. ALLOWABLE TOTAL DIST. (%) ASPECT AVERAGE ELEVATION (m)																								

C. ADMINISTRATION

REGION	DISTRICT	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY
		93 M 045 041	SHANNON SPENCE	842-5389	09-Aug-96	

MC 96/8/30
ENTERED MLES DATE

Kispiox Forest District
P. Box 215
Hazelton, British Columbia
V0J 1Y0
Tel: 842-7600 Fax: 842-7676

File: 18750-20/93M 045 041

May 31, 1996

FILE COPY

Repap British Columbia Inc
Carnaby Operations
#10 North Boundary Road
South Hazelton, British Columbia
V0J 2R0

Dear Sir(s):

Please submit an MLSIS Form A as soon as possible for A16831, Cutting Permit 501, Blocks 08, approval date May 28, 1996.

Should you have any questions or concerns, please contact myself at 842-7600.

Yours truly,

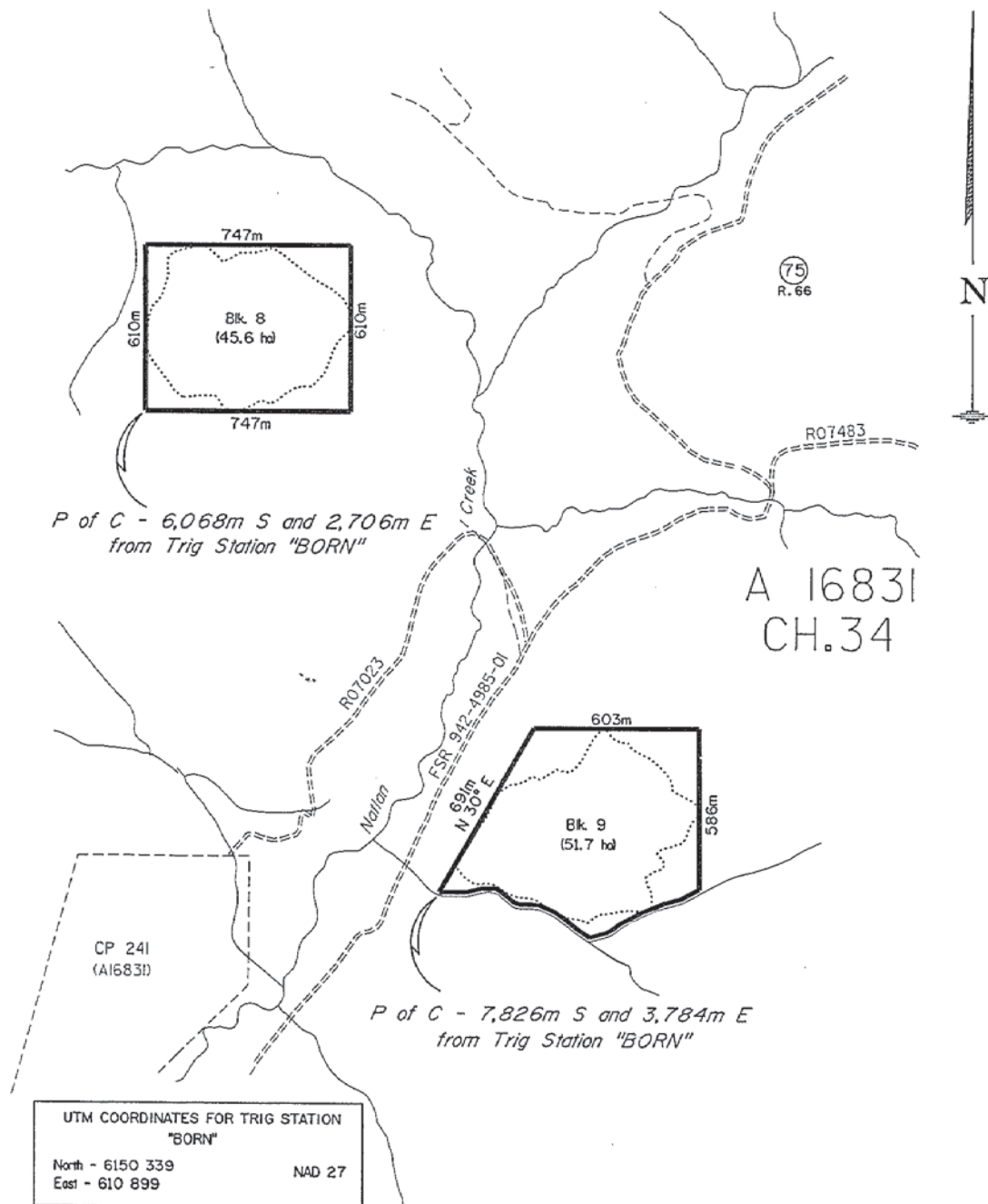


For Bob Phipps
Silviculture Practices Forester
Kispiox Forest District

g\corpserv\30day\silv\bp7200

EXHIBIT 'A'

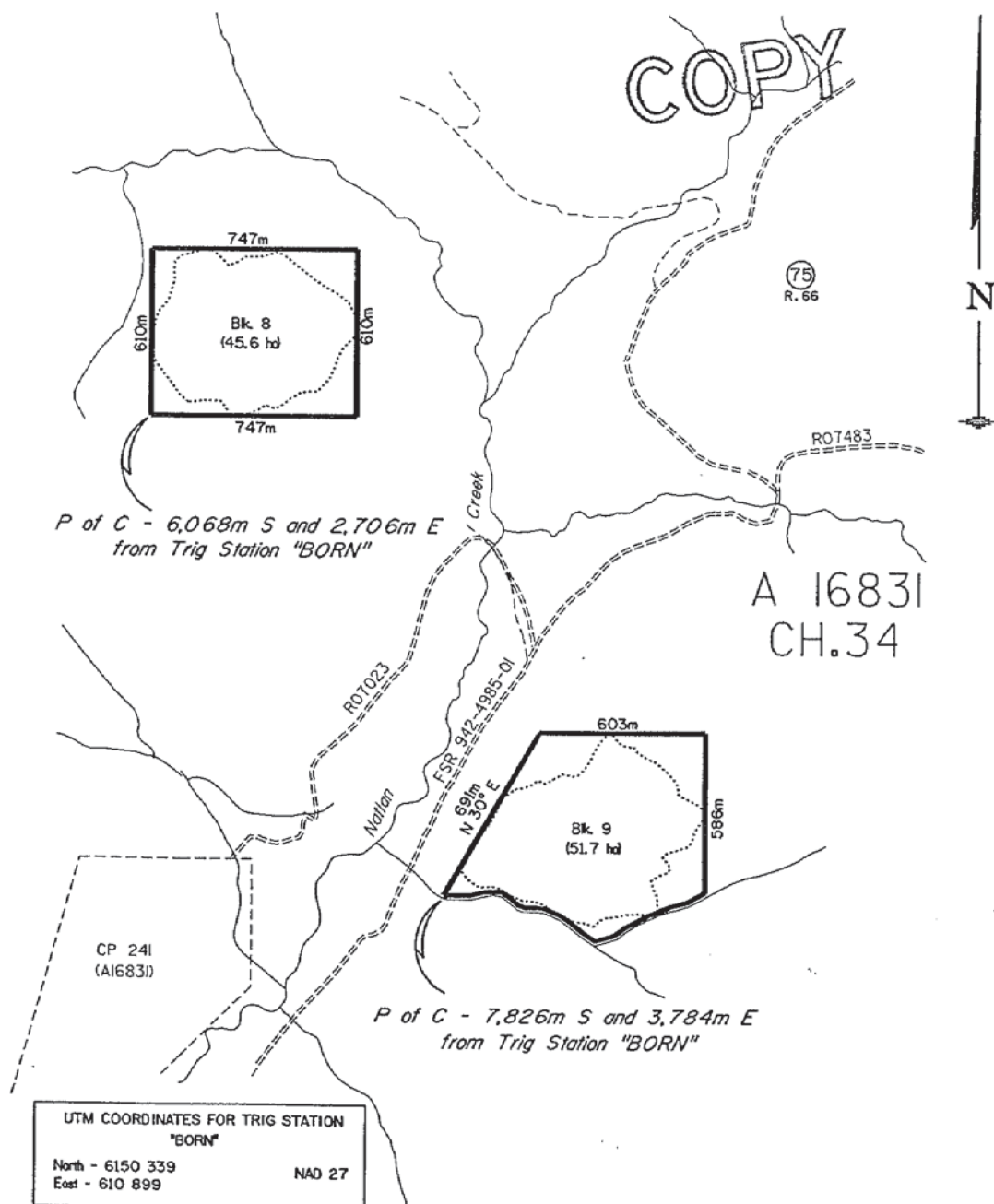
MAP OF:		F.L. A-16831		DATE		Sept. 19, 1995	
C.P. 501 BLK. 8 & 9		REF. MAP		R93M/SW (F6)			
U.T.M. GRID	ZONE	EAST	NORTH	REG.	COMPT.	L	BASE USED
	09614861614386866075						93M.045/44/34
FOREST REGION		Pr Rupert 02		LAND DISTRICT		Cassiar 06	
FOREST DISTRICT		Kispiox 24		OUTLINE		AREA as shown hectares ±	
MANAGEMENT UNIT		TIMBER SUPPLY AREA		PULPWOOD AGREEMENT		CASCADES	
TYPE Z		NUMBER Kispiox 12				EAST X	
NUMBER Skeena 75		BLOCK				WEST	
BLOCK		SUB-BLOCK					
ORCS #19500-40/A16831 CP501 BLK. 8 - OPENING #93M.045-041 BLK. 9 - OPENING #93M.045-042		WITHIN: SKEENA PROVINCIAL FOREST, FLA16831 CH. 34					



MAP OF:		F.L. A-16831		DATE Sept. 19, 1995	
		C.P. 501 Blk. 8 & 9		REF. MAP R93M/SW (F6)	
U.T.M. GRID	ZONE	EAST	NORTH	REG.	COMPT. L
	0 9 6 1 4 8 6 1 6 1 4 3 8 6 8 6 6 0 7 5				
FOREST REGION Pr Rupert 02			LAND DISTRICT Cassiar 06		BASE USED 93M.045/44/34
FOREST DISTRICT Kispiox 24			OUTLINE		SCALE 1:20000
			AREA as shown hectares ±		

EXHIBIT 'A'

MANAGEMENT UNIT		TIMBER SUPPLY AREA		PULPWOOD AGREEMENT	CASCADES
TYPE	Z	NUMBER	Kispiox 12		EAST X
NUMBER	Skeena 75	BLOCK			WEST
BLOCK		SUB-BLOCK			
ORCS #19500-40/A16831CP501 BLK. 8 - OPENING #93M.045-041 BLK. 9 - OPENING #93M.045-042		WITHIN: SKEENA PROVINCIAL FOREST, FLA16831CH. 34			



DRAWN BY:

AMP

SKEENA CELLULOSE INC., CARNABY OPERATIONS

SILVICULTURE PRESCRIPTION

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK.	GROSS AREA (ha)	NP NAT (ha)	RES AREA (ha)	NP UNN (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	08	34.4	0.0	6.3	2.6	0.3	25.8
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M-045; 93M-044-041		BC92085 177-178		Natlan ML		980-1130m		T. Johnson		July 20, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species < 17.5 centimetres diameter at breast height (1.3 m).

MANAGEMENT OBJECTIVES

The management objectives identified below will ensure that the long term productivity of the following resources is maintained and protected over the course of the next rotation.

Timber:

- to leave the present timber on low productivity site units undisturbed.
- to establish a future crop composed of species ecologically adapted to the site.
- to maintain the diversity of conifer species found in the existing stand.
- to produce a future crop of balsam, spruce, and pine sawlogs on an 100 to 120 year rotation.
- to manage the future crop to produce a minimum merchantable volume of 200 cubic metres per hectare at rotation.

Water:

- to maintain the water quality of all seasonal creeks with 10 metre machine free zones in which all windfirm non-merchantable trees will be left standing.
- to provide root structures which will stabilize stream banks and reduce erosion.
- to maintain drainage patterns of all seasonal creeks and seepage areas by crossing at designated points.

Wildlife:

- to establish new forestry patches which encompass the moderate value grizzly habitat meadow forests and the low productivity heron's bill site.
- to provide thermal and visual cover adjacent to the meadow forests.
- to provide limited visual cover along all seasonal creeks by retaining non-merchantable trees within the machine free zones.

- to improve the structural diversity of the future stand by retaining clumps of advance regeneration where feasible.

Landscape:

- to reduce the visual impact of clearcutting by leaving new forestry patches, patches of advance regeneration, and non-merchantable trees within the machine free zones along seasonal creeks.

SITE DESCRIPTION

Ecological Classification: ESSFwv (June 1993)

TU	ST	GROSS AREA (ha)	NET AREA (ha)	SITE SERIES	EDAPHIC GRID M/N	SITE INDEX @ 50 yrs	SOIL DESCRIPTION								
							HUMUS FORM	LFH (cm)	SOIL GROUP	SOIL HOR	DEPTH (cm)	SOIL TEXT	COARSE FRAG %	DRAIN	SEEP DEPTH
3	A	0.6	0.0	04	3/B	9	Mor	12.0	Brunisol	Ae Bfj Bm C	0-3 3-12 12-24 24+	SiL SiL SiL SiL	45 45 45 55	Moderate Poor	>47cm
1	B	12.6	10.7	01	4/C	13	Moder	2.0	Podzol	Ae Bf Bm C	0-2 2-13 13-29 29+	SiL SiL SiL SiL	30 30 30 45	Moderate Rapid	>50cm
2	C	16.6	13.6	05	4/D	14	Mor	4.0	Brunisol	Ahe Bmj BC C	0-3 3-13 13-28 28+	SiCL SiCL SiL SiL	20 20 20 20	Moderate	>50cm
3	D	0.9	0.8	06	5/B	15	Mor	2.5	Podzol	Ae Bf Bm BC	0-3 3-16 16-32 32+	SiL SiL SiL SiL	20 30 30 20	Moderate	>57cm
3	E	2.2	0.6	07	6/C	8	Moder	11.0	Gleysol	Om Cg	0-17 17+	 C	 20	Poor	17cm
3	F	1.5	0.1	08	7/B	8	Moder	1.0	Organic	Om Oh Cg	0-10 10-46 46+	 C	 0	Poor	20cm

Topography:

TU	SLOPE DESCRIPTION					WATERCOURSE SPACING / 100m
	AVE %	ASPECT	LENGTH	UNIFORM	FAILURES	
1	25	NE	Short	Broken	None	0
2	35	NE	Short	Broken	None	0
3	31	E	Long	Broken	None	0

HARVESTING CONSIDERATIONS

Silviculture System: Manage all treatment units using an even-aged clearcut silviculture system with new forestry patches located around the low productivity 04, 07 and 08 site units. These units would be difficult to regenerate within MOF time frames because soils are generally cold and saturated and, in the case of the 08 unit, the area is a frost pocket. Alternative silviculture systems

are not prescribed because the advance regeneration is patchy and there are no additional overriding integrated resource management constraints which would support their use. To reduce the harsh climatic constraints of the ESSFwv the opening size has been kept small and is broken up by new forestry patches.

Summary of Existing Stand Structure

TU	Layer 2 Poles (sph)	Vigour, % Release, Leader Height (cm)	Layer 3 Saplings (sph)	Vigour, % Release, Leader Height (cm)	Layer 4 Regen (sph)	Vigour, % Release, Leader Height (cm)
1	300	Low, 40%, 2cm	400	Low, 10%, 1cm	700	Low 0%, 0cm
2	200	Good, 60%, 10cm	400	Low, 20%, 2cm	800	Low, 30%, 1cm
3	150	Good, 60%, 15cm	500	Moderate, 30%, 4cm	800	Low, 20%, 1cm

Leave Tree Specs: Within machine free zones all windfirm non-merchantable trees will be left standing. Where clumps of acceptable regeneration are found and it is operationally feasible to skid around them, they will be retained to reduce the climatic extremes of the ESSF and add structural diversity to the future stand. No cottonwood were noted on this block; however, if they are found during the course of falling, they will be retained as wildlife trees.

Harvest Method and Constraints: Harvest this block using a combination of hand and mechanical falling and conventional ground based skidding equipment. **TU 1:** Harvest this unit in the summer using conventional ground based equipment on dry soils. If winter operations are undertaken, harvest the unit on soils frozen to a minimum of 15 centimetres or a snowpack of at least 1.0 metres. **TU 2:** Harvest this unit in the winter on soils frozen to a depth of at least 15 centimetres or a minimum snowpack of 1.0 metres. Summer operations are not prescribed because the slopes are moderate to steep and the surface erosion hazard is high. **TU 3:** Harvest the 06 site units, Stratum D, in the winter on soils frozen to a minimum of 15 centimetres or a snowpack of at least 1.0 metres. The 07 site units, Stratum E, are ribboned machine free and will be long lined from dry ground. Summer harvesting is not prescribed because the slopes of Stratum D are steep, the compaction hazard is very high for the clay soils, and the surface erosion hazard is high throughout the unit.

Start: Winter 1996.

Finish: Summer 1996.

Utilization Standards: Kispiox District close utilization standards.

Opening Size and Configuration: This opening conforms with the size and location identified in Skeena Cellulose's Development Plan for the Natlan Chart Area. The western boundary follows the break above a creek. The northern boundary is determined by the operational constraint of adverse skidding, a topographic break and the road location. The eastern boundary is determined by the maximum opening size and adjacency constraints. The southern boundary is determined by maximum skid distance, operability limits of ground based equipment, and opening size.

A terrain stability and erosion potential survey (level B) conducted by Madrone Consultants Ltd. indicates that the central portion of the block is classified as relatively stable (Terrain Class II) and the north and south third of the block have a low failure potential (Terrain Class III).

Block Access: This block is located 49 kilometres north of Hazelton by road. Access to the proposed block is gained from the Kilometre 35 on the Suskwa FSR. A total of 2.9 kilometres of road will be required to access this block - 1.4 kilometres of road upgrading in the cutblock to the south and 1.5 kilometres of new road construction. The existing bridge across Natlan Creek will be removed and reconstructed.

Culverts: Culverts will be installed and maintained to ensure that patterns of downslope drainage are not significantly altered. See the accompanying logging plan map for culvert locations and sizes.

Skid Trails: Excavated / bladed skid trails are laid out in accordance with the site degradation guidelines below. Skid trails will be laid out prior to logging. All trails will be constructed as per the enclosed Logging Plan. Where trails cross machine free zones or seepage areas, temporary skid bridges will be constructed. All temporary crossings will be removed upon completion of logging.

SITE DISTURBANCE

TU	SOIL DEGRADING PROCESS	HAZARD RATING	CONTROLLING SITE FACTORS
1	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	High Moderate Moderate High Moderate	Mesic medium textured silt loam soils with 30 percent coarse fragments, thin forest floor on moderate slopes.
2	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Moderate High High Moderate	Mesic fine textured clay soils with 20 percent coarse fragments, thin forest floor on moderate to steep slopes.
3	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Moderate Very High High High	Subhygric fine textured clay soils with 20 percent coarse fragments, thin forest floors on moderate slopes.

Measures To Reduce Site Degradation: To meet site degradation guidelines all landings will be a maximum of 0.1 ha in size. Upon completion of road construction, all cuts and fills will be seeded to reduce erosion and sedimentation. Upon completion of logging, all secondary haul roads and bladed skid trails will be waterbarred at spacings determined by their gradient and surface erosion hazard.

SOIL DISTURBANCE STANDARDS

Treatment Unit ¹	1			2			3			TOT
Gross Area			12.6			16.6			5.2	34.4
NP Natural			0.0			0.0			0.0	0.0
NCBR			0.0			0.0			0.0	0.0
Reserve Area			0.4			2.2			3.7	6.3
NP Unnatural	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	0.9	0.0	0.9	0.8	0.0	0.8	0.0	0.0	0.0	1.7
Landings (conventional)	0.6	0.0	0.6	0.3	0.3	0.0	0.0	0.0	0.0	0.6
Landings (roadside areas)			0.0			0.0			0.0	0.0
Bladed/Excavated Trails			0.0		0.0	0.0			0.0	0.0
Other (pits, quarries etc.)			0.0			0.0			0.0	0.0
Net Area to Reforest			10.7			13.6			1.5	25.8
Soil Dist. Rds & Lndgs (%)										6.7
Skid Trail Area			1.0			0.6			0.1	
Other Dispersed Dist.			0.1			0.1				
Potential Detrimental Dist. Rds & Trails (%)			10.0			5.0			4.7	7.1
Forest Floor Disp.			25.0			25.0			25.0	

1: All units in hectares unless stated otherwise.

Mainline Road Width: 15.0 m

Spur Road Width: 13.5 m

Conventional Landing Size: 0.2 ha 0.3 ha

Skid Trail Width: 4.0 m

Dec 96 - Dec 03

To meet site degradation guidelines, Landing 1 will be fully rehabilitated. Landing 1 is selected for rehabilitation because their soils are sufficiently deep for ripping and because it is a productive growing site. Prior to commencement of harvest, all forest floor material and the top 30 centimetres of mineral soil will be stripped from the running surface of the landing and piled adjacent to the area. Upon completion of logging, all skid trails entering or leaving the landings will be cross ditched to ensure excessive water is not directed onto the landing surface. To increase future productivity, ash from slash piles will then be redistributed across the landing surface if slash piles have been burnt. The running surface of the landing will be ripped and the piled surface material will then be spread across the landing surface and seeded with clover to increase the nitrogen content of the soil. Landings will then be planted to spruce.

OTHER RESOURCES

Range: This area is not within an MOF range unit. Currently there is no range use in the Natlan Chart Area and, with the low forage potential present, future use is unlikely.

Landscape/Recreation: Visual quality objectives have not been established for this area. The visual sensitivity will be low because there are no identified viewpoints in the area. This area may be visible in the background of the viewshed of Natlan Peak or the ski area accessed from the avalanche chute at Kilometre 28 on the Suskwa FSR.

This block contains the following biophysical feature - E³, coniferous forest; and E⁶, forest parkland. Currently there is no recreational use of the area adjacent to the block. Once access is completed, feature related activities may consist of hiking, skiing, hunting and snowmobiling.

Water Quality/Fisheries: Maintenance of the water quality of creeks within and adjacent to the block is important because they are tributaries to Natlan Creek 300 metres to the north. Natlan Creek is an S2 fish bearing creek.

There are three seasonal S6 creeks - Creek A in the south, Creek B in the north, and Creek C in the southeast. Creek A has a channel width of 1.3 metres and a low sediment hazard because fines makeup less than 20 percent of the creekbed. Creeks B and C have poorly defined channels with a moderate sediment hazard. Water quality in the above creeks will be managed using a 20 metre riparian management area in which there is a new forestry patch (Creek A) and a 10 metre machine free zone. The additional 10 metres of the riparian management area will be managed as per the harvest methods and constraints for respective treatment units. Additional seepage areas are protected in the large new forestry patches in the northeast and southwest portions of the block. Machine free zones will ensure sedimentation is minimized by confining skidding to designated crossings and by stabilizing drainage patterns with retention of non-merchantable trees in the machine free zone.

There is an additional S6 creek adjacent to the southwest boundary. The boundary is placed at the top of a break above the creek. The creek is approximately 20 metres from the block and the boundary will not enter the riparian management area of the creek.

Wildlife: Wildlife use of this block is moderate. Bear, wolves, moose, marten, various rodents and a variety of bird species are known to inhabit the surrounding area. Moose prints and pellets were noted throughout the block. Bear browsing of the black gooseberry in TU 3 was noted occasionally. Grizzly and ungulate habitat mapping completed by Wildfor Consultants identifies the block as encompassing subalpine fir - azalea and subalpine fir - huckleberry habitat units with low to moderate grizzly habitat value.

Wildlife habitat will be maintained by including the productive forage areas of Stratum E and F in the new forestry patches. The surrounding low volume stands included in the new forestry patches will provide both thermal and visual cover for animals foraging in the area. Snags within the new forestry patches will also provide habitat for cavity nesters. Retention of non-merchantable trees in the machine free zones will provide limited visual cover and connect the new forestry patches with the adjacent timber. Retention of regeneration patches will also increase the structural diversity of the future stand.

Traplines/Guide Territories: This area lies within Traplines 608T033 and 608T034 and Guide Territory 630G001. Prior to commencement of logging operations, the owners of the above licences will be notified of Skeena Cellulose's intent to harvest this area.

Mining Claims: No mining claims or survey lines were noted in the area.

Aboriginal Activity: This block lies within the claimed traditional house territory of Luutkudziiwus. Prior to logging, the traditional house chief will be contacted regarding Skeena Cellulose's plans to harvest this block. No aboriginal activities were noted in this area. If historical sites are found during the course of logging, activities will cease until an assessment of the site is completed and a protection plan is implemented.

PROTECTION

Hazard Abatement: Once logging is completed, the slash hazard on this block will be low. Where possible, skid whole trees to landings where tops and other debris can be piled and burnt in the fall of H+1. The slash load throughout the block will be assessed post harvest. Areas of excessive slash loading will be piled and burnt after waste surveys are completed.

Pest Treatment: Timber on this block is infected with *Echinodontium tinctorium* and *Phellinus pini*. These fungi will not be a problem in the future stand because losses occur only in mature forests. Balsam bark beetle attacks were frequent within the block. A number of red attack trees were noted. Clearcut logging will remove the brood stock from within the block and the newly planted balsam will be resistant to beetle attack because they will be vigorous. *Tomentosis* was not noted in the block. However, as *Tomentosis* is endemic throughout the Kispiox Forest District, spruce will be kept to less than 40 percent of trees planted. Pest damage will be assessed during surveys conducted at H+3 and H+8. No particular problems are anticipated.

Adjacent Area: The adjacent forests are balsam dominated with minor components of spruce and approximately 300 years old. Timber adjacent to the block will serve as a significant source of brood stock for balsam bark beetles.

SILVICULTURE PLAN

Site Preparation:

TU	SITE PREPARATION - PREFERRED	TIMING	SITE PREPARATION - ALTERNATIVE
1	Hand screef and direct plant	H+1	Light piling
2	Hand screef and direct plant	H+1	Light piling
3	Hand screef and direct plant	H+1	Elevated microsites

Upon completion of logging, conduct a plantability survey to determine the number of available plantable spots. If the number of plantable spots falls below 1100 per hectare, site preparation will be required. The need for site preparation is not anticipated.

TU 1: If site preparation is required, use low ground pressure machinery. Activities will be completed on dry soils during the summer months to reduce the compaction hazard of the medium textured soils. Light piling is prescribed to improve planter access and ensure that surface erosion is minimized. **TU 2:** If site preparation is required on this unit, use low ground pressure equipment. Site preparation will be completed on dry summer soils to reduce the compaction hazard of the fine textured clay soils. The preferred treatment will be light piling to improve planter access and minimize surface erosion. **TU 3:** If site preparation is required, the object of treatment will be to create elevated microsites which will improve the soil temperature and aeration. Use low ground pressure equipment and work from the drier adjacent units on dry summer soils in order to reduce site degradation.

Reforestation:

TU	NET AREA (ha)	REGEN METH	SPECIES	STOCK TYPE & AGE	SOW (yr)	PLANT (yr)	STEMS / HA	AMOUNT (k)
1	10.7	Plant	Bl	PSB 313 1+0	H	H+1	600	6.6
			Sx	PSB 313 1+0	H	H+1	500	5.5
			Pl	PSB 313 1+0	H	H+1	300	3.3
2	13.6	Plant	Bl	PSB 313 1+0	H	H+1	850	11.4
			Sx	PSB 313 1+0	H	H+1	550	7.4
3	1.5	Plant	Bl	PSB 415 1+0	H	H+1	850	1.2
			Sx	PSB 415 1+0	H	H+1	550	0.8
Total								36.2

If vegetative cover is greater than 30 percent at the time of planting, alternative reforestation scenarios could include substitution of PSB 415 for 313. Other alternative scenarios could include altering the relative percentages of species planted and inclusion of pine up to 30 percent of the total stocking. Spruce stocking should not exceed 40 percent of the target stocking to reduce the risk of *Tomentosis* infection.

Regeneration surveys will be conducted at H+3. Blocks will be surveyed using the even-aged survey methodology and patches of advance regeneration will be tallied as acceptable well-spaced trees if they are acceptable layer 2, 3, or 4 trees. Layer 1 trees will be tallied as ghost trees and will not contribute to the stocking of the site.

Seed Source: Seedlot availability is as per the five year development plan, 1995-1999. Prior to harvest, a seed source will be established for all species prescribed. All seed or seedlings used to implement this prescription will be ecologically adapted to the site and used in accordance with the Provincial Seed Transfer Guidelines.

Brushing and Weeding:

TU	BRUSH HAZARD	BRUSH SPECIES (%cover/height cm)	PREFERRED TREATMENT	ALTERNATIVE TREATMENT	TIMING
1	Low	Fireweed 40/70cm, false azalea 5/60cm, huckleberry species 10/50cm @ H+7	No treatment	Manual, Chemical ground	H+7-10
2	Moderate	Fireweed 50/80cm, thimbleberry 10/50cm, oak fern 10/10cm @ H+7	Manual	Chemical ground	H+5-10
3	High	Fireweed 50/110cm, thimbleberry 30/70cm, oak fern 20/30cm, lady fern 10/50cm devil's club 20/30cm @ H+7	Manual	Chemical ground, Manual	H+3-9

The impact of competing vegetation on seedling performance will be assessed during surveys conducted at H+3 and H+6. If either survey indicates that less than 900 seedlings per hectare will meet free growing criteria within the time frame listed below, either manual or chemical brushing will be conducted.

Manual treatment will consist of removing all vegetation greater than half the height of the tree from within a 1.0 metre radius around each crop tree. Assessments of resprouting will be completed the fall after treatment. A repeat treatment will be required if competing vegetation has overtopped the tree within this time period.

TU 1, 2, and 3 - St D: Prescription of a ground based chemical treatment is acceptable for TU 1 and 2 and Stratum D of TU 3. Ten metre pesticide free zones will be delineated around all waterbodies and seepage areas prior to treatment. Chemicals will be applied selectively to competing vegetation around encumbered crop trees. Important wildlife forage plants will not be treated. **TU 3 - St E, F:** These units will be pesticide free zones because seepage sites are frequent. Pesticide free zones will be treated manually.

Free Growing Stocking Standards:

TU	Net Area (ha)	Species		Target Prefer Accept ¹ (WSsph)	Min. Prefer Accept ¹ (WSsph)	Min. Prefer ¹ (WSsph)	Reg Del (yrs)	Early (yrs)	Late (yrs)	Min FG Ht (m)	Crop Height vs. Comp	Max Dens (sph)	Post Spacing	
		Preferred	Acceptable										Max. (WSsph)	Min. (WSsph)
1	10.7	Bl Se Pl ⁴	Hm	1200	700	600	7	15	20	1.6 ² 0.8 ³	125	5000	1200	700
2	13.6	Bl Se	Pl ⁴	1200	700	600	4	12	20	1.6 ² 0.8 ³	125	5000	1200	700
3	1.5	Bl ⁵ Se ⁵	Pl ⁴	1200	700	600	4	12	20	1.6 ² 0.8 ³	125	5000	1200	700

1: Minimum inter-tree spacing = 2.0 m.

2: Free growing height pine.

3: Free growing height all other species.

4: Risk of snow damage.

5: Risk of frost damage.

If surveys conducted at H+5 indicate conifer densities exceed the maximum density of 5000 stems per hectare, the stand will be spaced to reduce inter-tree competition. Spacing will be conducted when crown closure is achieved or prior to the latest free growing date. Post spacing densities will be between 1200 and 700 stems per hectare if pest levels are low. If pest surveys indicate significant mortality will occur on this site, spacing densities will be increased to a maximum of 2000 stems per hectare.

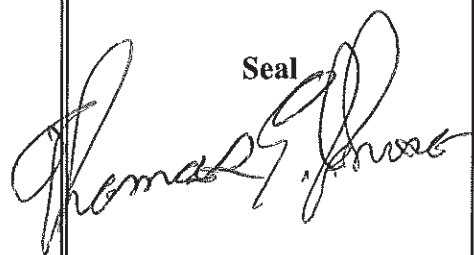
Maps Attached:

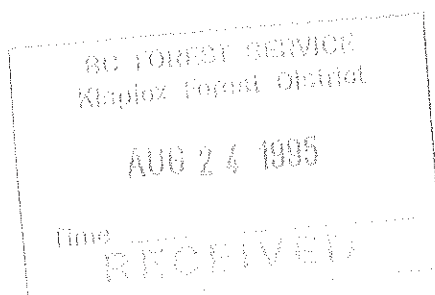
Ecosystem Map
Treatment Unit Map
Scale 1:5,000

Field Work Completed By: Date:

Tom Johnson RPF July 20, 1995

Licensee Acknowledgement: Date:**District Manager Approval: Date:**

 Seal
RPF's Signature Thomas E. Johnson
Date Sealed: August 14, 1995





F.L. A16831
C.P. 501
Blk. 8

Gr. Area	34.4ha	ha	NP Nat.	ha
Net Area	ha	ha	NP UNN.	ha

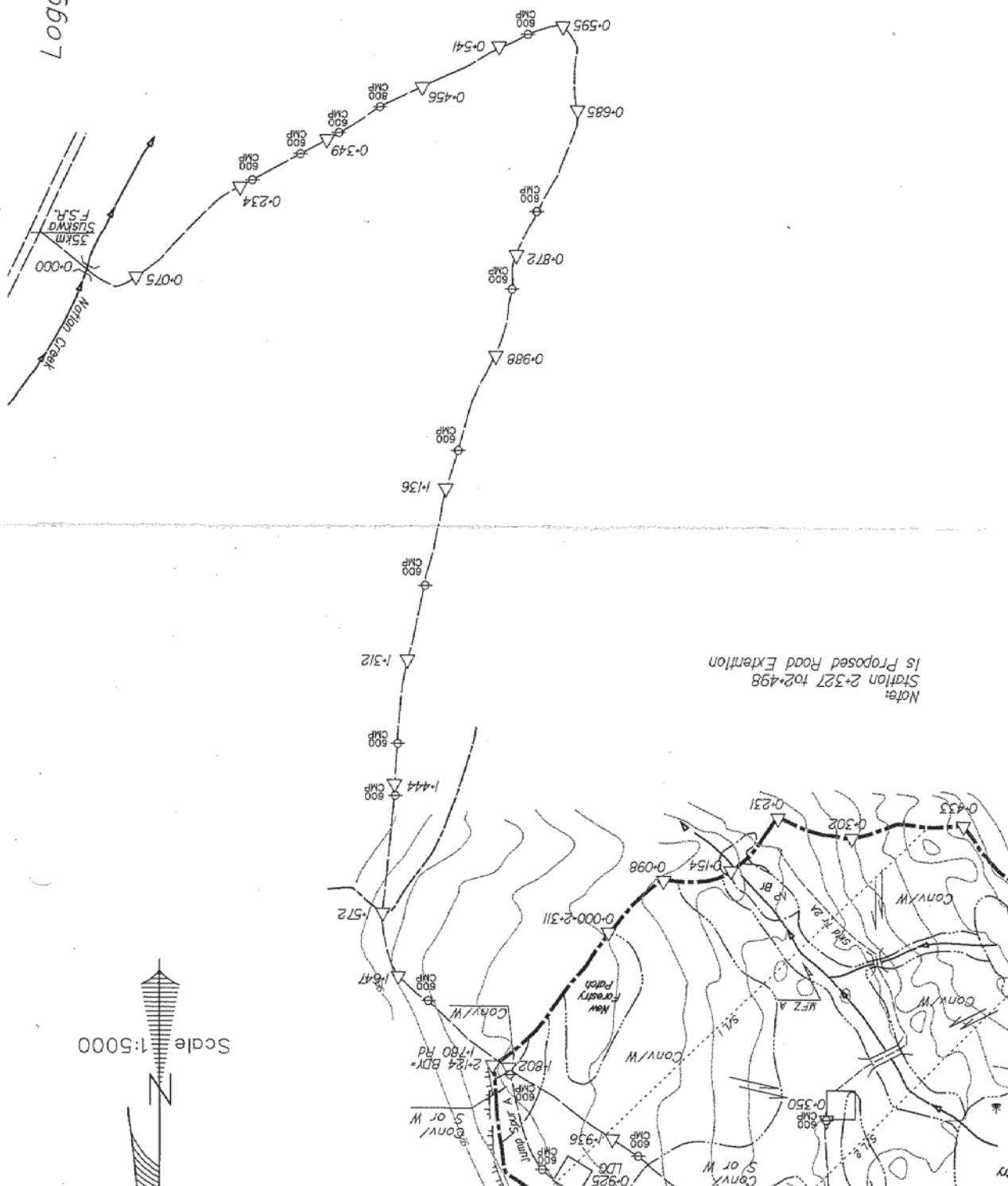
Chart: Nation
Location: Nation M/L

LEGEND:

- Roads (Built)
- Roads (Located)
- Culverts
- Landings (Conv/Cable)
- Skid/BS Trail
- Skid Bridge
- Skid Direction
- Block Boundary
- Harvest Sys. Bdy.
- Timber Type Line
- Slope (Percent)
- Contours
- Creek (Persistent)
- Creek (Ephemeral)
- Embankment
- Break
- Ridge
- Gully
- Rock
- Swamp
- Tree Swamp
- Non-commercial
- Blowdown
- Slide
- Slash Pile

History
Site Prep.
Stand Tending
Distance
Page 52 Regen.
N. E.

Logging Plan Map



E.L. A16822

C.P. 501

B(K. 08

Carnaby

Gr. Area 34.4ha

NP Nat. 0.0ha

Net Area 25.9ha

NP UNN. 2.3ha

Chart: Upper Nation

Location: 35km Sukwa

LEGEND:

Roads (Built)

Roads (Located)

Landings (Conv/Cable)

Skid/BS Trail

Skid Bridge

Plot Line & Centre

Block Boundary

Site Series

Stratum/Treatment

Harvest System

Slope (Percent)

Contours

Creek (Persistent)

Creek (Ephemeral)

Embankment

Break

Ridge

Gully

Rock

Swamp

Tree Swamp

Non-commercial

Blowdown

Slide

Slash Pile

History

Site Prep.

Stand Tending

Disturbance

Regen.

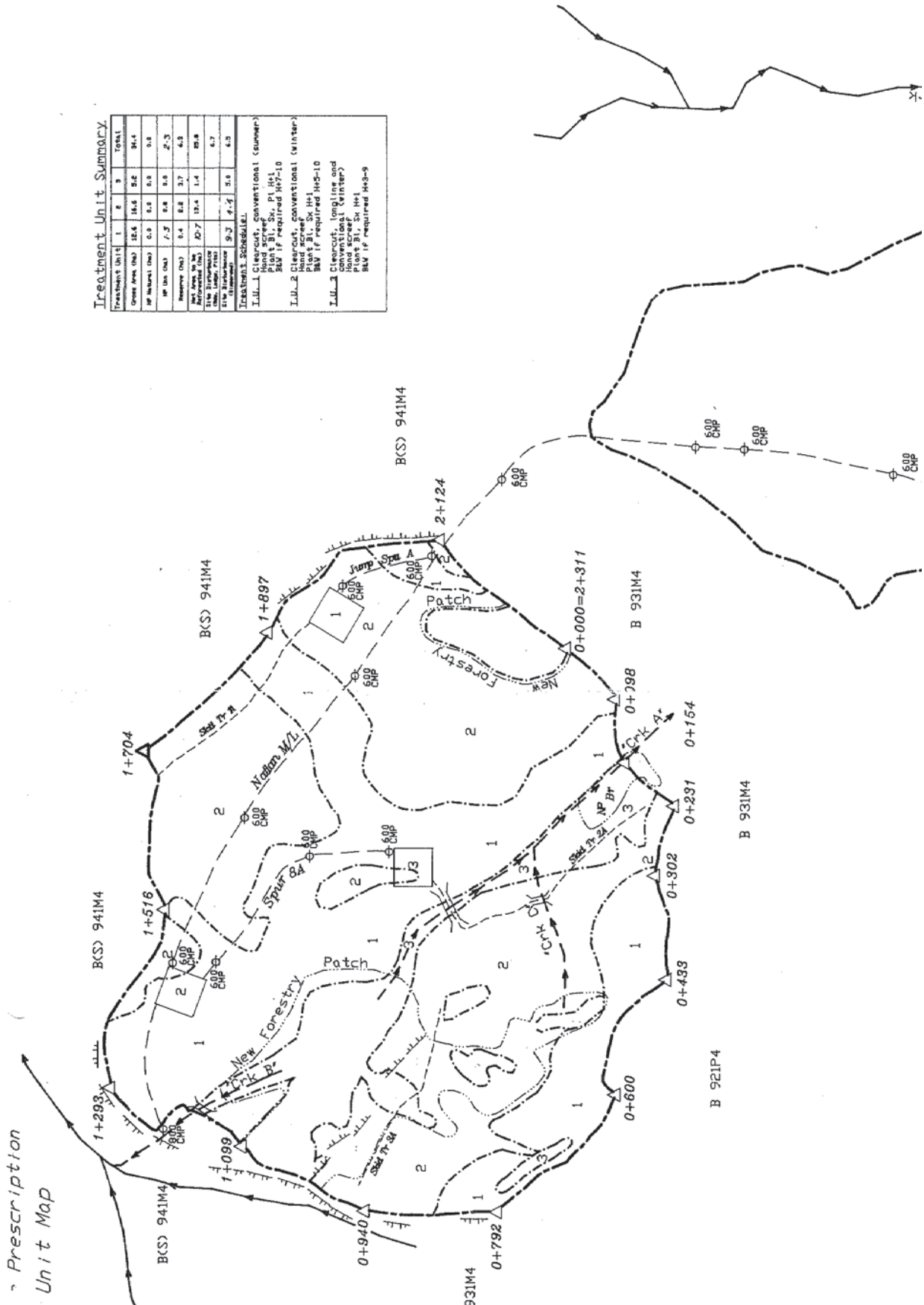
00000000 N.

00000000 E.

Area Spags for: G. Jackson

SP For: EBR-2011-00128, son

SP Completion: 07/20/95



Treatment Unit Summary

Treatment Unit	1	2	3	Total
Grass Area (ha)	12.6	14.6	8.6	35.8
NP Area (ha)	0.9	0.9	0.9	2.7
NP Un (ha)	7.3	8.6	8.6	24.5
Harvest (ha)	0.4	8.8	3.7	12.9
NP Area (ha)	10.7	15.4	1.4	27.5
Site Series	9.3	4.2	5.8	19.3
Site Series	9.3	4.2	5.8	19.3

TREATMENT SCHEDULE

T.U. 1 Clearcut, conventional (summer)
Plant B1, Sx, Pl H41
BAV if required H47-10

T.U. 2 Clearcut, conventional (winter)
Plant B1, Sx, Pl H41
BAV if required H47-10

T.U. 3 Clearcut, longline and
conventional (winter)
Plant B1, Sx, Pl H41
BAV if required H47-10

Region..... RPR Prince Rupert Forest Region
Opening..... 93M 04E 0.0 42
Location..... EPI5019
Tenure Type. For Forest Licence
Open Cat..... FTHL Status.. APP A

District..... DKL Kispiox Forest District
Licence No..... A16831 CP. 501 Bk. 9 Mark. EP1501
Licencea..... 00026428 04 SKEENA CELLULOSE INC.
Block Status.... S11 Silviculture
TAUP Area(ha).... 37.0 Net. 32.7 FTAS (ha). 37.0

OPENING ADMIN

Geo. Forest District.. DKL Kispiox Forest District
Disturbance Type..... L
Previous Stand Type.... MAT Timber Type.. BL SX 9 3 1
Timber Supply Bk..... 12C Kispiox TSA Block C
Photo Line No(s).....
UTM: Zone.. 00 East... 000000 North.. 0000000 NAD.. 63
Treatment Regime Id...
Location Code 1 & 2...
Funding Source..... IA Industrial Appraisal
Last Updated By..... MLESDT on 2001 01 11 MLESDT ISIS FTP DATA, BILL BOWIE
SP Exempt..... N
Harvest Offset..... 00
Actual Sale Date..... 1982 09
Actual Harvest Start... 1996 11
Actual Silv Handover... 1997 04
Declared Regen Delay... 1998
Prescribe Free GR: Early 2008 Late... 2016

SP SUMMARY

SP Administration:
Sealed by..... RPF.. Date..
Approved by..... KPOTTING KPOTTING Date.. 1996 05 10
For the Manager of Kispiox Forest District
Amendment Number.. 21 Initiated by. BMCLENNIA on 1997 02 26 Approved by. on 1996 05 10

Area of No Planned Reforestation (ha): Reserve
Perm. Rock Water Swamp Other NP NC>4ha No Mod. IMH Other NPR Area Sum of SU Area (ha): Totals (ha):
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 32.7 NAR TAUP FTAS
37.0 37.0

Ecology:

SU	ID	Moisture/Nutrient	BGC Information				Elevation			Aspect	Slope			Position
			Zone	SB	VR	Site	Min	Max	Avg		Min	Max	Avg	
1	1		ESSF	WV		01			1020	SW	South	W		
2	2		ESSF	WV		05			1020	SW	South	W		
3	3		ESSF	WV		06			1020	SW	South	W		
4	4		ESSF	WV		09			1020	SW	South	W		

Free Growing Stocking Standards:

SU Layer	NAR Area(ha)	Preferred Species	Acceptable Species	Basil Max Area Dan	WSS/ha	Trgt Min	Min Pref	Min Hor	Regen Yr Due	Early Yr Due	Late Yr Due	Hght Rel to Comp	Regen Method			
1	6.1	BL SX PL	HM	5000	1200	700	600	2.0	7	2003	12	2008	20	2016	125 %	PLANT
2	11.4	BL SX	PL	5000	1200	700	600	2.0	4	2000	12	2008	20	2016	125 %	PLANT
3	13.2	BL SX	PL	5000	1200	700	600	2.0	4	2000	12	2008	20	2016	125 %	PLANT
4	2.0	BL SX		5000	1000	500	400	2.0	4	2000	12	2008	20	2016	125 %	PLANT

Detrimental Soil Disturbances:

Max Proportion of Total Area Allowed for Permanent Access. 7.0 %
Maximum Allowable Detrimental Soil Disturbance:
Max Forest Floor Max Soil Max Soil Maximum Temporary Access
Disp Reduction Disturb Soil Disturb Total To Be No Planned
(%) (cm) Disturbx Pre-Rehabx Accessx Rehabx Rehabx

SU	Disp (%)	Reduction (cm)	Disturbx	Pre-Rehabx	Accessx	Rehabx	Rehabx
1	30.0					9.8	
2	25.0					4.4	
3	25.0					4.5	
4	25.0					5.0	

ATU SUMMARY

Denudation:

Result ATU	Technique	System Variant	Phase	Disturbance	Reserve	Harvest Start	Harvest End	Denuded Area (ha)
R L1	HV	CLEAR	REMOV	L	G	1996 11 01	1997 04 01	37.0

Silviculture:

Result ATU	Base	Technique	Method	Objectives	Date	P	R	Area	Fund	Project Id
R C1	SU	RG	PLOT	CE	1998 08 01	M	M	32.7	IA	
R E1	PL	PL	CTAIN	CE	1998 08 01	M	M	32.7	IA	
R C2	SU	PL	PLOT	PP	1998 09 01	M	M	32.7	IA	
R 5	SU	RG	PLOT	SU CE RG	2000 08 15	M	M	32.7	IA	

Plant Stock Allotment:

ATU	Species	Trees	Request Key	Lot Number
E1	PLI	1750		14630
E1	SX	17805		40008
E1	BL	6025		40005
E1	BL	25900		40007

FOREST COVER

SU	Polygon	Area (ha)	L Y	R A	Stk/Typ	Age	Avg Plt	Range	Avg Hght	Ref Yr	Spec Sita	DBH	Stems/ha	Density	WS	FQ VFS	F	X Data	S Site	Basal	Rsrv
1	2.6																				
2	1.7																				
3	6.1																				
3	6.1																				
4	11.4																				
4	11.4																				
5	13.2																				
5	13.2																				
6	2.0																				
6	2.0																				
6	2.0																				

Region..... RPR Prince Rupert Forest Region
Opening..... 93M 045 0.0 42
Location..... EP15019
Tenure Type.. For Forest Licence
Open Cat.... FTHL Status.. APP A

District..... DKI Kispiox Forest District
Licence No..... A16831 CP. 501 Bk. 9 Mark. EP1501
Licensee..... 00026428 04 SKEENA CELLULOSE INC.
Block Status... S11 Silviculture
TAUP Area(ha)... 37.0 Net. 32.7 FTAS (ha). 37.0

LAND STATUS

NSR Category.

This Opening is Regenerated.. Yes Declared Regen Mat on.... 1998 01 01
This Opening is Free Growing.. No Declared Free Growing on.

Status Date	UNW + NAT + FOR = Total	NP (ha)	-----x NPL + PL + NAT = Total	NSR (ha)	-----x ART + NAT = Total	IMM (ha)	-----x MAT + NC BR = Total	Other (ha)	-----x FG (ha) NOR
1999 01 11	2.6								
1997 09 17	2.6			32.7	32.7	1.7	34.4		
				End of Report		1.7	1.7		



MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B'

SECTION 35

A.

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES		GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM		

B.

SILVICULTURE														
OBLIGATION		ACTIVITY		OBJECTIVES			FUNDING		COMPLETION DATE		NET AREA TREATED (ha)		RESP	OPENING NO.
TIMBERMARK	BLOCK	BASE	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM	MM			
P1501	9	SU	PL	PLOT	PP			IA	1998	09		32.7	L	93M 045 0.0 0042
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER

INPUT TO MLSIS

99/05/18 Date
KAP Initials

C. ADMINISTRATION

PREPARED BY		TELEPHONE	DATE		REVIEWED BY		DATE		REGION	DISTRICT
			Y	M	D			Y	M	D
LISA HAMMERSTEDT	(250) 842-5399		9	9	0				PR	KI





MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B'

SECTION 35

A. DENUDDATION

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES		GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM		

B. SILVICULTURE

OBLIGATION		ACTIVITY		OBJECTIVES		FUNDING SOURCE	COMPLETION DATE YYYY MM	NET AREA TREATED (ha)	RESP	OPENING NO.
TIMBERMARK	BLOCK	BASE PL	TECH. PL	METHOD CTAIN	1 CE					
EP1501	9					IA	1998 08	32.7	L	93M 045 0.0 - 42
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES
14630	PL	1750	40008	SXS	17805	40005	BL	6025	40007	BL
								25900		

C. ADMINISTRATION

PREPARED BY LISA HAMMERSTEDT	TELEPHONE (250) 842-5399	DATE Y M D 9 8 1 1 1 2	REVIEWED BY 99/01/11 KAP	DATE Y M D	REGION PR	DISTRICT KI
---------------------------------	-----------------------------	------------------------------	-----------------------------	---------------	--------------	----------------



A. DENUDDATION

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES			GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.	
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM	MM			
EP1501	9	L	CLEAR		REMOV	G	1996	11	1997	04	37.0	93M 045 0.0 0042

B. SILVICULTURE

OBLIGATION		ACTIVITY		OBJECTIVES			FUNDING		COMPLETION DATE		NET AREA TREATED (ha)	RESP	OPENING NO.	
TIMBERMARK	BLOCK	BASE	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM				
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER

C. ADMINISTRATION

PREPARED BY LISA HAMMERSTEDT	TELEPHONE (250) 842-5399	DATE Y M D 9 8 1 1 1 9	REVIEWED BY 899/01/11 KAP	DATE Y M D 9 8 1 1 1 9	REGION PR	DISTRICT KI
---------------------------------	-----------------------------	------------------------------	------------------------------	------------------------------	--------------	----------------

MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
FOREST COVER DEFINITION -- FORM 'C'

SECTION 35

A.

OBLIGATION	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE		
TIMBERMARK BLOCK				Y	M	D
EP1501	93M 045 0.0 0042	LISA HAMMERSTEDT	(250) 842-5399	9	8	1
				1	1	9

B.

S T R A T E G Y	L A N D U S E	R A N K	A R E A (ha)	S P E C I E S C O M P O S I T I O N										A G E		H E I G H T (0.1 m)	C R O W N C L O S E (%)	R E F. Y E A R	S I T E		D E N S I T Y (stems/ha)	W E L L - S P A C E D (stems/ha)	F R E E - G R O W I N G (stems/ha)	R E S. T Y P E	B A S A L A R E A (m2/ha)	P E S T I N F E S T A T I O N			
				S T A T U S	T Y P E	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	S P E C I E S	C L				I N D E X	C O D E						%	C O D E	%	
																													%
1	I	1	6.1	IMM	ART	BL	50	SX	40	HW	10				1	1	0.4	1	98	P	12	1960		G					
1	S	6.1	6.1	IMM	ART	BL	57	SX	43						1	1	0.4	0	98	P	12	1200		G					
2	I	11.1	11.1	IMM	ART	BL	60	SX	30	HW	10				1	1	0.3	1	98	P	12	1840		G					
2	S	11.1	11.1	IMM	ART	BL	70	SX	30						1	1	0.3	0	98	P	14	1160		G					
3	I	13.2	13.2	IMM	ART	SX	60	BL	40						1	1	0.3	1	98	M	15	1567		G					
3	S	13.2	13.2	IMM	ART	SX	60	BL	40						1	1	0.3	0	98	M	15	1200		G					
4	I	2.0	2.0	IMM	ART	BL	50	SX	40	HW	10				1	1	0.3	2	98	P	12	2520		G					
4	S	2.0	2.0	IMM	ART	BL	65	SX	35						1	1	0.3	0	98	P	12	1120		G					
5		1.7	1.7	MAT	NAT	HW	100								250	1	25.0	0	91	M	20	350	1	G					
6		2.6	2.6	NP	UNN										1	1	-1.0	0	91		00	1	1	G					

Regn Delay set 1998

C. ADMINISTRATION

REVIEWED BY	DATE	REGION	DISTRICT
1998/04/11	Y M D	PR	KI
KAP			

D.

RPF SIGNATURE AND SEAL	RPF SIGNATURE	DATE	Page 60	FNR-2011-000000
		98-Dec-17	2363	

CP: 501 Blk: 9
 Chart: Upper Natlan
 Gross Area: 37.0 ha
 Net Area Reforested: 32.7 ha
 Field Work: DM
 Map Drawn by: DM
 Date Drawn: 21/8/98
 Survey Type: Stocking
 Scale: 1:5000

**Skeena
 Cellulose
 Inc.**



**Backwoods
 Contracting**

Legend

- Block Boundary
- Treatment Boundary
- Internal Boundary
- Main Road
- Spur Road
- Trail
- Landing
- Creek
- 4-13 WS Trees
- 0-3 WS Trees
- >4 WS and >20 TC

Stocking Survey Plot Map

TU	ST	Area	Status	Treatment Recommendations
1	A	6.2 ha	SR	Stocking Survey 2000.
2	B	11.3 ha	SR	Stocking Survey 2000.
3	B	13.2 ha	SR	Stocking Survey 2000.
4	B	2.0 ha	SR	Stocking Survey 2000.

Biogeoclimatic Subzone: ESSFwv

Standard Unit 1

Inv: B15Sx4Hw1-1-0-4-12-1-1960/0-(98)(7)
 Silv: B157Sx43-1-0-4-12-1-1200/0-(98)(7)
 Total Conifers: 1960
 Total preferred well-spaced: 1200

Standard Unit 2

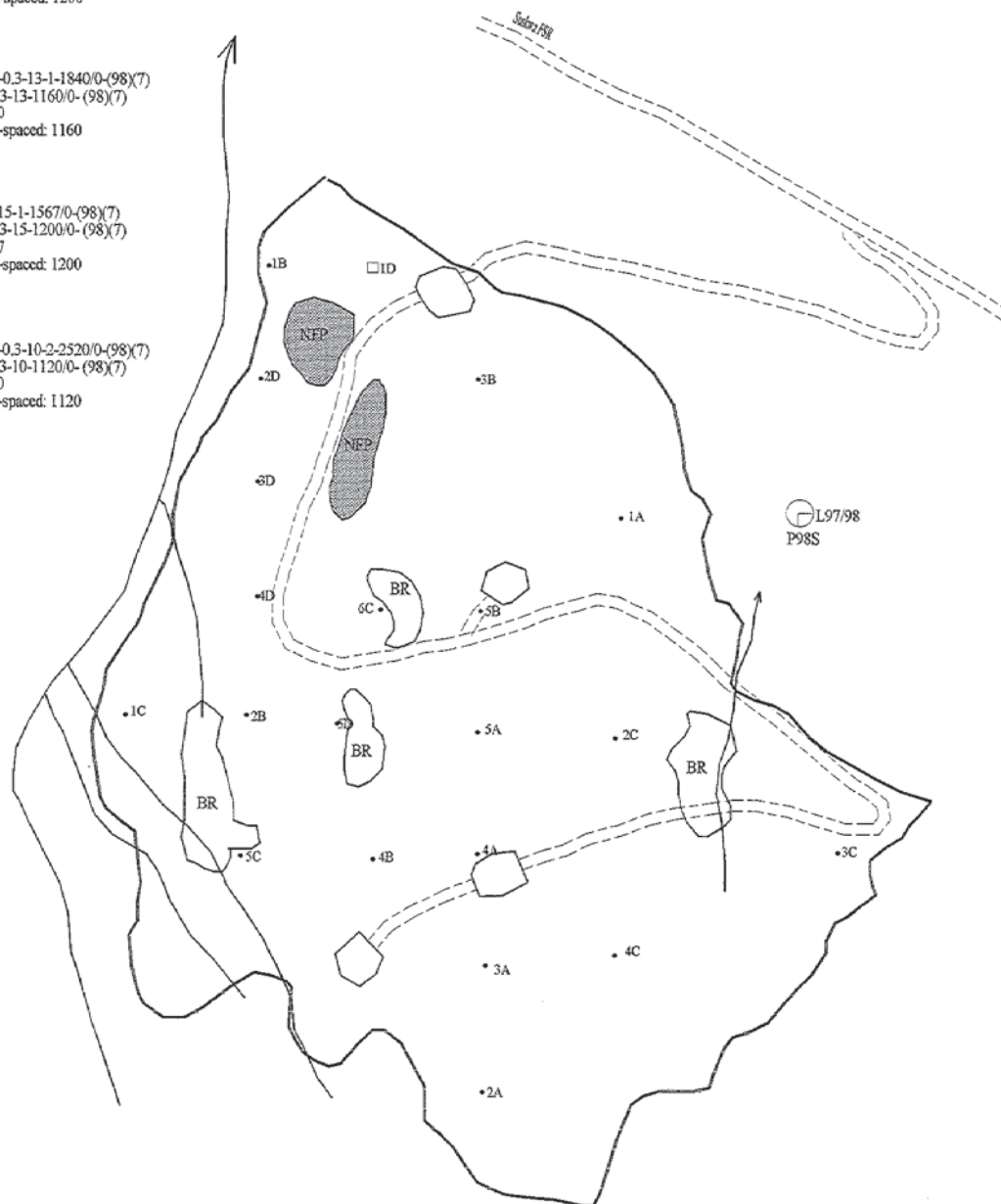
Inv: B16Sx3Hw1-1-0-3-13-1-1840/0-(98)(7)
 Silv: B170Sx30-1-0-3-13-1160/0-(98)(7)
 Total Conifers: 1840
 Total preferred well-spaced: 1160

Standard Unit 3

Inv: Sx6B14-1-0-3-15-1-1567/0-(98)(7)
 Silv: Sx60B140-1-0-3-15-1200/0-(98)(7)
 Total Conifers: 1567
 Total preferred well-spaced: 1200

Standard Unit 4

Inv: B15Sx4Hw1-1-0-3-10-2-2520/0-(98)(7)
 Silv: B165Sx35-1-0-3-10-1120/0-(98)(7)
 Total Conifers: 2520
 Total preferred well-spaced: 1120



CP: 501 Blk: 9
Chart: Upper Natlan

Gross Area: 37.0 ha
Net Area Reforested: 32.7 ha

Field Work: DM
Map Drawn by: DM
Date Drawn: 18/8/98

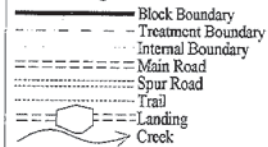
Survey Type: Stocking
Scale: 1:5000

**Skeena
Cellulose
Inc.**



**Backwoods
Contracting**

Legend



Standard Unit Map

TU	ST	Area	Status	Treatment Recommendations
1	A	6.2 ha	SR	Stocking Survey 2000.
2	B	11.3 ha	SR	Stocking Survey 2000.
3	B	13.2 ha	SR	Stocking Survey 2000.
4	B	2.0 ha	SR	Stocking Survey 2000.

Biogeoclimatic Subzone: ESSFwv

Standard Unit 1

Inv: BLSx4Hw1-1-0-4-12-1-1960/0-(98)(7)
Silv: BLS7Sx43-1-0-4-12-1-1200/0-(98)(7)
Total Conifers: 1960
Total preferred well-spaced: 1200

Standard Unit 2

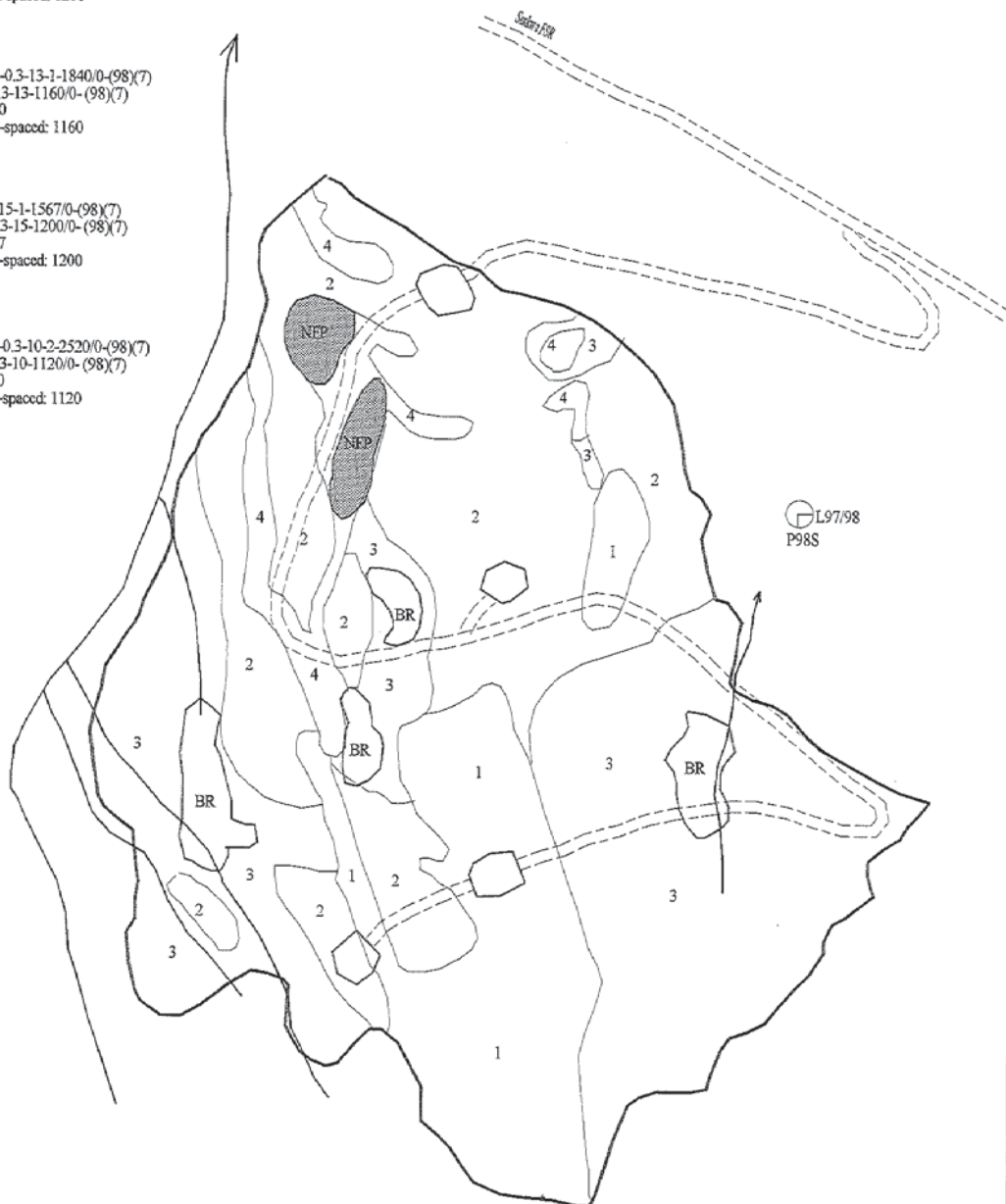
Inv: BLSx3Hw1-1-0-3-13-1-1840/0-(98)(7)
Silv: BLS7Sx30-1-0-3-13-1-1160/0-(98)(7)
Total Conifers: 1840
Total preferred well-spaced: 1160

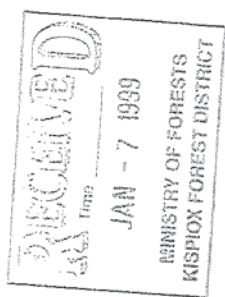
Standard Unit 3

Inv: Sx6B14-1-0-3-15-1-1567/0-(98)(7)
Silv: Sx60B140-1-0-3-15-1-1200/0-(98)(7)
Total Conifers: 1567
Total preferred well-spaced: 1200

Standard Unit 4

Inv: BLSx4Hw1-1-0-3-10-2-2520/0-(98)(7)
Silv: BLS6Sx33-1-0-3-10-1-1200/0-(98)(7)
Total Conifers: 2520
Total preferred well-spaced: 1120





REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

A.

DENUDATION											OPENING NO.	
OBLIGATION		BLOCK	DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYP	HARVEST DATES				GROSS BLOCK AREA (m) (POST-HARVEST)
								STARTED YEAR	MONTH	COMPLETED YEAR MONTH		
EP1 617	19	L	CLEARCT		REMOV	G		1997/01		1997/03	25.3	93M091 0.0 004
EP1 617	18	L	CLEARCT		REMOV	G		1996/11		1997/03	47.3	93M091 0.0 003
EP1 615	14	L	CLEARCT		REMOV	G		1997/01		1997/02	24.6	93M0710.0 007
EP1 614	12	L	CLEARCT		REMOV	N		1996/07		1997/01	51.0	93M 091
EP1 614	11	L	CLEARCT		REMOV	N		1996/06		1997/01	53.0	93M0910.0 001
EP1 388	89	W	CLEARCT		SALVW	N		1997/05		1997/06	10.1	103P060
EP1 501	08	L	CLEARCT		REMOV	G		1997/01		1997/04	34.4	93M045 041
EP1 501	09	L	CLEARCT		REMOV	G		1996/11		1997/04	37.0	93M045 -42
EP1 611	06	L	CLEARCT		REMOV	N		1993/12		1997/06	51.0	93M081 0.0 002
EP1 612	15	L	CLEARCT		REMOV	G		1996/01		1997/01	42.0	93M0800.0 006
EP1 702	17	L	CLEARCT		REMOV	G		1997/01		1997/06	36.2	93M061
EP1 651	03	L	CLEARCT		REMOV	G		1997/01		1997/06	48.2	93M081 010
EP1 370	09	L	CLEARCT		REMOV	G		1996/11		1997/02	26.4	103P0700.0 085
EP1 361	69	L	CLEARCT		REMOV	G		1996/05		1997/06	32.0	093M051
EP1 361	63	L	CLEARCT		REMOV	G		1996/11		1997/02	28.3	103P080
EP1 241	06	L	CLEARCT		REMOV	N		1996/07		1997/03	41.5	
EP1 310	17	L	CLEARCT		REMOV	G		1996/07		1997/07	18.7	93M025
EP1 310	16	L	CLEARCT		REMOV	N		1997/04		1997/06	8.4	93M024
EP1 172	14	L	CLEARCT		REMOV	G		1996/08		1997/07	21.2	93L091 0.0 004
EP1 172	13	L	CLEARCT		REMOV	G		1996/07		1997/07	34.5	93L091 0.0 003
EP1 651	08	L	CLEARCT		REMOV	N		1997/01		1997/02	16.8	93M081
EP1 145	26	L	PATCHCT	PATCH	REMOV	G		1997/02		1997/03	26.8	103P 30
EP1 502	10	L	PATCHCT	PATCH	REMOV	U		1996/11		1997/01	92.6	93M045

B. ADMINISTRATION

PREPARED BY BRENDA BIRD	TELEPHONE NO. 842-5399	DATE 10-Sep-97	REVIEWED BY K. Pattungu	DATE 9/10/97	REGION	DISTRICT
			ENTERED MLSIS			

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM C

A.

OBLIGATION	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE
TIMBERMARK				
EP1 501	93M045-42	BRENDA BIRD	842-5399	10-Sep-97

B.

SITRA	LAYER	HAUK	AREA (ha)	STOCKING	STATUS	TYPE	REF. YR	SITE CL	INDEX	RES BASAL AREA (cush)
100			1.7	MAT	NAT	97	M 20			
100			32.7	NSR	PL	97	M 20			
100			2.6	NP	UNN	97	M 20			

Mat Nat missing
 4w - 100
 250 yrs old
 25.0 Mht.
 M-20 sit clasp/index
 350 st/ha.
 res typed
 res typed

C. ADMINISTRATION

ENTERED MLSIS	REVIEWED	DATE	REGION	DISTRICT
<i>K. Pattinson</i>	<i>7/09/97</i>			

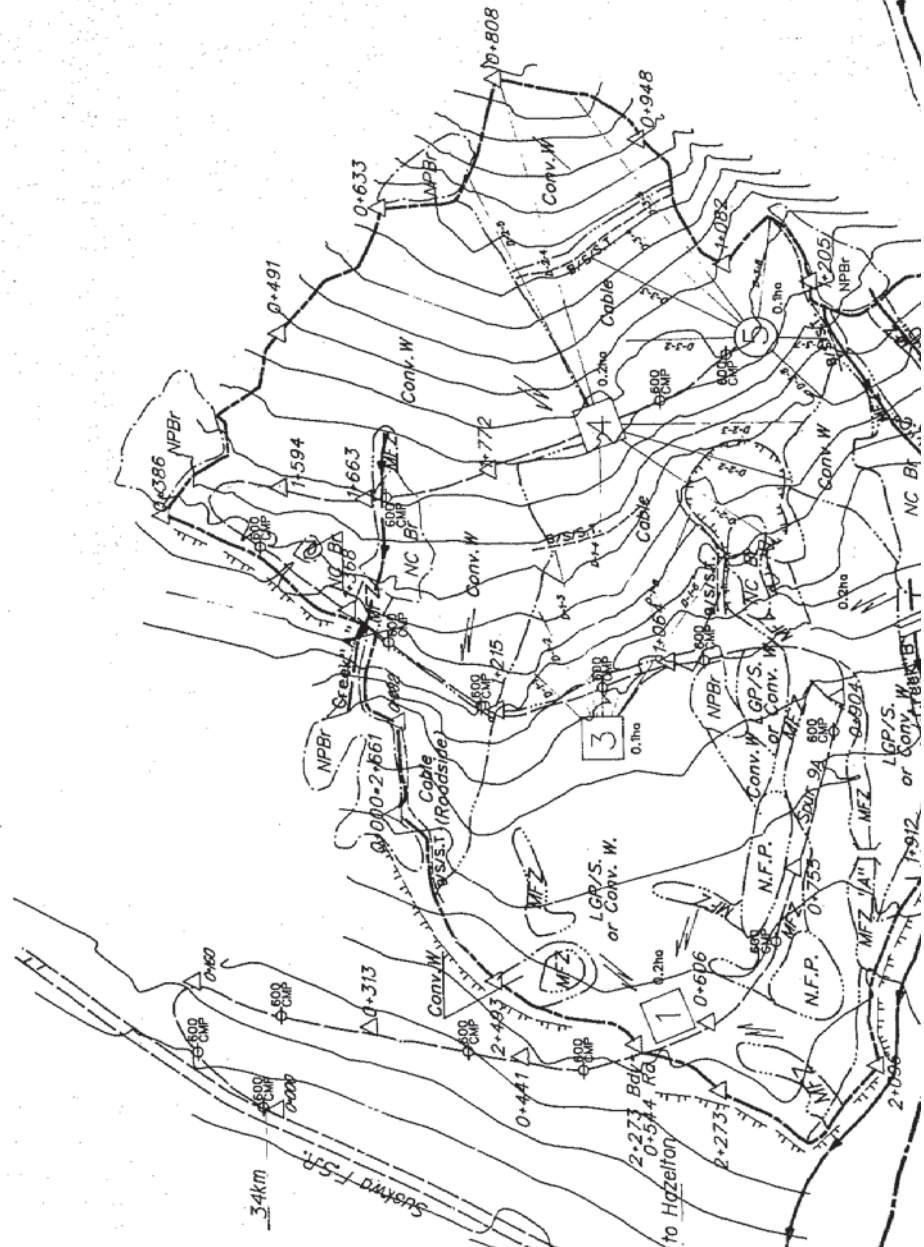
D.

RPF SIGNATURE AND SEAL	
<i>[Signature]</i>	RPF NO.
DATE	
97-SEP-10	2363

BC FOREST SERVICE
Kispiox Forest District
SEP 11 1997
Time _____
RECEIVED

Setting Map

F.L. A16831 C.P. 501 Blk. 9		
Gr. Area 37.0ha	NP Nat. 0.0 ha	LEGEND: Roads (Built) Roads (Located) Culverts Landings (Conv/Cable) Skid/BS Trail Skid Bridge Skid Direction Block Boundary Harvest Sys. Bdy. Timber Type Line Slope (Percent) Contours Creek (Persistent) Creek (Ephemeral) Embankment Break Ridge Gully Rock Swamp Tree Swamp Non-commercial Blowdown Slide Slash Pile History Stand Tending Recen.
Net Area 32.7ha	NP UNN. 2.6 ha	
Chart: Nallan Location:		NCCNP Br x x x



BC FOREST SERVICE
Kispiox Forest District
SEP 11 1997
Time
RECEIVED

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

A.

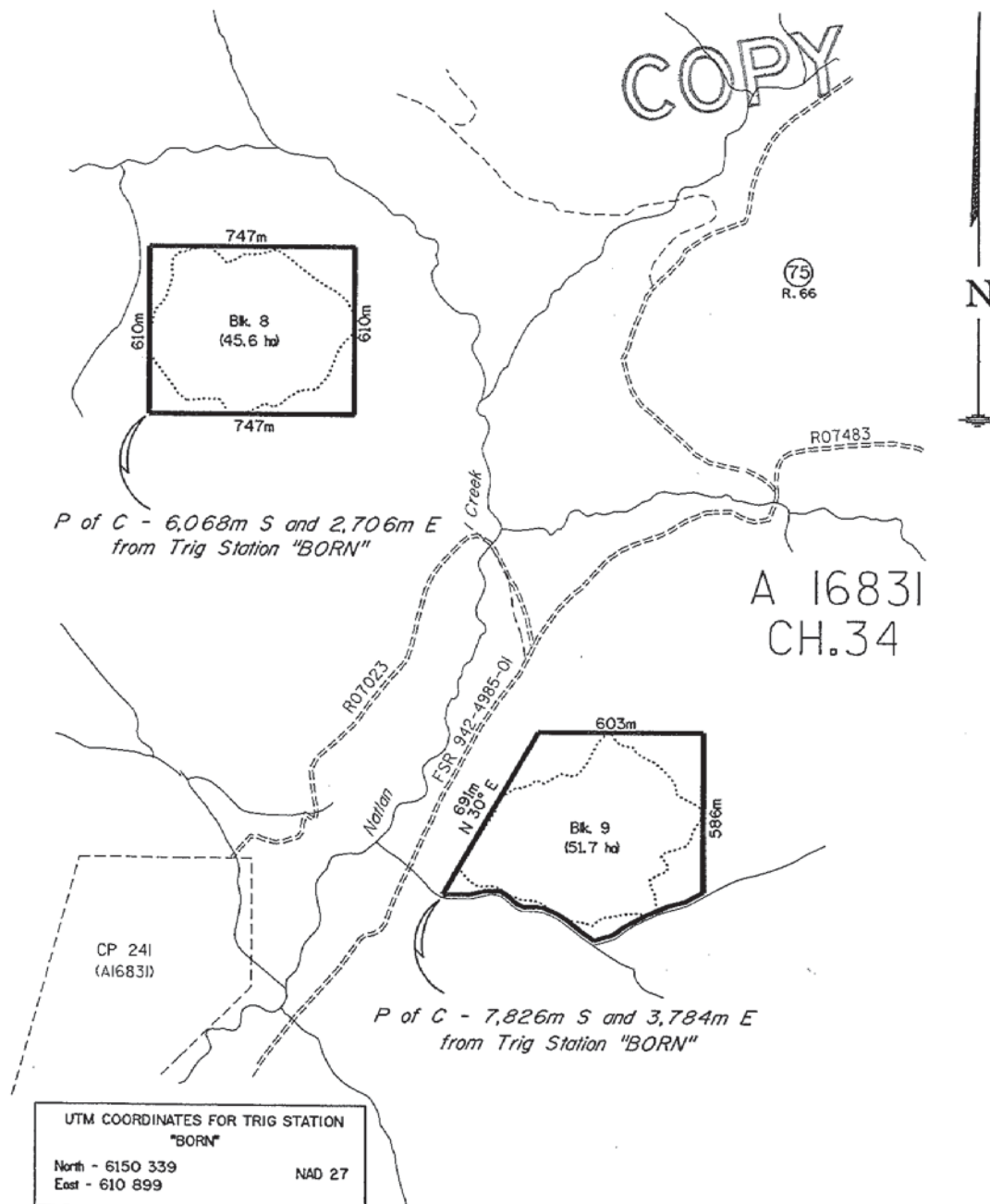
OBLIGATION		DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYPE	HARVEST DATES		GROSS BLOCK AREA (HA) (POST-HARVEST)	OFFERING NO.
TIMBERMARK	BLOCK						STARTED YEAR	COMPLETED YEAR		
EP1617	19	L	CLEARCT		REMOV	G	1997/01	1997/03	25.3	93M091 0.0 004
EP1617	18	L	CLEARCT		REMOV	G	1996/11	1997/03	47.3	93M091 0.0 003
EP1615	14	L	CLEARCT		REMOV	G	1997/01	1997/02	24.6	93M0710.0 007
EP1614	12	L	CLEARCT		REMOV	N	1996/07	1997/01	51.0	93M091
EP1614	11	L	CLEARCT		REMOV	N	1996/06	1997/01	53.0	93M0910.0 001
EP1388	89	W	CLEARCT		SALW	N	1997/05	1997/06	10.1	103P060
EP1501	08	L	CLEARCT		REMOV	G	1997/01	1997/04	34.4	93M045 041
EP1501	09	L	CLEARCT		REMOV	G	1996/11	1997/04	37.0	93M045-42
EP1611	06	L	CLEARCT		REMOV	N	1993/12	1997/06	51.0	93M081 0.0 002
EP1612	15	L	CLEARCT		REMOV	G	1996/01	1997/01	42.0	93M0800.0 005
EP1702	17	L	CLEARCT		REMOV	G	1997/01	1997/06	35.2	93M061
EP1651	03	L	CLEARCT		REMOV	G	1997/01	1997/06	48.2	93M081 010
EP1370	09	L	CLEARCT		REMOV	G	1996/11	1997/02	26.4	103P0700.0 085
EP1361	69	L	CLEARCT		REMOV	G	1996/05	1997/06	32.0	093M051
EP1361	63	L	CLEARCT		REMOV	G	1996/11	1997/02	28.3	103P080
EP1241	06	L	CLEARCT		REMOV	N	1996/07	1997/03	41.5	
EP1310	17	L	CLEARCT		REMOV	G	1996/07	1997/07	18.7	93M025 *
EP1310	16	L	CLEARCT		REMOV	N	1997/04	1997/06	8.4	93M024
EP1172	14	L	CLEARCT		REMOV	G	1996/08	1997/07	21.2	93L091 0.0 004
EP1172	13	L	CLEARCT		REMOV	G	1996/07	1997/07	34.5	93L091 0.0 003
EP1651	08	L	CLEARCT		REMOV	N	1997/01	1997/02	16.8	93M081
EP1145	26	L	PATCHCT	PATCH	REMOV	G	1997/02	1997/03	26.8	103P-30
EP1502	10	L	PATCHCT	PATCH	REMOV	U	1996/11	1997/01	92.6	93M045

B. ADMINISTRATION

PREPARED BY BRENDA BIRD	TELEPHONE NO. 842-5399	DATE 10-Sep-97	DATE 10-Sep-97	REVIEWED BY K. B. BIRD	DATE 9/15/97	REGION	DISTRICT
			ENTERED MLSIS				

EXHIBIT 'A'

IAP OF:		F.L. A-16831		DATE		Sept. 19, 1995	
		C.P. 501 Blk. 8 & 9		REF. MAP		R93M/SW (F6)	
U.T.M.	ZONE	EAST	NORTH	REG.	COMPT.	L	BASE USED
GRID	09614861614386866075						93M.045/44/34
FOREST REGION		LAND DISTRICT		SCALE			
Pr Rupert 02		Cassiar 06		1:20000			
FOREST DISTRICT		OUTLINE		AREA		as shown hectares ±	
Kispiox 24							
MANAGEMENT UNIT		TIMBER SUPPLY AREA		PULPWOOD AGREEMENT		CASCADES	
TYPE Z		NUMBER Kispiox 12				EAST X	
NUMBER Skeena 75		BLOCK				WEST	
BLOCK		SUB-BLOCK					
ORCS #19500-40/A16831CP501 BLK. 8 - OPENING #93M.045-041 BLK. 9 - OPENING #93M.045-042		WITHIN: SKEENA PROVINCIAL FOREST, FLA16831 CH. 34					



DRAWN BY:

AMP

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

OBLIGATION		DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYP	HARVEST DATES			GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED	COMPLETED	YEAR		
EPI 617	18	L	CLEARCT		REMOV	G	1996/11			47.3	93M 091-003
EPI 614	12	L	CLEARCT		REMOV	N	1996/07			51.0	93M 091-002
EPI 614	11	L	CLEARCT		REMOV	N	1996/07			53.0	93M0910.0 001
EPI 415	55	L	CLEARCT		REMOV	G	1995/08			34.3	93M062 0.0 021
EPI 501	09	L	CLEARCT		REMOV	G	1996/11			37.0	93M045-042
EPI 702	25	L	CLEARCT		REMOV	N	1996/07			34.6	93M 061-059
EPI 241	06	L	CLEARCT		REMOV	N	1996/07			41.5	93M 045-037
EPI 310	17	L	CLEARCT		REMOV	G	1996/07			18.7	93M 025-005
EPI 502	10	L	PATCHCT		REMOV	U	1996/11			92.6	93M 045-043

A.

B. ADMINISTRATION

PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY	DATE	REGION	DISTRICT
SLAWEK KOCHANIEK	842-5399	22-Jan-97	<i>Br...</i>	97/01/28	92	24

ENTERED MLSIS	DATE
MC	97/01/29

Kispiox Forest District
P.O. Box 215
Hazelton, British Columbia
V0J 1Y0

Tel: 842-7600 Fax: 842-7676

File: 18750-20/93M-045-042 & 93M-034-040

May 10, 1996

Repap British Columbia Inc
Carnaby Operations
#10 North Boundary Road
South Hazelton, British Columbia
V0J 2R0

Dear Repap British Columbia Inc.:

Please submit an MLSIS Form A as soon as possible for A16831, C.P. 501, Blocks 07 and 09, approval date May 10, 1996.

Should you have any questions or concerns, please contact myself at 842-7600.

Yours truly,

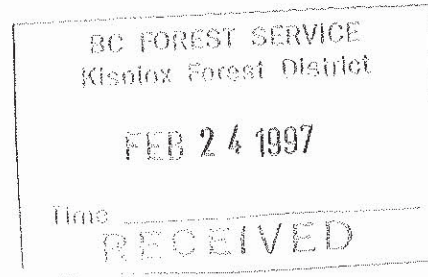


for Bob Phipps
Silviculture Practices Forester
Kispiox Forest District

g\corpserv\perm\silv\forms\5067s



93M045-42.



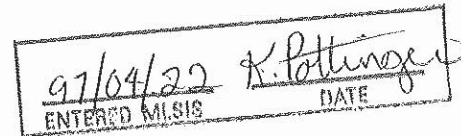
February 21, 1997

Kispiox Forest District
Post Office Box 215
Hazelton, B.C.
V0J 1Y0

FILE COPY

Re: Amendment - Logging Plan for Cutting Permit 501 Block 9

Attn: Ron Cotton, Tenure Admin. Officer



Dear Mr. Cotton:

Please accept this letter, accompanying logging plan maps (two coloured copies) as an application to amend the Logging Plan for Cutting Permit (CP) 501 Block 9.

As highlighted in green on the appended maps the addition of **non-bladed** backspar trails is requested:

- along portions of the outer boundary,
- along the break which defines the yarding split between landings 3 and 4, and
- along a break above (East of) landing 4 from which deflection to the East boundary is poor.

The addition of these trails will provide improved / adequate deflection and prevent site degradation caused by scouring (due to the lack of load suspension). The trails can be easily accessed from existing road and from adjacent Conventionally harvested ("Conv. Winter" on Logging Plan map) units. Since these trails will take advantage of the deflection-limiting breaks where sideslopes are under 40%, they will not require blading. Moreover, the existing 1.3m snowpack can be excavated in various locations to allow the backspar hoe to sit level where necessary.

The patch of ground East of the proposed trail above (also East of) landing 4 can be favourably skidded to the proposed mobile backspar trail. Sideslopes in this unit are < 45% and are protected by a snowpack ≥ 1.3 m. The timber can then be skidded to roadside through the adjacent "Conv. W." unit (to the North-east) then to landing 4 itself.

.../2

The only change required in the Logging Plan for these amendments is the shift in harvesting system areas: removing 1.6 ha "Cable" and adding it to the "Conventional Winter". Furthermore, the 1.6 ha harvesting system change (Cable to Conventional Winter) is only 2% (ie., < 10%) of the Cutting Permit area. No further Deactivation is necessary as none of the proposed trails require blading, designated crossings, nor will they be subjected to excessive compaction.

Please consider the proposed amendments separately should one take longer than another. Your earliest attention to this matter will be appreciated as the amendments will result in a reduced potential for site degradation and an increase in harvesting production.

If you have any questions, please contact the undersigned.

Yours truly,
REPAP BRITISH COLUMBIA INC.
Carnaby Lumber Operations

A handwritten signature in cursive script, appearing to read "F. Barbosa".

Fernando Barbosa
Area Supervisor



REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

AMENDMENT

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK	GROSS AREA (ha)	NP NAT (ha)	NP UNN (ha)	RES AREA (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	9	37.0	0.0	2.6	1.7	0.0	32.7
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M.045		BC92094 55,56		Natlan		920-1120		T. Johnson		July 21, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species ≤ 17.4 centimetres diameter at breast height (1.3 m). Advance regeneration includes all layer 2, 3, and 4 trees.

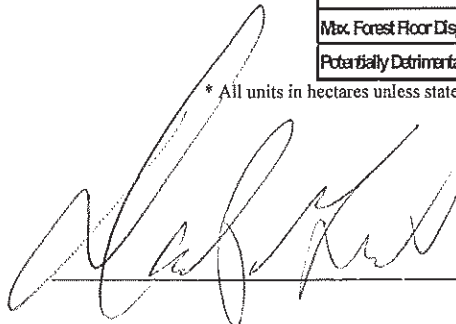
COMMENTS:

A total of 0.3 ha of skid/backspar trail (non-bladed) has been added to the block.

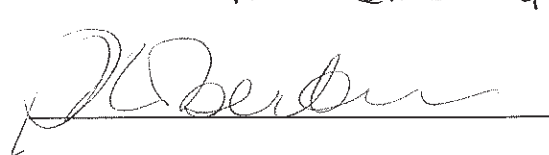
Soil disturbance figures for this block are revised as follows:

Standard Unit*	1			2			3			4			TOTAL
Gross Area			64			126			140			40	37.0
NP Natural			0.0			0.0			0.0			0.0	0.0
NCBR			0.0			0.0			0.0			0.0	0.0
Reserve Area			0.0			0.0			0.0			1.7	1.7
	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	0.2	0.0	0.2	0.7	0.0	0.7	0.8	0.0	0.8	0.3	0.0	0.3	2.0
Landings (conventional)	0.1	0.0	0.1	0.8	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Landings (roadside areas)													0.0
Excavated Skid/Backspar Trails													0.0
Net Area to Reforest			6.1			11.4			13.2			2.0	32.7
Soil Dist. Rds & Landings (%)			-			-			-			-	7.0
Excavated Skid/Backspar Trails			0.0			0.0			0.0			0.0	0.0
Skid/Backspar Trail Area			0.1			0.1			0.1			0.0	0.3
Other Detrimental Disturbance			0.5			0.4			0.5			0.1	1.5
Max. Forest Floor Displacement (%)			30			25			25			25	26
Potentially Detrimental Dist. (%)			9.8			4.4			4.5			5.0	5.5

* All units in hectares unless stated otherwise. Spur Road Width = 13.5 m, Excavated/Bladed Skid Trail Width = 4.0 m.


97-FEB-24

David Gill, Repap BC, Carnaby Operations

Approval DATE 97/02/26


District Manager, Kispiox Forest District

The only change required in the Logging Plan for these amendments is the shift in harvesting system areas: removing 1.6 ha "Cable" and adding it to the "Conventional Winter". Furthermore, the 1.6 ha harvesting system change (Cable to Conventional Winter) is only 2% (ie., < 10%) of the Cutting Permit area. No further Deactivation is necessary as none of the proposed trails require blading, designated crossings, nor will they be subjected to excessive compaction.

Please consider the proposed amendments separately should one take longer than another. Your earliest attention to this matter will be appreciated as the amendments will result in a reduced potential for site degradation and an increase in harvesting production.

If you have any questions, please contact the undersigned.

Yours truly,
REPAP BRITISH COLUMBIA INC.
Carnaby Lumber Operations

A handwritten signature in dark ink, appearing to read "F. Barbosa", written in a cursive style.

Fernando Barbosa
Area Supervisor



C.P. 501
Bik. 9

FILE COPY

AMENDMENT: LEGEND

EXISTING "CABLE GROUND"
(APPROVED)

PROPOSED ADDITIONAL "CONVENTIONAL WINTER GROUND" (FORMERLY CABLE)

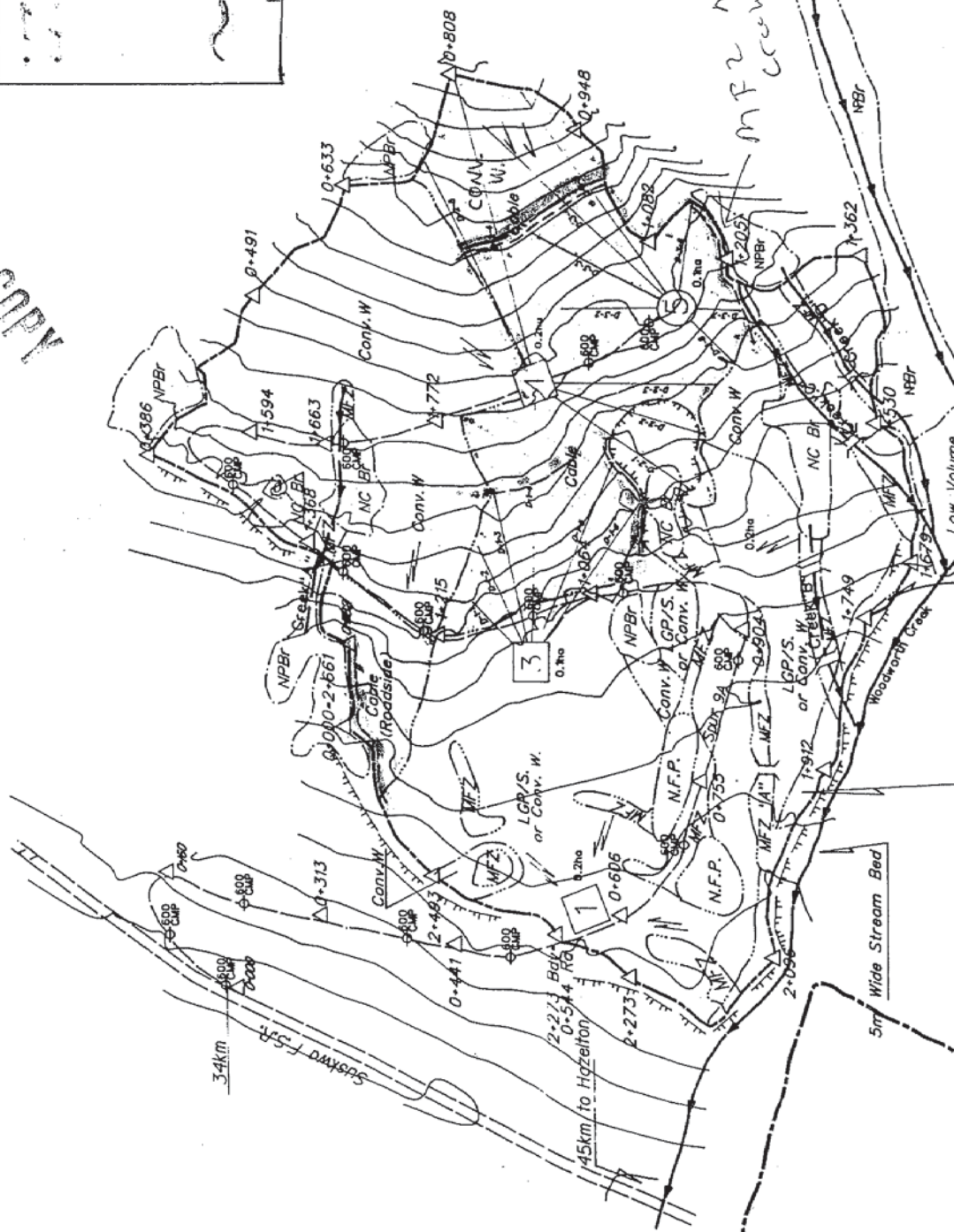
PROPOSED ADDITIONAL BIS/SUID
TRAIL LOCATION (NON-BLADED)
minimum 1.0 m roadable, winter only

APPROVED

57-20-75

Beitrag

Mr F R W
Mrs + Mr W
on tabled or
contrasting
trail.

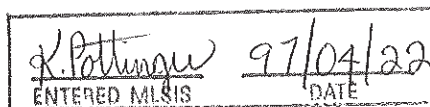
Page 78
FNR-201



December 04, 1996

opening # 93M 045 042

District Manager
Ministry of Forests
Box 215
Hazelton, B.C.
V0J 1Y0



Attn.: Ron Cotton, R.P.F. Tenure Administration Officer

Re: Logging plan amendment A-16831 CP 501-09

Dear Ron:

As per our conversation the other day, please accept an application to delete landing number 2 from CP 501, block 9. The landing will not be built. A revised logging plan map is attached. As a result of not building Landing 2, an SP amendment is also attached. If you have any questions, please call.

Yours truly,

REPAP BRITISH COLUMBIA INC.,
CARNABY OPERATION

John W. McNutt, M.Sc.F.
Area Superintendent

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

ADMINISTRATIVE INFORMATION

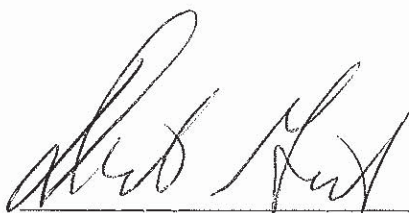
REGION	DISTRICT	TSA	LICENCE	C.P.	BLK	GROSS AREA	NP NAT (ha)	NP UNN (ha)	RES AREA (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	9	37.0	0.0	2.6	1.7	0.0	32.7
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M.045		BC92094 55, 56		Natlan		920 - 1120 m		T. Johnson		July 21, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species ≤ 17.4 centimetres diameter at breast height (1.3 m). Advance regeneration includes all layer 2, 3, and 4 trees.

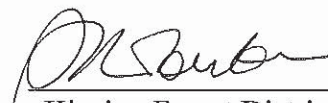
COMMENTS:

Landing #2 has been deleted from the logging plan. Landing size restrictions of 0.2ha for landings 1 and 4, and, 0.1ha for landings 3 and 5 reduce the total disturbance for permanent access structures to 2.6ha. (2.0ha for roads and 0.6ha. for landings) from 2.9ha. under the original prescription.

Under the original prescription one landing was prescribed for rehabilitation. As soil disturbance due to roads and landings remains at 7.0% under this amendment, the requirement for rehabilitation is removed.

 96-Dec-03
David Gill, RPF

Repap B.C., Carnaby Operations

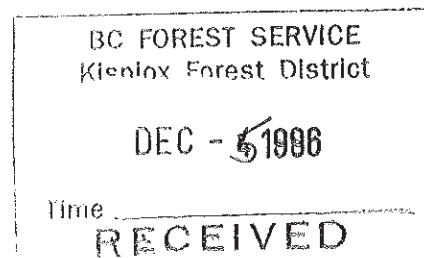
 Jan 13/97
Kispiox Forest District



THE
1996-1997
ANNUAL REPORT
OF THE
BC FOREST SERVICE
Klennox Forest District

The Klennox Forest District is a large and diverse area of forest land. It is home to a wide variety of plant and animal life, and is a valuable resource for the people of British Columbia. The Klennox Forest District is a large and diverse area of forest land. It is home to a wide variety of plant and animal life, and is a valuable resource for the people of British Columbia.

The Klennox Forest District is a large and diverse area of forest land. It is home to a wide variety of plant and animal life, and is a valuable resource for the people of British Columbia. The Klennox Forest District is a large and diverse area of forest land. It is home to a wide variety of plant and animal life, and is a valuable resource for the people of British Columbia.



Setting Map

F.L. A16831
C.P. 501
Blk. 9



Gr. Area 37.0ha
Net Area 32.7ha

NP Nat. 0.0 ha
NP UNN. 2.6 ha

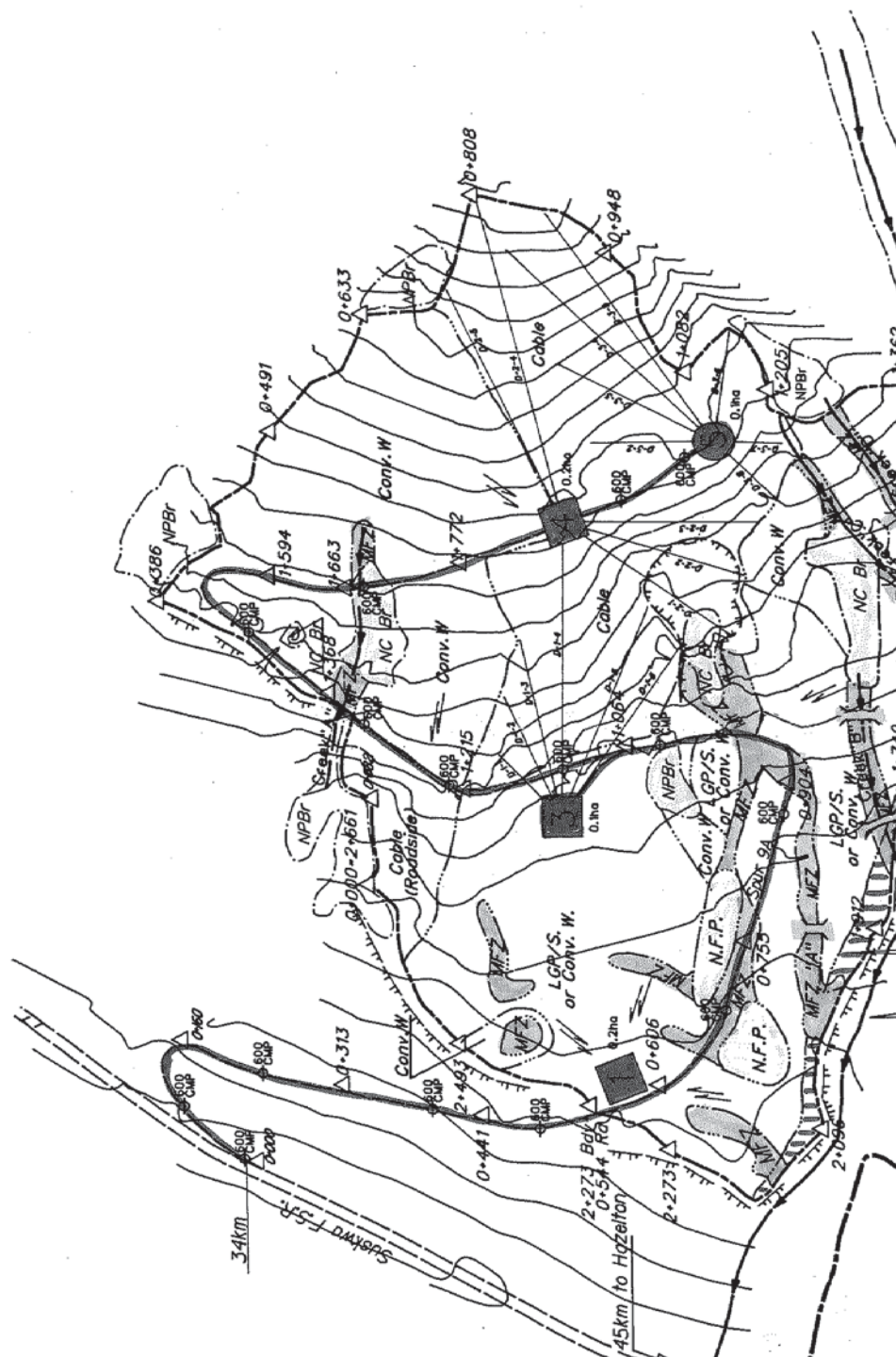
Chart: Natan
Location:

LEGEND:

- Roads (Built)
- Roads (Located)
- Culverts
- Landings (Conv/Cable)
- Skid/BS Trail
- Skid Bridge
- Skid Direction
- Block Boundary
- Harvest Sys. Bdy.
- Timber Type Line
- Slope (Percent)
- Contours
- Creek (Persistent)
- Creek (Ephemeral)
- Embankment
- Break
- Ridge
- Gully
- Rock
- Swamp
- Tree Swamp
- Non-commercial
- Blowdown
- Slide
- Slash Pile
- NCCAP, Br
- Disturbance
- Regen.

History

Page 82
Site Prep.
SENR-2014-090
Disturbance
Regen.



REPAP BRITISH COLUMBIA INC. CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK.	GROSS AREA (ha)	NP NAT (ha)	RES AREA (ha)	NP UNN (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	09	37.0	0.0	1.7	3.2	0.4	32.7
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M.045 - 0412		BC92094 55-56		Suskwa FSR		920-1120m		T. Johnson		July 21, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species < 17.5 centimetres diameter at breast height (1.3 m).

MANAGEMENT OBJECTIVES

The management objectives identified below will ensure that the long term productivity of the following resources is maintained and protected over the course of the next rotation.

Timber:

- to establish a future crop composed of species ecologically adapted to the site.
- to maintain the diversity of conifer species found in the existing stand.
- to produce a future crop of balsam, spruce, and pine, sawlogs on a 100 to 120 year rotation.
- to manage the future crop to produce a minimum merchantable volume of 200 cubic metres per hectare at rotation.

Water:

- to maintain the water quality of all seasonal creeks with 10 metre machine free zones in which all windfirm non-merchantable trees will be left standing in ground based harvest areas.
- to provide root structures which will stabilize stream banks and reduce erosion.
- to maintain drainage patterns of all seasonal creeks and seepage areas by crossing at designated points in ground based harvest areas.

Wildlife:

- to leave the brush patches in the block undisturbed.
- to provide limited visual cover along all seasonal creeks by retaining non-merchantable trees within the machine free zones and, where feasible, along creeks in cable units.
- to improve the structural diversity of the future stand by retaining clumps of poles and saplings where feasible.

REPAP BRITISH COLUMBIA INC. CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK.	GROSS AREA (ha)	NP NAT (ha)	RES AREA (ha)	NP UNN (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	501	09	37.0	0.0	1.7	3.2	0.4	32.7
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M.045 - 042		BC92094 55-56		Suskwa FSR		920-1120m		T. Johnson		July 21, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species < 17.5 centimetres diameter at breast height (1.3 m).

MANAGEMENT OBJECTIVES

The management objectives identified below will ensure that the long term productivity of the following resources is maintained and protected over the course of the next rotation.

Timber:

- to establish a future crop composed of species ecologically adapted to the site.
- to maintain the diversity of conifer species found in the existing stand.
- to produce a future crop of balsam, spruce, and pine, sawlogs on a 100 to 120 year rotation.
- to manage the future crop to produce a minimum merchantable volume of 200 cubic metres per hectare at rotation.

Water:

- to maintain the water quality of all seasonal creeks with 10 metre machine free zones in which all windfirm non-merchantable trees will be left standing in ground based harvest areas.
- to provide root structures which will stabilize stream banks and reduce erosion.
- to maintain drainage patterns of all seasonal creeks and seepage areas by crossing at designated points in ground based harvest areas.

Wildlife:

- to leave the brush patches in the block undisturbed.
- to provide limited visual cover along all seasonal creeks by retaining non-merchantable trees within the machine free zones and, where feasible, along creeks in cable units.
- to improve the structural diversity of the future stand by retaining clumps of poles and saplings where feasible.

Landscape:

- to reduce the visual impact of clearcutting by leaving brush patches, non-merchantable trees within the machine free zones along seasonal creeks, and clumps of regeneration.

SITE DESCRIPTION**Ecological Classification: ESSFwv (June 1993)**

TU	ST	GROSS AREA (ha)	NET AREA (ha)	SITE SERIES	EDAPHIC GRID M/N	SITE INDEX @ 50 yrs	SOIL DESCRIPTION								
							HUMUS FORM	LFH (cm)	SOIL GROUP	SOIL HOR	DEPTH (cm)	SOIL TEXT	COARSE FRAG %	DRAIN	SEEP DEPTH
1	A	6.4	6.2	01	4/C	11	Mor	5.0	Podzol	Ae Bfhj Bf	0-10 10-17 17+	L L L	40 40 40	Moderate Rapid	>52cm
2	B	12.6	11.3	05	5/D	12	Mor	6.0	Podzol	Ae Bf Bm	0-6 6-15 15+	fSL fSL fSL	50 50 50	Rapid	>53cm
3	C	14.0	13.2	06	5/E	16	Mor	6.0	Brunisol	Ah Bm C	0-5 5-20 20+	C C CL	40 40 40	Moderate	>54cm
4	D	2.9	2.0	09	7/D	7	Mor	4.0	Gleysol	Oh Cg	0-4 4+	C C	30	Poor	>50cm
	E	1.1	0.0	51	6/E	0	Mull	5.0	Brunisol	Ah Bm	0-8 8+	CL CL	65 65	Moderate	30cm

Topography:

TU	SLOPE DESCRIPTION					WATERCOURSE SPACING / 100m
	AVE %	ASPECT	LENGTH	UNIFORM	FAILURES	
1	33	SW	Long	Broken	None	0
2	45	SW	Short	Uniform	None	0
3	33	SW	Short	Uniform	None	0
4	5	SW	Short	Broken	None	0

HARVESTING CONSIDERATIONS

Silviculture System: Manage all treatment units using an even-aged clearcut silviculture system and leave non-commercial brush patches undisturbed. Alternative silviculture systems are not prescribed for this block because the advance regeneration is patchy. The northern section of Stratum A contains acceptable poles which will be left standing where operationally feasible. In addition there are no overriding integrated resource management constraints which would support the use of alternative systems.

Summary of Existing Stand Structure

TU	Layer 2 Poles (sph)	Vigour, % Release, Leader Height (cm)	Layer 3 Saplings (sph)	Vigour, % Release, Leader Height (cm)	Layer 4 Regen (sph)	Vigour, % Release, Leader Height (cm)
1	300	Low, 10%, 3cm	300	Low, 20%, 4cm	800	Good, 70%, 7cm
2	300	Low, 30%, 5cm	200	Moderate, 40%, 5cm	200	Low, 10%, 5cm
3	50	Low, 0%, 0cm	100	Moderate, 20%, 4cm	0	
4	50	Good, 60%, 10cm	200	Low, 8%, 10cm	300	Low, 30%, 3cm

Leave Tree Specs: Within machine free zones all windfirm non-merchantable trees will be left standing. Where clumps of acceptable regeneration are found, and it is operationally feasible to skid or yard around them, they will be retained to add structural diversity to the future stand. No cottonwood were noted on this block; however, if they are found during the course of falling they will be retained as wildlife trees.

Harvest Method and Constraints: Harvest this block using a combination of hand and mechanical falling and ground based skidding and cable logging. **TU 1, 2:** These units encompass the majority of the steeper slopes which will be harvested with cable systems. No seasonal operational constraints are placed on operation of cable systems. The gentler slopes of the unit will be harvested using ground based equipment. Use low ground pressure equipment operating on dry summer soils, or conventional ground based equipment operating in the winter on soils frozen to a depth of greater than 15 centimetres, or a minimum snowpack of 1 metre. **TU 3:** This unit will be harvested with ground based equipment predominantly. Winter operations will be conducted using conventional equipment operating on soils frozen to a depth of greater than 15 centimetres or a minimum snowpack of 1 metre. Small areas with steeper slopes will be harvested with cable systems. No seasonal constraints are attached to cable operations. **TU 4:** Harvest this unit by long lining logs from the drier ground of TU 2 or 3 if operations are completed in the summer. If the unit is harvested in the winter, operations will be conducted using conventional equipment on ground frozen to a depth of greater than 15 centimetres or a snowpack of at least 1 metre. **TU 1, 2, 3:** In areas designated for cable harvest, wood will be hoe chunked to lead where deflection is poor. Hoe chunking will be completed on dry soils in the summer, soils frozen to a depth of 15 centimetres, or a minimum snowpack of 1 metre. Harvest system boundaries are identified on the accompanying logging plan.

Start: Winter 1996.

Finish: Summer 1996.

Utilization Standards: Kispiox District close utilization standards.

Opening Size and Configuration: This opening conforms with the size and location identified in Repap's Development Plan for the Natlan Chart Area. The opening is determined on the south side by the break above Woodworth Creek, on the east by operational constraints of block size and skidding/yarding distance, on the north by the road location and brush patches and on the west by the topographic break above the mainline.

Block Access: This block is located 47 kilometres north of Hazelton by road. Access to the proposed block is gained from the Suskwa FSR at 38.5 kilometre. A total of 2.0 kilometres of road will be constructed to access the block.

Culverts: Culverts will be installed and maintained to ensure that patterns of downslope drainage are not significantly altered. See the accompanying logging plan map for culvert locations and sizes.

Skid Trails: Skid trails will be constructed as per the site disturbance standards below. Where trails cross machine free zones or seepage areas, temporary skid bridges will be constructed and removed upon completion of logging.

SITE DISTURBANCE

TU	SOIL DEGRADING PROCESS	HAZARD RATING	CONTROLLING SITE FACTORS
1	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Moderate Moderate High Moderate Moderate	Medium loam soils, moderate to steep slopes, and a thin forest floor.
2	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	High Moderate High High High	Coarse fine sandy loam soils, moderate slopes, and a subhygric moisture regime.
3	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Moderate High Moderate High	Medium textured clay soils, moderate slopes, thin forest floor, and a subhygric moisture regime.
4	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Low Moderate Moderate High	Medium textured clay soils, gentle slopes, thin forest floor, and a subhydryic moisture regime.

Measures To Reduce Site Degradation: To meet the site degradation requirements, landings will be between 0.1 and 0.2 hectares. Upon completion of road construction, all cuts and fills will be seeded to reduce erosion and sedimentation. Upon completion of logging, all secondary haul roads and bladed skid trails will be waterbarred at spacings determined by their gradient and surface erosion hazard.

SOIL DISTURBANCE STANDARDS

Treatment Unit ¹	1			2			3			4			TOT
Gross Area			6.4			12.6			14.0			4.0	37.0
NP Natural			0.0			0.0			0.0			0.0	0.0
NCBR			0.0			0.0			0.0			0.0	0.0
Reserve Area			0.0			0.0			0.0			1.7	1.7
NP Unnatural	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	0.2	0.0	0.2	0.7	0.0	0.7	0.8	0.0	0.8	0.3	0.0	0.3	2.0
Landings (conventional)	0.1	0.0	0.1	0.8	0.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Landings (roadside work areas)			0.0			0.0			0.0			0.0	0.0
Bladed/Excavated Trails			0.0			0.0			0.0			0.0	0.0
Other (pits, quarries etc.)			0.0			0.0			0.0			0.0	0.0
Net Area to Reforest			6.1			11.4			13.2			2.0	32.7
Soil Dist. Rds & Lndgs (%)													7.0
Skid Trail Area													
Backspear Trail Area													
Dispersed Dist.			0.6			0.5			0.6			0.1	
Potentially Detrimental Dist. Rds & Trails (%)			9.8			4.4			4.5			5.0	5.5
Forest Floor Disp.			30			25			25			25	

1: All units in hectares unless stated otherwise.

Mainline Road Width: 15.0 m
 Spur Road Width: 13.5 m
 Conventional Landing Size: 0.2ha
 Cable Landing: 0.1 ha
 Skid Trail Width: 4.0 m

To meet site degradation guidelines landing 1 will be rehabilitated. Landing 1 is selected for rehabilitation because soils are sufficiently deep for ripping and because it is a productive growing site. Prior to commencement of harvest, all forest floor material and the top 30 centimetres of mineral soil will be stripped from the running surface of the landing and piled adjacent to the area. Upon completion of logging, all skid trails entering or leaving the landings will be cross ditched to ensure excessive water is not directed onto the landing surface. To increase future productivity, ash from slash piles will then be redistributed across the landing surface if slash piles have been burnt. The running surface of the landing will be ripped and the piled surface material will then be spread across the landing surface and seeded with clover to increase the nitrogen content of the soil. Landings will then be planted to pine.

OTHER RESOURCES

Range: This area is not within an MOF range unit. Currently there is no range use in the Natlan Chart Area and, with the low forage potential present, future use is unlikely.

Landscape/Recreation: Visual quality objectives have not been established for this area. The visual sensitivity will be low because there are no identified viewpoints in the area. The block may be visible from Natlan Peak or the ski area at 28 kilometre on the Suskwa FSR. From either area, the block will be in the background of the viewshed.

This block contains the following biophysical feature - E³, coniferous forest. Currently there is no recreational use of the area. Once access is completed, feature related activities may consist of hunting, and snowmobiling.

Water Quality/Fisheries: Maintainance of the water quality of creeks within the block is important because they are tributaries to Natlan Creek 400 metres to the east. Natlan Creek is an S2 fish bearing creek.

Woodworth Creek adjacent to the southern boundary of the block is an S3 fish bearing creek. The water quality of this creek will be managed with a 40 metre riparian management area. Within the riparian management area, a 20 metre riparian reserve will be established. The riparian reserve is generally outside the block boundary but in the vicinity of Station 1+912 it falls within the block. In this area, it will be ribboned as a reserve area. Within the remainder of the riparian area all merchantable trees will be harvested according to the harvest methods and constraints for the respective treatment unit. Non-merchantable trees will be left to feather the edge of the riparian reserve. The area of the feathered cut is delineated by the partial cut ribbon on the accompanying logging plan.

There are four seasonal S6 creeks - Creek A in the north, Creek B, C, and D in the south. Creeks A, B, C, and D have 60 centimetre channels with moderate sediment hazards. Water quality in these creeks will be managed using a 20 metre riparian management area in which a 10 metre machine free zone will be ribboned adjacent to the creek. The additional 10 metres of the riparian management area will be managed as per the harvest methods and constraints for respective treatment units. Machine free zones will ensure sedimentation is minimized by confining skidding to designated crossings and by stabilizing drainage patterns with retention of non-merchantable stems.

Wildlife: Wildlife use of this block is low. The following wildlife species - wolf, bear, moose, a number of rodent species, and a variety of bird species - are known to inhabit the area. Moose tracks were noted sporadically throughout the block and a grizzly bear was sighted in the area. Moose browsing was noted in the brush patch in the north corner of the block. Habitat mapping completed by Wildfor Consultants has identified this area as encompassing subalpine fir - azalea, and subalpine fir - huckleberry habitat units with low to moderate grizzly forage value.

At a stand level TU 3 is representative of the subalpine fir devil's club habitat unit and is a moderate value source of spring and summer grizzly forage. The quality of this habitat unit will be reduced by logging. Prior to logging, assess the importance of this habitat unit at a landscape level and develop management plans which will ensure that adequate forage is spatially and temporally distributed throughout the landscape. To ensure the provision of forage throughout the landscape, alternative reforestation scenarios could include the reduction of target stocking standards and/or the adoption of cluster planting.

To maintain the integrity of habitat in the scattered brush patches, they will be left undisturbed. The retention of non-merchantable trees in the machine free zones and the retention of regeneration patches will provide additional visual cover for animals foraging on the block. Retention of patches and regeneration will also increase the structural diversity of the future stand and, consequently, increase the variety of habitat niches available for wildlife.

Traplines/Guide Territories: This area lies within Trapline 608T033 and Guide Territory 603G001. Prior to commencement of logging operations, the owners of the above licences will be notified of Repap's intent to harvest this area.

Mining Claims: No mining claims or survey lines were noted in the area.

Aboriginal Activity: This block lies within the claimed traditional house territory of Lutkudziiwus. Prior to logging, the traditional house chief will be contacted regarding Repap's plans to harvest this block. No aboriginal activities were noted in this area. If historical sites are found during the course of logging, activities will cease until an assessment of the site is completed and a protection plan is implemented.

PROTECTION

Hazard Abatement: Once logging is completed, the slash hazard on this block will be moderate. Where possible skid whole trees to landings where tops and other debris can be piled and burnt the fall after harvest (H+1). The slash load throughout the block will be assessed post harvest. Areas of excessive slash loading will be piled and burnt after waste surveys have been completed.

Pest Treatment: Timber on this block is infected with *Echinodontium tinctorium* and *Phellinus pini*. These fungi will not be a problem in the future stand because they typically cause losses in mature forests. Scattered balsam bark beetle attacks were noted throughout the block. Clearcutting will remove the brood stock of beetles in the block. Adjacent timber will continue to produce brood stock but, because the newly planted seedlings will be young and vigorous, they should be relatively resistant to beetle attack. *Tomentosia* was not found in the block. However, because *Tomentosia* is endemic throughout the Kispiox Forest District, spruce will be kept to less than 40 percent of trees planted. Pest damage will be assessed during surveys conducted at H+3 and H+6. No particular problems are anticipated.

Adjacent Area: Timber adjacent to the block will serve as a continuing source of brood stock of balsam bark beetles because the adjacent stands are balsam and balsam hemlock forests approximately 300 years old.

SILVICULTURE PLAN

Site Preparation:

TU	SITE PREPARATION - PREFERRED	TIMING	SITE PREPARATION - ALTERNATIVE
1	Hand screef and direct plant	H+1	Light piling / Hand held spot scarifier
2	Hand screef and direct plant	H+1	Light piling / Hand held spot scarifier
3	Hand screef and direct plant	H+1	Light piling
4	Hand screef and direct plant	H+1	Raised microsites

Upon completion of logging, conduct a plantability survey to determine the number of available plantable spots. If the number of plantable spots falls below 1100 per hectare, site preparation will be required. The need for site preparation is not anticipated.

TU 1: If site preparation is required, use low ground pressure machinery. Light piling is recommended to improve planter access in high slash areas. **TU 2:** If site preparation is required, use low ground pressure equipment to improve planter access with a light piling treatment. To reduce the compaction hazard of the fine sandy loam soils, site preparation will be completed on dry soils in the summer. **TU 3:** If site preparation is required, use low ground pressure machinery. Light piling is recommended to improve planter access in high slash areas and control vegetation. Operations will be completed on dry soils in the summer to reduce the compaction hazard of the clay soils. **TU 4:** If site preparation is required, use low ground pressure machinery to create raised microsites which will improve the soil temperature and moisture regime of planted seedlings. Because the compaction hazard of the clay soil is high machinery will operate from the drier adjacent units where feasible. On ground too steep for machines, handheld power screefers will be used.

Reforestation:

TU	NET AREA (ha)	REGEN METH	SPECIES	STOCK TYPE & AGE	SOW (yr)	PLANT (yr)	STEMS / HA	AMOUNT (k)
1	6.2	Plant	Bl	PSB 313 1+0	H	H+1	600	3.7
			Se	PSB 313 1+0	H	H+1	500	3.1
			Pl	PSB 313 1+0	H	H+1	300	1.9
2	11.3	Plant	Bl	PSB 415 1+0	H	H+1	850	9.6
			Se	PSB 415 1+0	H	H+1	550	6.2
3	13.2	Plant	Bl	PSB 415 1+0	H	H+1	850	11.2
			Se	PSB 415 1+0	H	H+1	550	7.3
4	2.0	Plant	Bl	PSB 415 1+0	H	H+1	850	1.7
			Se	PSB 415 1+0	H	H+1	550	1.1
Total								45.8

In TU 4 target seedlings for raised microsites where the seedling environment will be more favourable. If vegetative cover is greater than 30 percent at the time of planting, alternative reforestation scenarios could include substitution of PSB 415 for 313 or PSB 615 for 415. Other alternative scenarios could include altering the relative percentages of species planted and inclusion of pine up to 20 percent in all units but TU 4. Spruce stocking should not exceed 40 percent of the target stocking to reduce the risk of *Tomentosis* infection. To ensure the provision of forage throughout the landscape, an additional alternative reforestation scenario could include the reduction of target stocking standards and/or the adoption of cluster planting in TU 3 Stratum C.

Regeneration surveys will be conducted at H+3. Blocks will be surveyed using the even-aged survey methodology and patches of advance regeneration will be tallied as acceptable well-spaced trees if they are acceptable layer 2, 3, or 4 trees. Layer 1 trees will be tallied as ghost trees and will not contribute to the stocking of the site.

Seed Source: Seedlot availability is as per the five year development plan, 1995-1999. Prior to harvest, a seed source will be established for all species prescribed. All seed or seedlings used to implement this prescription will be ecologically adapted to the site and used in accordance with the Provincial Seed Transfer Guidelines.

Brushing and Weeding:

TU	BRUSH HAZARD	BRUSH SPECIES (%cover/height cm)	PREFERRED TREATMENT	ALTERNATIVE TREATMENT	TIMING
1	Low	Fireweed 50/70cm, false azalea 5/80cm, @ H+6	No Treatment	Manual or Chemical ground	H+9-12
2	Moderate	Fireweed 50/110cm, oak fern 20/30cm, thimbleberry 20/70cm, false azalea 5/80cm @ H+6	Manual	Chemical ground	H+7-12
3	High	Fireweed 60/120cm, oak fern 40/60cm, spiny wood fern 10/50cm, devil's club 15/60cm @ H+6	Manual	Chemical ground	H+7-12
4	High	Grass 30/30cm, lady fern 10/20cm, black twinberry 15/130cm, devil's club 10/80cm @ H+6	Manual	Chemical ground	H+7-12

The impact of competing vegetation on seedling performance will be assessed during surveys conducted at H+3 and H+6. If either survey indicates that less than 900 seedlings per hectare will meet free growing criteria within the time frame listed below, either manual or chemical brushing will be conducted.

Manual treatment will consist of removing all vegetation greater than half the height of the tree from within a 1.0 metre radius around each crop tree. Assessments of resprouting will be completed the fall after treatment. A repeat treatment will be required if competing vegetation has overtopped the tree within this time period.

TU 1, 2, 3: Prescription of a ground based chemical treatment is acceptable. Ten metre pesticide free zones will be delineated around all seasonal creeks and seepage areas prior to treatment. Chemicals will be applied selectively to competing vegetation around encumbered crop trees. Important wildlife forage plants will not be treated. Manual brush control will be used within the pesticide free zone. **TU 4:** Chemical treatment of brush is not acceptable because seepage areas are frequent.

Free Growing Stocking Standards:

TU	Net Area (ha)	Species		Target Prefer Accept ¹ (WSsph)	Min. Prefer Accept ¹ (WSsph)	Min. Prefer ¹ (WSsph)	Reg Del (yrs)	Early (yrs)	Late (yrs)	Min FG Ht (m)	Crop Height vs. Comp	Max Dens (sph)	Post Spacing	
		Preferred	Acceptable										Max. (WSsph)	Min. (WSsph)
1	6.2	Bl Se Pl ⁵	Hm	1200	700	600	7	12	20	1.6 ² 0.8 ³	125	5000	1200	700
2	11.3	Bl Se	Pl ⁵	1200	700	600	4	12	20	1.6 ² 0.8 ³	125	5000	1200	700
3	13.2	Bl ⁶ Se ⁶	Pl ⁵	1200	700	600	4	12	20	1.6 ² 0.8 ³	125	5000	1200	700
4	2.0	Bl ⁶ Se ⁶		1000	500	400	4	12	20	0.6	125	5000	1200	700

1: Minimum inter-tree spacing = 2.0 m.

2: Free growing height pine.

3: Free growing height all other species.

4: Free growing height all species.

5: Risk of snow damage.

6: Risk of frost damage.

If surveys conducted at H+6 indicate conifer densities exceed the maximum density of 5000 stems per hectare, the stand will be spaced to reduce inter-tree competition. Spacing will be conducted when crown closure is achieved or prior to the latest free growing date. Post spacing densities will be between 1200 and 700 stems per hectare if pest levels are low. If pest surveys indicate significant mortality will occur on this site, spacing densities will be increased to a maximum of 2000 stems per hectare.

Maps Attached:

Ecosystem Map
Treatment Unit Map
Scale 1:5,000

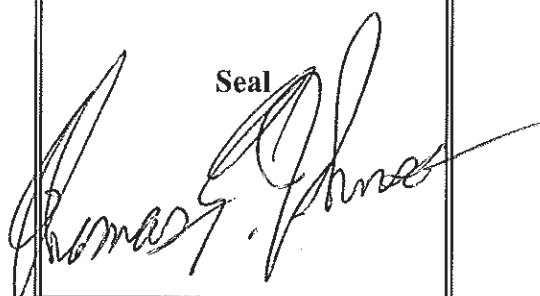
Field Work Completed By: Date:
Tom Johnson RPF July 20, 1995

Licensee Acknowledgement: Date:

 96.04.29

District Manager Approval: Date:

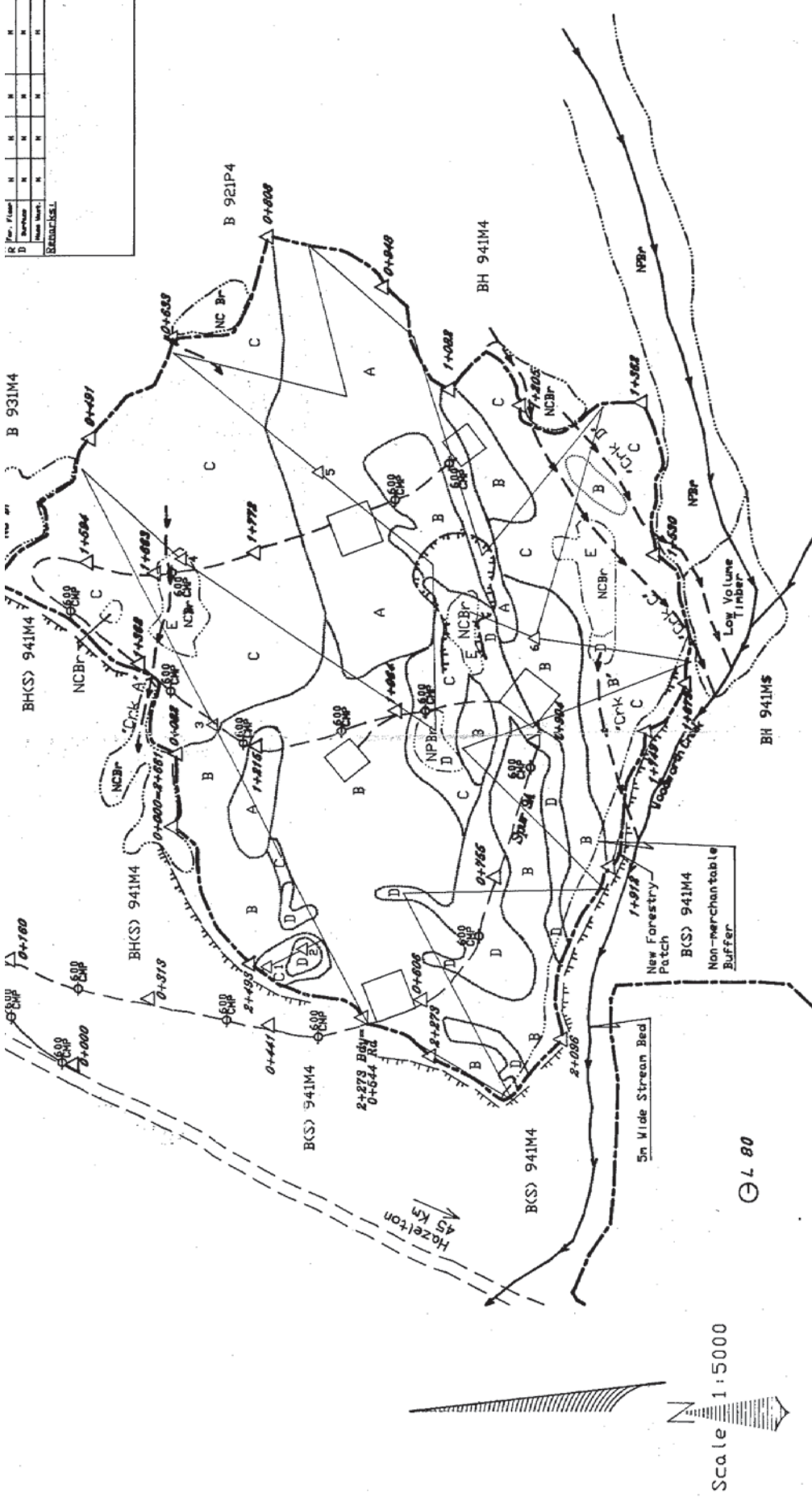
 96/05/10

 Seal
RPF's Signature Thomas E. Johnson
Date Sealed: April 24, 1996

[illegible]

F.L. A16822 C.P. 501 B.L. 09		Gr. Area 37.0ha NP Nat. 0.0ha Net Area 32.7ha NP UNN. 2.6ha	Chart: Upper Nation Location: 34km Susukwa	LEGEND: Roads (Built) ——— Roads (Located) - - - Landings (Conv/Cable) □ ○ Skid/BS Trail --- Skid Bridge (X) Plot Line & Centre —▲— Block Boundary ——— Site Series ——— Stratun/Treatment ——— Harvest System ——— Slope (Percent) — Contours ——— Creek (Persistent) ——— Creek (Ephemeral) ——— Embankment ——— Break Ridge)))) Gully (((((Rock ~~~~~ Swamp * * * Tree Swamp ▲ Non-commercial NCC, NP, Br Blowdown T Slide ——— Slash Pile X	HISTORY Site Prep. ○ Stand Tending ○ Disturbance ○ Regen. ○ Page 05	0001682201-00128 00000000 E.
------------------------------------	--	--	---	---	---	---------------------------------

Rev.	Issue	By	Date
1	Initial	W	11/11/00
2	Revised	W	11/11/00
3	Revised	W	11/11/00
4	Revised	W	11/11/00
5	Revised	W	11/11/00
6	Revised	W	11/11/00
7	Revised	W	11/11/00
8	Revised	W	11/11/00
9	Revised	W	11/11/00
10	Revised	W	11/11/00
11	Revised	W	11/11/00
12	Revised	W	11/11/00
13	Revised	W	11/11/00
14	Revised	W	11/11/00
15	Revised	W	11/11/00
16	Revised	W	11/11/00
17	Revised	W	11/11/00
18	Revised	W	11/11/00
19	Revised	W	11/11/00
20	Revised	W	11/11/00
21	Revised	W	11/11/00
22	Revised	W	11/11/00
23	Revised	W	11/11/00
24	Revised	W	11/11/00
25	Revised	W	11/11/00
26	Revised	W	11/11/00
27	Revised	W	11/11/00
28	Revised	W	11/11/00
29	Revised	W	11/11/00
30	Revised	W	11/11/00
31	Revised	W	11/11/00
32	Revised	W	11/11/00
33	Revised	W	11/11/00
34	Revised	W	11/11/00
35	Revised	W	11/11/00
36	Revised	W	11/11/00
37	Revised	W	11/11/00
38	Revised	W	11/11/00
39	Revised	W	11/11/00
40	Revised	W	11/11/00
41	Revised	W	11/11/00
42	Revised	W	11/11/00
43	Revised	W	11/11/00
44	Revised	W	11/11/00
45	Revised	W	11/11/00
46	Revised	W	11/11/00
47	Revised	W	11/11/00
48	Revised	W	11/11/00
49	Revised	W	11/11/00
50	Revised	W	11/11/00
51	Revised	W	11/11/00
52	Revised	W	11/11/00
53	Revised	W	11/11/00
54	Revised	W	11/11/00
55	Revised	W	11/11/00
56	Revised	W	11/11/00
57	Revised	W	11/11/00
58	Revised	W	11/11/00
59	Revised	W	11/11/00
60	Revised	W	11/11/00
61	Revised	W	11/11/00
62	Revised	W	11/11/00
63	Revised	W	11/11/00
64	Revised	W	11/11/00
65	Revised	W	11/11/00
66	Revised	W	11/11/00
67	Revised	W	11/11/00
68	Revised	W	11/11/00
69	Revised	W	11/11/00
70	Revised	W	11/11/00
71	Revised	W	11/11/00
72	Revised	W	11/11/00
73	Revised	W	11/11/00
74	Revised	W	11/11/00
75	Revised	W	11/11/00
76	Revised	W	11/11/00
77	Revised	W	11/11/00
78	Revised	W	11/11/00
79	Revised	W	11/11/00
80	Revised	W	11/11/00
81	Revised	W	11/11/00
82	Revised	W	11/11/00
83	Revised	W	11/11/00
84	Revised	W	11/11/00
85	Revised	W	11/11/00
86	Revised	W	11/11/00
87	Revised	W	11/11/00
88	Revised	W	11/11/00
89	Revised	W	11/11/00
90	Revised	W	11/11/00
91	Revised	W	11/11/00
92	Revised	W	11/11/00
93	Revised	W	11/11/00
94	Revised	W	11/11/00
95	Revised	W	11/11/00
96	Revised	W	11/11/00
97	Revised	W	11/11/00
98	Revised	W	11/11/00
99	Revised	W	11/11/00
100	Revised	W	11/11/00



F.L. A16831
C.P. 501
Blk. 9



Gr. Area 37.0ha
Net Area 32.7ha

NP Nat. 0.0 ha
NP UNL 2.6 ha

Chart: Nation
Location:

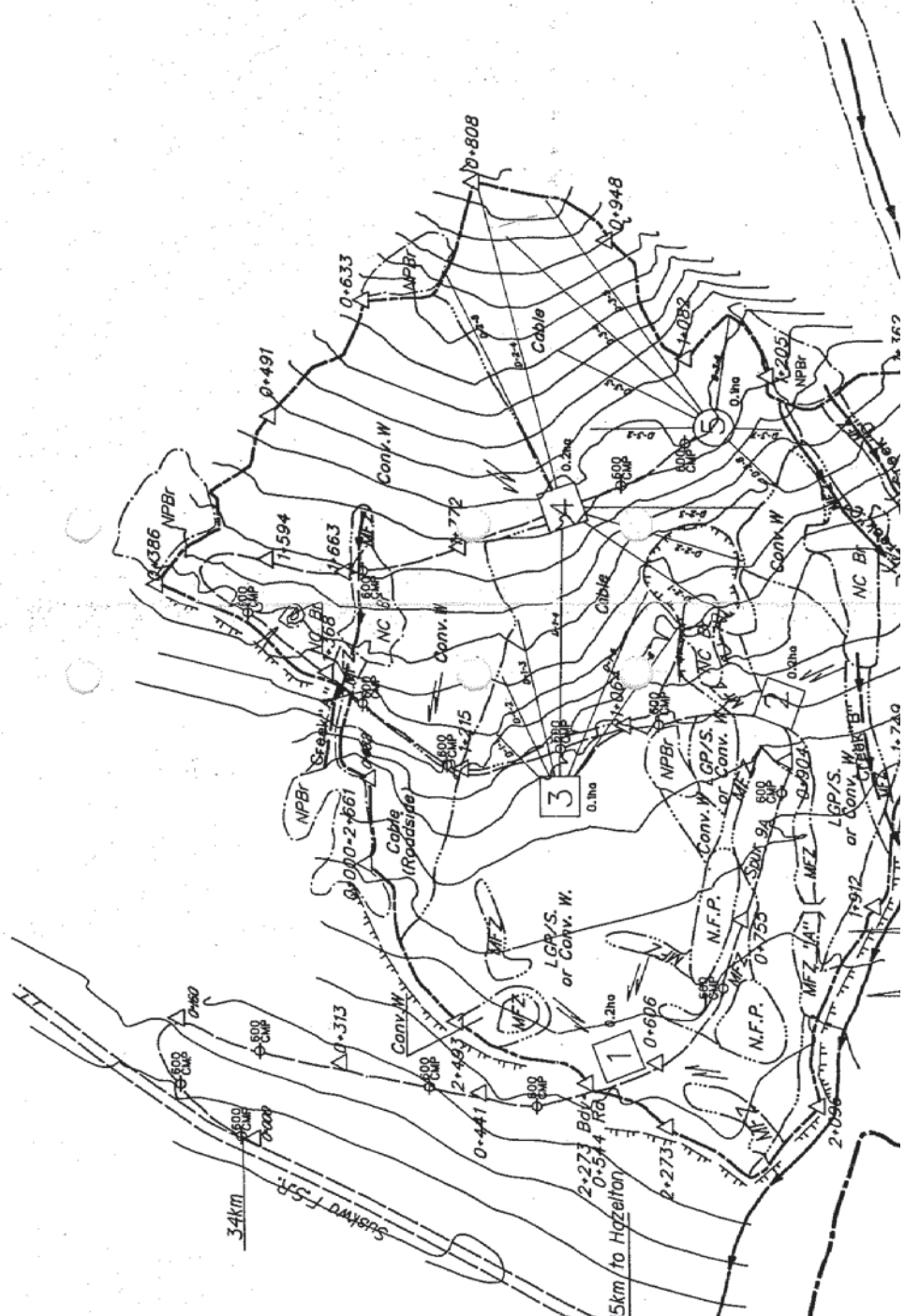
LEGEND:

- Roads (Built)
- Roads (Located)
- Culverts
- Landings (Conv/Cable)
- Skid/BS Trail
- Skid Bridge
- Skid Direction
- Block Boundary
- Harvest Sys. Bdy.
- Timber Type Line
- Slope (Percent)
- Contours
- Creek (Persistent)
- Creek (Ephemeral)
- Embankment
- Break
- Ridge
- Gully
- Rock
- Swamp
- Tree Swamp
- Non-commercial
- Blowdown
- Slide
- Slash Pile
- NCC, NP, Br
- Disturbance
- Regen.

History

Page 97 Site Prep.
Stand NPB 2011-1008
Disturbance
Regen.

Setting Map





Date: 1999 10 05
Page: 1
Userid: KNOTTING

SILVICULTURE
FOREST COVER ATTRIBUTE FORM

Region.... RPR Prince Rupert Forest Region
Opening... 93M 045 0.0 43
Location : EPI50210
Open Cat.. 22-5 Status... APP A
District..... DK1 Kispiox Forest District
Licence No/Blk.... A16831 / 10
Cutting Permit.... 502 FTAS (ha). 92.6
Gross Area (ha)... 92.6 Net..... 42.7

Last Action Date: 1999 09 29

Std. Unit Polygon	Area (ha)	L V	R A	Stook Sts/Typ	M- spp	Species Composition				M- Age	Range	Avg Hght	Ref Yr	Site	St/ha	DBH MSS/ha	M- Stocking	F % CC	Data Spc	Stk Cis	Basal Area R
						%	spp	%	spp	%	Pit										
1	5.4	NP	UNN										1997					N	7		G
3	46.2	MAT	NAT	HW	100					250		25.0	1997	M	350			N	7	20	G
1	4	24.0	IMM	ART	BL	60	SX	40		1	1	.2	1999	M	2215	1		N	7	0 0 20	G
1	4	24.0	S	IMM	ART	BL	54	SX	44	PLI	2	.2	1999	M		1	1156	N	7	20	G
2	5	16.8	IMM	ART	BL	70	SX	30		2	2	.2	1999	M	2354	1		N	7	20	G
2	5	16.8	S	IMM	ART	BL	58	SX	38	PLI	4	.2	1999	M		1	1154	N	7	0 0 20	G
3	6	1.9	IMM	ART	BL	70	SX	30		1	1	.2	1999	M	2360	1		N	7	0 0 20	G
3	6	1.9	S	IMM	ART	BL	56	SX	44		1	.2	1999	M		1	1200	N	7	0 0 20	G
2	.3	NP	NAT										1997					N	7		G

End of Report



MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B' SECTION 35

A.

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES		GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM		

B.

SILVICULTURE															
OBLIGATION		ACTIVITY		OBJECTIVES		FUNDING		COMPLETION DATE		NET AREA TREATED (ha)		RESP		OPENING NO.	
TIMBERMARK	BLOCK	BASE	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM	42.7	L	93M 045 / 0043		
EP1502	10	SU	RG	PLOT	CE	RG		IA	1999	8					
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES		

Regn Debay declared 1999/08

INPUT TO ISIS
9/10/99 KAP.
Date Initials

C. ADMINISTRATION

PREPARED BY	TELEPHONE	DATE		REVIEWED BY	DATE		REGION	DISTRICT
		Y	M		Y	M		
Andre Roy	250-842-6399	1999	09				PR	KI

RECEIVED
TIME _____
SEP 27 1999
MINISTRY OF FORESTS
KISPIOX FOREST DISTRICT

ONE 10/1/99
[REDACTED]

A.

	OBLIGATION		OPENING NO.	PREPARED BY	TELEPHONE NO	DATE		
	TIMBERMARK	BLOCK				Y	M	D
EP1602	10		93M 045/0043	Andre Roy	250-842-5399	1999	9	21

၈၂

S	T	L	R	A	N	K	AREA (ha)	STOCKING	SPECIES COMPOSITION												AGE (yrs)	AGE PLT.	HEIGHT (0.1 m)	CRWN CLOSE (%)	REF YEAR	SITE		DENSITY (stems/ha)	WELL- SPACED (stems/ha)	FREE- GROWING (stems/ha)	RES. TYPE	BASAL AREA (m2/ha)	PEST INFESTATION			
									STATUS	TYPE	SPECIES	%	SPECIES	%	SPECIES	%	SPECIES	%	SPECIES	%						CL.	INDEX						CODE	%	CODE	%
											%	%	%	%	%	%	%	%	%	%																
1	I						46.2	MAT	NAT	HW	100									1997	M	20	350			G										
2	I						0.3	NP	NAT											1997	M	00				G										
3	I						3.4	NP	UNN											1997	M	00				G										
4	I						24.0	IMM	ART	BL	60 SX	40								1999	M	20	2215			G										
5	I						168	IMM	ART	BL	54 SX	44 PL	2							1999	M	20		1156		G										
6	I						168	IMM	ART	BL	70 SX	30								1999	M	20	2354			G										
7	I						1.9	IMM	ART	BL	58 SX	38 PL	4							1999	M	20		1154		G										
8	I							IMM	ART	BL	70 SX	30								1999	M	20	2360			G										
9	I							IMM	ART	BL	56 SX	44								1999	M	20	1200			G										

C. ADMINISTRATION

REVIEWED BY <i>Kate Pattinson</i>	DATE			REGION	DISTRICT
	Y	M	D		
	5	9	10		
				PR	KI

Q.



 RPF SIGNATURE

09/19/23

 DATE

2894

 RPF NO.

RPF SIGNATURE AND SEAL

RECEIVED
TIME _____
SEP 27 1999
MINISTRY OF FORESTS
KISPIOX FOREST DISTRICT

Survey Type: Regen Delay
Scale: 1:10000

**Skeena
Cellulose
Inc.**

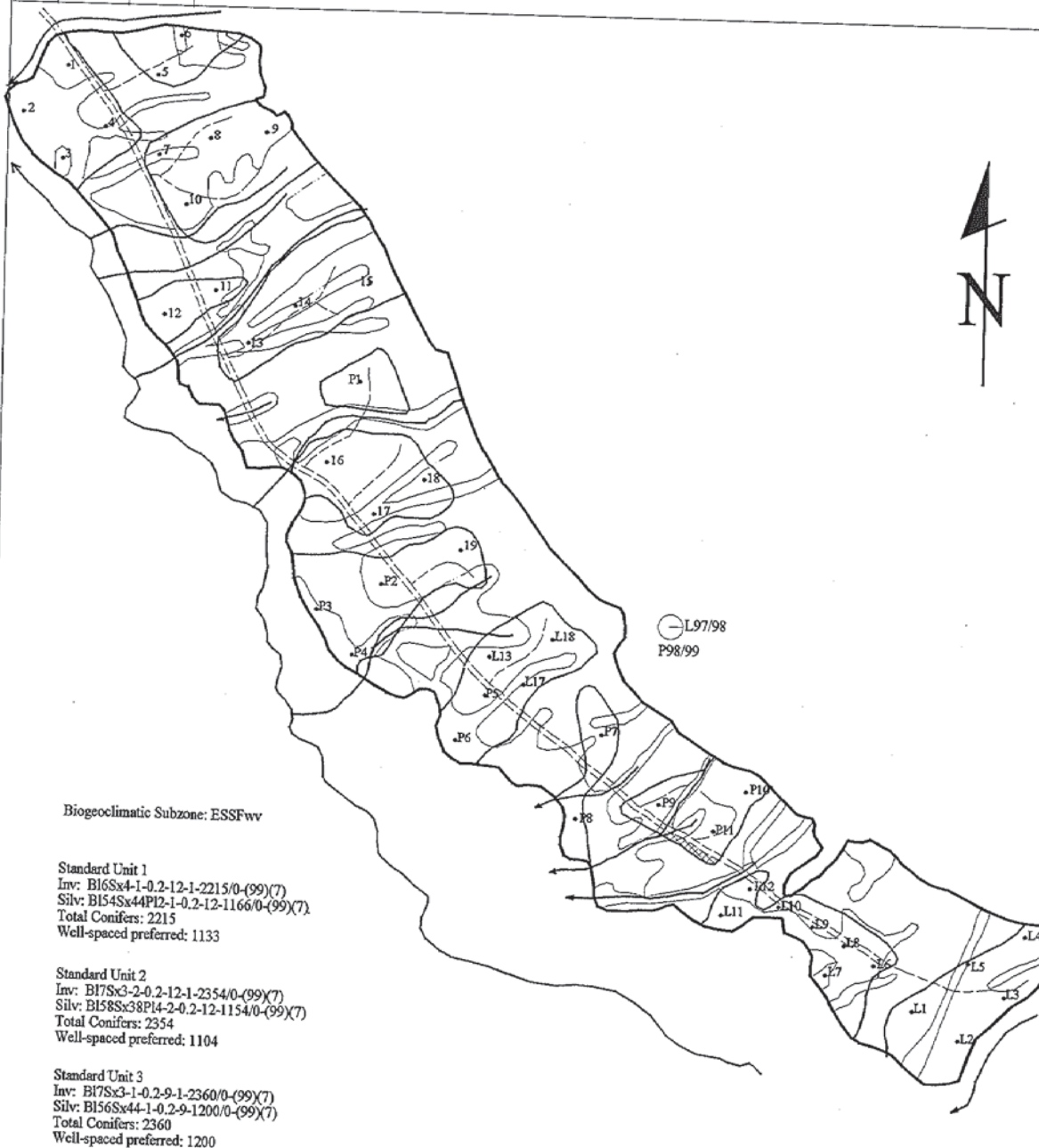


Backwoods Contracting

Block Boundary
 Internal Boundary
 SU Boundary
 Main Road
 Spur Road
 Landing
 Creek

- 4-10 WS Trees
- 0-3 WS Trees

SsU	Area	Status	Treatment Recommendations
1	24.0 ha	SR	Stocking Survey 2001
2	16.8 ha	SR	
3	1.9 ha	SR	



CP: 502 Blk: 10
Chart: Upper Nattan

Gross Area
Net Area Reforested: 42.7 ha

Field Work: LH, SM
Map Drawn: D.Marder
Date Drawn: 4/9/99

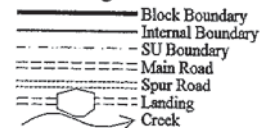
Survey Type: Regen Delay
Scale: 1:10000

**Skeena
Cellulose
Inc.**



**Backwoods
Contracting**

Legend



- 4-10 WS Trees
- 0-3 WS Trees

Standard Unit Map

SsU	Area	Status	Treatment Recommendations
1	24.0 ha	SR	Stocking Survey 2001
2	16.8 ha	SR	
3	1.9 ha	SR	



Biogeoclimatic Subzone: ESSFwv

Standard Unit 1
Inv: B16Sx4-1-0.2-12-1-2215/0-(99)(7)
Silv: B154Sx44P12-1-0.2-12-1166/0-(99)(7)
Total Conifers: 2215
Well-spaced preferred: 1133

Standard Unit 2
Inv: B17Sx3-2-0.2-12-1-2354/0-(99)(7)
Silv: B158Sx38P14-2-0.2-12-1154/0-(99)(7)
Total Conifers: 2354
Well-spaced preferred: 1104

Standard Unit 3
Inv: B17Sx3-1-0.2-9-1-2360/0-(99)(7)
Silv: B156Sx44-1-0.2-9-1200/0-(99)(7)
Total Conifers: 2360
Well-spaced preferred: 1200

MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B' SECTION 35

A.

DENUDATION									
OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES		OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM	

B.

SILVICULTURE															
OBLIGATION		ACTIVITY		OBJECTIVES			FUNDING		COMPLETION DATE		NET AREA		RESP		OPENING NO.
TIMBERMARK	BLOCK	BASE	PL	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM	TREATED (ha)	SPECIES	NUMBER	
EP1502	10	PL	CTAIN			CE			IA	1999	8	20.7	L		93M 0457 0043
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	
35029	BL	16460	40009	SX	9435	40006	BL	6570	40008	SX	3960	40007	BL	3190	39635
														PLI	1475

INPUT TO ISIS
Date 99/09/24 KAP
Initials

C. ADMINISTRATION

PREPARED BY	TELEPHONE	DATE		REVIEWED BY		DATE		REGION	DISTRICT	
		Y	M	D		Y	M	D	PR	KI
Andre Roy	250-842-5399	1999	09	21						

MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B' SECTION 35

A.

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES		GROSS BLOCK AREA (ha)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY MM	COMPLETED YYYY MM	(POST-HARVEST)	

B.

SILVICULTURE													
OBLIGATION		ACTIVITY		OBJECTIVES		FUNDING		COMPLETION DATE		NET AREA TREATED (ha)	RESP	OPENING NO.	
TIMBERMARK	BLOCK	BASE	PL	TECH.	METHOD	1	2	3	SOURCE	YYYY	MM		
EP1502	10	PL	PL	CTAIN		CE			IA	1999	8	L	93M 0457 0043
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SPECIES	NUMBER
35029	BL	16460	40009	SX	9435	40006	BL	6570	40008	SX	3960	BL	3190 39635
													1475

INPUT TO ISIS
Date 99/09/24 KAP
Initials

C. ADMINISTRATION

PREPARED BY	TELEPHONE	DATE		REVIEWED BY		DATE		REGION	DISTRICT
		Y	M	D		Y	M	D	
Andre Roy	250-842-5399	1999	09	21					KI



MAJOR LICENCE SILVICULTURE INFORMATION SYSTEM
ACTIVITY REPORTING -- FORM 'B'

SECTION 35

A. DENUDATION

OBLIGATION		DIST.	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES. TYPE	HARVEST DATES				GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YYYY	COMPLETED MM	YYYY	MM		

B. SILVICULTURE

OBLIGATION		ACTIVITY		OBJECTIVES			FUNDING		COMPLETION DATE		NET AREA TREATED (ha)		RESP		OPENING NO.	
TIMBERMARK	BLOCK	BASE PL	TECH. PL	METHOD CTAIN	1 CE	2 CE	3 CE	SOURCE IA	YYYY	MM	1998	08	22.0	L	93M 045 0.0	- 43
EP1502	10															
SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES	NUMBER	SEEDLOT	SPECIES
14630	PL	1250	40008	SXS	14800	40007	BL	19545								

C. ADMINISTRATION

PREPARED BY	TELEPHONE	DATE	REVIEWED BY	DATE	REGION	DISTRICT
LISA HAMMERSTEDT	(250) 842-5399	Y 9 M 8 D 1 1 2		Y M D	PR	KI



REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

A.

DENUDATION											OPENING NO.	
BLOCK		DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYP	HARVEST DATES					GROSS BLOCK AREA (ha) (POST-HARVEST)
TIMBERMARK	BLOCK						STARTED		COMPLETED			
							YEAR	MONTH	YEAR	MONTH		
EP1 617	19	L	CLEARCT		REMOV	G		1997/01		1997/03	25.3	93M091 0.0 004
EP1 617	18	L	CLEARCT		REMOV	G		1996/11		1997/03	47.3	93M091 0.0 003
EP1 615	14	L	CLEARCT		REMOV	G		1997/01	*	1997/02	24.6	93M0710.0 007
EP1 614	12	L	CLEARCT		REMOV	N		1996/07		1997/01	51.0	93M091 0.0 001
EP1 614	11	L	CLEARCT		REMOV	N		1996/06		1997/01	53.0	93M0910.0 001
EP1 388	89	W	CLEARCT		SALVW	N		1997/05		1997/06	10.1	103P060
EP1 501	08	L	CLEARCT		REMOV	G		1997/01		1997/04	34.4	93M045 041
EP1 501	09	L	CLEARCT		REMOV	G		1996/11		1997/04	37.0	93M045
EP1 611	06	L	CLEARCT		REMOV	N		1993/12		1997/06	51.0	93M081 0.0 002
EP1 612	15	L	CLEARCT		REMOV	G		1996/01		1997/01	42.0	93M080.0 006
EP1 702	17	L	CLEARCT		REMOV	G		1997/01		1997/06	36.2	93M061
EP1 651	03	L	CLEARCT		REMOV	G		1997/01		1997/06	48.2	93M081 010
EP1 370	09	L	CLEARCT		REMOV	G		1996/11		1997/02	26.4	103P0700.0 085
EP1 361	69	L	CLEARCT		REMOV	G		1996/05	*	1997/06	32.0	093M051
EP1 361	63	L	CLEARCT		REMOV	G		1996/11		1997/02	28.3	103P080
EP1 241	06	L	CLEARCT		REMOV	N		1996/07		1997/03	41.5	93M025
EP1 310	17	L	CLEARCT		REMOV	G		1996/07		1997/07	18.7	93M024
EP1 310	16	L	CLEARCT		REMOV	N		1997/04		1997/06	8.4	93M024
EP1 172	14	L	CLEARCT		REMOV	G		1996/08		1997/07	21.2	93L091 0.0 004
EP1 172	13	L	CLEARCT		REMOV	G		1996/07		1997/07	34.5	93L091 0.0 003
EP1 651	08	L	CLEARCT		REMOV	N		1997/01		1997/02	16.8	93M081
EP1 145	26	L	PATCHCT		REMOV	G		1997/02		1997/03	26.8	103P 30
EP1 502	10	L	PATCHCT		REMOV	U		1996/11		1997/01	92.6	93M045

B. ADMINISTRATION

PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY	DATE	REGION	DISTRICT
BRENDA BIRD	842-5399	10-Sep-97	K. Pattungu	97/09/15		
			ENTERED-MLSIS	DATE		

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM C

A.

OBLIGATION	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE
TIMBERMARK EP1 502	BLOCK 10	93M045 - 43 BRENDA BIRD	842-5399	D M Y 10-Sep-97

B.

STRA	LAYER	RANK	AREA (ha)	STOCKING	STATUS	TYPE	REF.	YR	SITE	CL	INDEX	RES	BASAL AREA (m ² /ha)
100			46.2	MAT	NAT	97	97		M 20		0	G	
100			0.3	NP	NAT	97	97				0	G	
100			3.4	NP	UNN	97	97				0	G	
100			42.7	NSR	PL	97	97		M 20		0	G	

Mat nat missing lots
check other yellow
sheets

C. ADMINISTRATION

ENTERED MLSIS	DATE	REGION	DISTRICT
<i>R. Pottenger</i>			

D.

RPF SIGNATURE AND SEAL	
RPF SIGNATURE <i>[Signature]</i>	RPF NO. 2363
DATE 97-SEP-10	

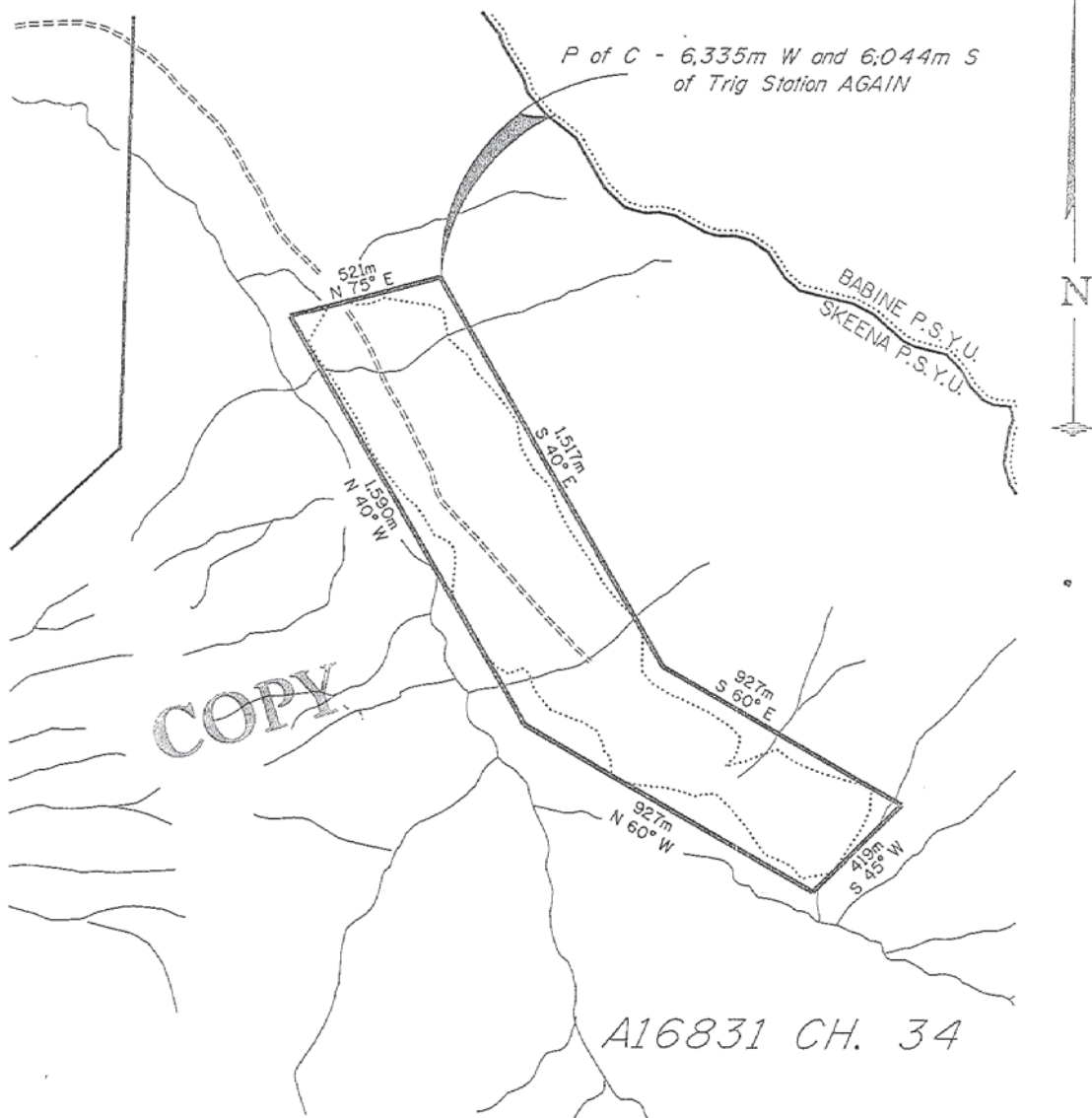
BC FOREST SERVICE
Klamath Forest District
SEP 11 1997
Time RECEIVED

EXHIBIT 'A'

MAP OF:		F.L. A-16831		DATE		96-02-20	
		CP 502 BLK. 10		REF. MAP		R93M/SW (E5)	
U.T.M. GRID	ZONE	EAST	NORTH	REG.	COMPT.	L	BASE USED
	09	618105	611423	83	66	075	93M.045
FOREST REGION		Pr Rupert 02		LAND DISTRICT		Cassiar 06	
FOREST DISTRICT		Kispiox 24		OUTLINE		AREA 119 hectares ±	

MANAGEMENT UNIT		TIMBER SUPPLY AREA		PULPWOOD AGREEMENT	CASCADES
TYPE	Z	NUMBER	Kispiox 12		EAST X
NUMBER	Skeena 75	BLOCK			WEST
BLOCK		SUB-BLOCK			
ORCS #19500-40/A16831 OPENING #93M.045-043		WITHIN: Skeena Prov. Forest, A16831 CH. 34			

Skeena Provincial Forest



UTM COORDINATES FOR
TRIG STATION AGAIN
North - 6149 710 NAD 27
East - 623 894

DRAWN BY:

AMP

Page 112

FNR-2011-00128

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

A.

DENUDATION													
OBLIGATION		BLOCK	DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYP	HARVEST DATES				GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
								STARTED YEAR	MONTH	COMPLETED YEAR	MONTH		
EP1617	19	L	CLEARCT	G	REMOV			1997/01		1997/03	25.3	93M091 0.0 004	
EP1617	18	L	CLEARCT	G	REMOV			1996/11		1997/03	47.3	93M091 0.0 003	
EP1615	14	L	CLEARCT	G	REMOV			1997/01		1997/02	24.6	93M0710.0 007	
EP1614	12	L	CLEARCT	N	REMOV			1996/07		1997/01	51.0	93M.091 - 2	
EP1614	11	L	CLEARCT	N	REMOV			1996/06		1997/01	53.0	93M0910.0 001	
EP1388	89	W	CLEARCT	N	SALWN			1997/05		1997/06	10.1	103P060	
EP1501	08	L	CLEARCT	G	REMOV			1997/01		1997/04	34.4	93M045 041	
EP1501	09	L	CLEARCT	G	REMOV			1996/11		1997/04	37.0	93M045	
EP1611	06	L	CLEARCT	N	REMOV			1993/12		1997/06	51.0	93M081 0.0 002	
EP1612	15	L	CLEARCT	G	REMOV			1996/01		1997/01	42.0	93M0800.0 006	
EP1702	17	L	CLEARCT	G	REMOV			1997/01		1997/06	36.2	93M081	
EP1651	03	L	CLEARCT	G	REMOV			1997/01		1997/06	48.2	93M081 010	
EP1370	09	L	CLEARCT	G	REMOV			1996/11		1997/02	26.4	103P0700.0 085	
EP1361	69	L	CLEARCT	G	REMOV			1996/05		1997/06	32.0	093M051	
EP1361	63	L	CLEARCT	G	REMOV			1996/11		1997/02	28.3	103P080	
EP1241	06	L	CLEARCT	N	REMOV			1996/07		1997/03	41.5	93M025 - 37	
EP1310	17	L	CLEARCT	G	REMOV			1996/07		1997/07	18.7	(93M025 - 5)	
EP1310	16	L	CLEARCT	N	REMOV			1997/04		1997/06	8.4	93M024	
EP1172	14	L	CLEARCT	G	REMOV			1996/08		1997/07	21.2	93L091 0.0 004	
EP1172	13	L	CLEARCT	G	REMOV			1996/07		1997/07	34.5	93L091 0.0 003	
EP1651	08	L	CLEARCT	N	REMOV			1997/01		1997/02	16.8	93M081	
EP1145	26	L	PATCHCT	G	REMOV			1997/02		1997/03	26.8	103P.30	
EP1502	10	L	PATCHCT	U	REMOV			1996/11		1997/01	92.6	93M045	

B. ADMINISTRATION

PREPARED BY BRENDA BIRD	TELEPHONE NO. 842-5399	DATE D M Y 10-Sep-97	ENTERED BY K. Patungu	DATE D M Y 27/09/97	REGION	DISTRICT
----------------------------	---------------------------	----------------------------	--------------------------	---------------------------	--------	----------

A. TENURE

OBLIGATION		LICENCE NO.	C.P.	STAND TYPE	PREVIOUS		C/P	DATE SP APPROVED	YRS TO INV	GROSS BLOCK AREA (ha)	MAXIMUM PERCENTAGE PERMANENT ACCESS (A)	NET AREA TO BE REFORESTED (ha)		
TIMBERMARK	BLOCK				TUBER TYPE	SITE								
EPI 502	10	A18831	502	MAT	1 SPECIES	2 SPECIES	CL	INDEX	Y	M	D	96/10/15	92.6	42.6
					BL	SX	941	M 12	C					

SITE	LAY. AREA ER	NET AREA (ha)	BIOGEOCLIMATIC ZONES/BIOTYPE/VARIANT	SITE SERIES	REGENERATION METHOD	TARGET STOCKING (<i>kwsha</i>)	STOCK MINIMUM (<i>kwsha</i>)	MINIMUM PREFERRED (<i>kwsha</i>)	BASAL HORIZ. (<i>in</i>)	PREFERRED SPECIES				ACCEPTABLE SPECIES			MAX. DENS. (<i>rhba</i>)	REGEN.		FQ (<i>yv</i>)	TREE SIZE cm	RES. TYPE		
										1	2	3	4	5	1	2		3	DELAY				EARLY	LATE
01	24.0		ESSFW	01	PLANT	1200	700	600	2.0	Bl	SA				pl	Hm		5000	7	15	20	125	80	4

PEST CODES%						AVERAGE ELEVATION (m)	ASPECT	MAX. ALLOWABLE TOTAL DIST. (%)	MAX. TOTAL FLOOR DISPL. (%)	MAX. TOTAL FLOOR REDUCTION (cm)
CODE	%		CODE	%						
						1080	SW	5.0	25.0	

SID	LAV- NER	NUTR AREA (ha)	BIOGEOCLIMATIC SITE	REGENERATION METHOD	TARGET STOCKING (trees/ha)	MINIMUM PREFERRED STOCKING (trees/ha)	MIN. HORIZ. AREA (m ² /ha)	PREFERRED SPECIES	ACCEPTABLE SPECIES	MAX. DEFS. (t/ha)	REGEN.	FG (yr)	TREE SIZE TYPE
								1	2	3	EARLY	LATE	cm
05	PLANT	1200	700	600	2.0			BI	X	PI	7	15	20
ESSFW											5000	180	80

PEST CODE/Σ				AVERAGE ELEVATION (m)	ASPECT	MAX. ALLOWABLE TOTAL DIST. (%)	MAX. TOTAL FOR FLOOR DISPL. (%)	MAX. TOTAL FOR FLOOR REDUCTION (cm)
CODE	%	CODE	%					
				1080	SW	9.6	25.0	

[illegible]

PEST CODE/%				AVERAGE ELEVATION (m)	ASPECT	MAX. ALLOWABLE TOTAL DIST. (%)	MAX. TOTAL FOR-FLOOR REDUCTION (cm)
CODE	%	CODE	%				
				1080	WSW	4.7	25.0

REGION	DISTRICT	OPENING NO.	PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY
		934 045 043	SLAWIEK KOCHANEK	842-5399	D M Y 30-Dec-86	<i>[Signature]</i>

97/01/06

2

ENTERED MIS

DATE _____

REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS - MLSIS FORM B

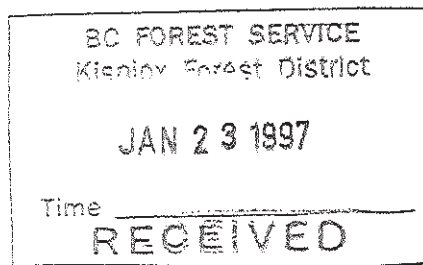
OBLIGATION		DIST	SILVICULTURAL SYSTEM	VARIANT	CUT PHASE	RES TYP	HARVEST DATES				GROSS BLOCK AREA (ha) (POST-HARVEST)	OPENING NO.
TIMBERMARK	BLOCK						STARTED YEAR	MONTH	COMPLETED YEAR	MONTH		
EP1617	18	L	CLEARCT		REMOV	G	1996/11			47.3	93M 091-003	
EP1614	12	L	CLEARCT		REMOV	N	1996/07			51.0	93M 091-002	
EP1614	11	L	CLEARCT		REMOV	N	1996/07			53.0	93M 091-001	
EP1415	55	L	CLEARCT		REMOV	G	1995/08			34.3	93M 062 0.0 021	
EP1501	09	L	CLEARCT		REMOV	G	1996/11			37.0	93M 045-042	
EP1702	25	L	CLEARCT		REMOV	N	1996/07			34.6	93M 061-059	
EP1241	06	L	CLEARCT		REMOV	N	1996/07			41.5	93M 045-037	
EP1310	17	L	CLEARCT		REMOV	G	1996/07			18.7	93M 025-005	
EP1502	10	L	PATCHCT		REMOV	U	1996/11			92.6	93M 045-043	

A.

B. ADMINISTRATION

PREPARED BY	TELEPHONE NO.	DATE	REVIEWED BY	DATE	REGION	DISTRICT
SLAWEK KOCHANEK	842-5399	22-Jan-97	<i>[Signature]</i>	97/01/28	PR	24

ENTERED MLSIS	DATE
MC	97/01/29



January 22, 1997

District Manager
Ministry of Forests
Box 215
Hazelton, B.C.
V0J 1Y0

opening # 93M 045 043

Attn.: **Ron Cotton, R.P.F. Tenure Administration Officer**
Egan Wuth, Compliance and Enforcement Officer

Re: Logging plan amendment A-16831 CP 502-10

Dear Ron and Egan:

SP Amendments

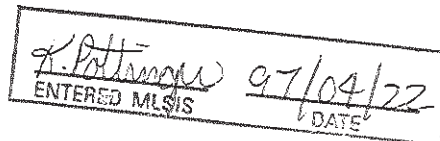
As per our conversation yesterday Egan, please accept this application to amend the logging plan of CP 502, block 10. I would like to include an area of timber, approximately 0.1 hectares in size, as shown on the attached 1:5,000 scale logging plan map. The area was inadvertently felled, despite the application of Repap's standard operating procedures. Procedures were reviewed between Repap and the primary contractor, Swan Lake. The area was viewed between Swan Lake and the falling subcontractor, Kirk Giguere. The falling subcontractor then viewed the area with his faller, ReJean Jack, however the faller still proceeded to fall the area. Also attached is a silvicultural prescription amendment for the area.

Thank you for your quick consideration of this request. If you have any questions, please call.

Yours truly,

REPAP BRITISH COLUMBIA INC.,
CARNABY OPERATION

John W. McNutt, M.Sc.F.
Area Superintendent



REPAP BRITISH COLUMBIA INC., CARNABY LUMBER OPERATIONS

SILVICULTURE PRESCRIPTION

AMENDMENT

ADMINISTRATIVE INFORMATION

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK	GROSS AREA	NP NAT (ha)	NP UNN (ha)	RES AREA (ha)	REHAB AREA (ha)	NET AREA TO BE REFOR (ha)
Prince Rupert	Kispiox	Kispiox	A16831	502	10	92.6	0.3	3.4	46.2	0.0	42.7
BCGS		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:	
93M.045 043		BC92094 54-55		Upper Natlan		900 - 1260 m		T. Johnson		October 24, 1995	

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species ≤ 17.4 centimetres diameter at breast height (1.3 m). Advance regeneration includes all layer 2, 3, and 4 trees.

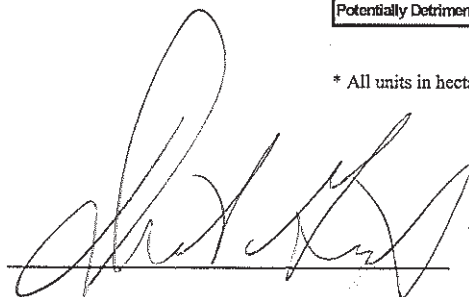
COMMENTS:

The NAR for this block has been increased by 0.1 ha.

Revised soil disturbance figures for this block are as follows:

Standard Unit *	1			2			3			TOTAL
Gross Area			57.7			31.1			3.8	92.6
NP Natural			0.0			0.0			0.3	0.3
NCBR			0.0			0.0			0.0	0.0
Reserve Area			31.3			13.4			1.5	46.2
	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	2.4	0.0	2.4	0.9	0.0	0.9	0.1	0.0	0.1	3.4
Landings (conventional)	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Landings (roadside areas)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavated Skid/Backsper Trails	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Area to Reforest			24.0			16.8			1.9	42.7
Soil Dist. Rds & Lndgs (%)			-			-			-	3.7
Excavated Skid/Backsper Trails			0.00			0.00			0.00	0.00
Skid/Backsper Trail Area			0.80			0.20			0.00	1.00
Other Detrimental Disturbance			0.40			1.40			0.10	1.90
Max. Forest Floor Displacement (%)			25			25			25	
Potentially Detrimental Dist. (%)			5.0			9.5			5.2	6.8

* All units in hectares unless stated otherwise. Spur Road Width = 13.5 m, Excavated/Bladed Skid Trail Width = 4.0 m.



97-JAN-22

David Gill, Repap BC, Carnaby Operations



District Manager, Kispiox Forest District



73 M 45 043

SKEENA CELLULOSE INC., CARNABY OPERATIONS

SILVICULTURE PRESCRIPTION

ORIGINAL

ADMINISTRATIVE INFORMATION:

REGION	DISTRICT	TSA	LICENCE	C.P.	BLK.	GROSS AREA (ha)	NP NAT (ha)	RES AREA (ha)	NP UNN (ha)	REHAB AREA (ha)	FUTURE HARVEST AREA	NET AREA TO BE REFOR (ha)
Rupert	Kispiox	Kispiox	A16831	502	10	92.6	0.3	0.0	3.4	0.0	46.3	42.6
BCGS / OPENING		PHOTO SERIES		LOCATION		ELEVATION		ASSESSED BY:		DATE:		
93M.045		BC92094 54-55		Upper Natlan		900-1260 m		T. Johnson		October 24, 1995		

* Note: "Non-merchantable" trees within this document refer to deciduous and coniferous tree species < 17.5 centimetres diameter at breast height (1.3 m). Advance regeneration collectively includes all Layer 2, 3, and 4 trees.

MANAGEMENT OBJECTIVES:

The management objectives identified below will ensure that the long term productivity of the following resources is maintained and protected over the course of the next rotation.

Timber:

- to harvest 40 percent of the basal area in this opening with entries every 50 years.
- to use small clearcuts which ameliorate environmental shifts after harvest.
- to establish a future crop composed of species ecologically adapted to the site.
- to maintain the diversity of conifer species presently found in the existing stand.
- to manage each clearcut as an even aged stand.
- to produce a future crop of balsam, hemlock, spruce, and pine sawlogs on a 90 to 120 year rotation.
- to manage the future crop to produce a minimum merchantable volume of 350 cubic metres per hectare at rotation.

Water:

- to maintain the water quality of the creek along the southern boundary and Natlan Creek to the west.
- to maintain the water quality of all seasonal creeks in the block with 10 metre machine free zones in which all windfirm non-merchantable trees will be left standing to provide root structures which will stabilize stream banks and reduce erosion.
- to maintain drainage patterns of all seasonal creeks and wet areas by crossing only at designated crossings.

Johnson -Schwarz Forest Management
December 19, 1995

R.P.F. Initials

BC FOREST SERVICE
Kispiox Forest District

DEC 20 1995

Time _____

RECEIVED

Wildlife:

- to provide limited visual cover along all seasonal creeks by retaining non-merchantable trees within the machine free zones in areas scheduled for harvest.
- to improve the structural diversity of the future stand by retaining acceptable advance regeneration where feasible.
- to create a mosaic of seral stages which will provide a variety of wildlife habitats.
- to retain visual and thermal cover throughout the block.

Landscape:

- to reduce the visual impact of clearcutting by harvesting small patches and retaining non-merchantable trees within the machine free zones along creeks.

SITE DESCRIPTION:**Ecological Classification:** ESSFwv (June 1993)

TU	ST	GROSS AREA (ha)	NET AREA (ha)	SITE SERIES	EDAPHIC GRID M/N	SITE INDEX @ 50 yr	SOIL DESCRIPTION								
							HUMUS FORM	LFH (cm)	SOIL GROUP	SOIL HOR	DEPTH (cm)	SOIL TEXT	COARSE FRAG %	DRAIN	SEEP DEPTH
1	A	57.7	24.0	01	4/C-D	12	Mor	5.0	Brunisol	Bm BC	0-15 15+	CL-SiL SC-SiL	65 65	Rapid	>40 cm
2	B	31.1	16.7	05	4-5/D	14	Mor	9.0	Brunisol	Bm	0+	SiL	50	Moderate	>47 cm
3	C	2.3	1.1	07	6/C	8	Moder	8.5	Brunisol	Bm BC	0-11 11+	C SC	40 60	Moderate	45 cm
3	D	1.5	0.8	08	6/B	12	Mor	12.0	Brunisol	Bm	0+	Si	30	Poor	>39 cm

Site Description:

TU	SLOPE DESCRIPTION					WATERCOURSE SPACING / 100m
	AVE %	ASPECT	LENGTH	UNIFORM	FAILURES	
1	30	SW	Short	Broken	None	1
2	25	SW	Short	Broken	None	0
3	13	WSW	Short	Broken	None	1

HARVESTING CONSIDERATIONS:

Silviculture System: Manage this area using an even aged management system comprised of a series of small clearcuts ranging in size from 1.2 to 5.2 hectares. Within each small clearcut additional patches of acceptable advance regeneration will be left standing where it is operationally feasible. Implementation of this system will improve survival by reducing the accumulation of snow and the chances of early and late season frosts.

Existing Understory Structure:

TU	Layer 2 Poles (sph)	Vigour, % Release, Leader Height (cm)	Layer 3 Saplings (sph)	Vigour, % Release, Leader Height (cm)	Layer 4 Regen (sph)	Vigour, % Release, Leader Height (cm)
1	450	Low, 15%, 4 cm	300	Low, 5%, 1 cm	150	Low, 0%, 0 cm
2	250	Moderate, 40%, 10 cm	700	Moderate, 40%, 7 cm	450	Low, 15%, 1 cm
3	50	Low, 20%, 10 cm	200	Low, 10%, 4 cm	200	Low, 0%, 1 cm

Leave Tree Specs: Within machine free zones all windfirm non-merchantable trees will be left standing. Where clumps of acceptable regeneration are found and it is operationally feasible to skid around them, they will be retained to add structural diversity to the future stand. No cottonwood were noted on this block; however, if they are found during the course of falling they will be retained as wildlife trees.

Harvest Method and Constraints: TU 1, 2, 3: Harvest the small clearcuts using a combination of hand and mechanical falling and conventional ground based equipment. Activities will be confined to the winter months when soils are frozen to a depth of at least 15 centimetres or when the snowpack is at least 1.0 metres. Summer operations are not prescribed because wet areas are frequent and soils are fine textured.

Start: Winter 1995.

Finish: Winter 1996.

Utilization Standards: Kispiox District close utilization standards.

Opening Size and Configuration: This opening conforms with the size and location identified in Skeena Cellulose's Development Plan for the Upper Natlan Chart Area. The northern, western and southern boundaries of this block follow the break above creeks. The eastern boundary is determined by the road location and the constraint of maximum skidding distance.

Block Access: By road this block is located 51 kilometres north of Hazelton. Access to the proposed block is gained from the Suskwa FSR. A total of 4.3 kilometres of road will be constructed to access this block. These road will be used for future entries in 50 years.

Culverts and Bridges: Culverts will be installed and maintained to ensure that patterns of downslope drainage are not significantly altered. See the accompanying logging plan map for culvert locations and sizes.

Skid Trails: Skid trails are laid out in accordance with the site degradation guidelines presented below. Bladed / excavated skid trails will be constructed within the following specifications. Cuts will not exceed 30 centimetres and the maximum gradient will be 40 percent. Trails will be located as per the enclosed Logging Plan. Where trails cross machine free zones or wet areas, temporary skid bridges will be constructed. All temporary crossings will be removed upon completion of logging.

SITE DISTURBANCE:

TU	SOIL DEGRADING PROCESS	HAZARD RATING	CONTROLLING SITE FACTORS
1	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Moderate High High High	Fine textured silt to clay loam soils with high coarse fragments on moderate slopes.
2	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	High High Moderate High Moderate	Fine textured silt loam soils with moderate coarse fragments on moderate slopes.
3	Compaction Displacement Forest Floor Disp Surface Erosion Mass Wasting	Very High Low Low High High	A hygric site with fine textured clay to silt soils with moderate coarse fragments on gentle slopes.

Measures To Reduce Site Degradation: Upon completion of road construction, all cuts and fills will be seeded to reduce erosion and sedimentation. Upon completion of logging, all secondary haul roads and bladed skid trails will be waterbarred at spacings determined by their gradient and surface erosion hazard.

Soil Disturbance Standards:

Treatment Unit *	1			2			3			TOT
Gross Area			57.7			31.1			3.8	92.6
NP Natural			0.0			0.0			0.3	0.3
NCBR (>4 ha contiguous)			0.0			0.0			0.0	0.0
Reserve Area			0.0			0.0			0.0	0.0
Future Harvest Area			31.3			13.5			1.5	46.3
NP Unnatural	Gross	Rehab	Net	Gross	Rehab	Net	Gross	Rehab	Net	
Roads	2.4	0.0	2.4	0.9	0.0	0.9	0.1	0.0	0.1	3.4
Landings (conventional)			0.0			0.0			0.0	0.0
Landings (roadside work areas)			0.0			0.0			0.0	0.0
Bladed/Excavated Trails ¹			0.0			0.0			0.0	0.0
Other (pits, quarries etc.)			0.0			0.0			0.0	0.0
Net Area to Reforest			24.0			16.7			1.9	42.6
Soil Dist. Rds & Lndgs (%)										3.7
Skid Trail Area			0.8			0.2			0.0	
Backspar Trail Area										
Other Dispersed Dist.			0.4			1.4			0.1	
Potentially Detrimental Dist. Rds & Trails (%)			5.0			9.6			4.7	6.8
Forest Floor Disp.			25			25			25	

* All units in hectares unless stated otherwise.

Spur Road Width: 15.0m
Skid Trail Width 4.0 m

OTHER RESOURCES:

Range: This area is not within an MOF range unit. Currently there is no range use in the Upper Natlan area. Future use is unlikely because the block has a low potential to produce forage.

Landscape / Recreation: Visual quality objectives have not been established for this area. The visual sensitivity will be low because there are no identified viewpoints in the area.

This block contains the following biophysical features - E³ coniferous forest, and L⁶ avalanche tracks. Currently there is no recreational use of the area. Feature related activities may consist of hunting, hiking, skiing and snowmobiling.

Water Quality / Fisheries: Maintenance of water quality in the creeks within and adjacent to the block is important because they are tributaries of Natlan Creek and the Suskwa River which are respectively S2 and S1 fish bearing waterbodies.

The western boundary of this block parallels an S3 creek. The riparian management area (RMA) on either side of the creek is 40 metres of which 20 metres is designated a riparian reserve zone. The block boundary follows the break above the creek outside the riparian reserve zone. In the northern half of the block the boundary lies 15 metres into the 20 metre riparian management zone. Where the block encroaches on the riparian management zone, the area will be harvested as per the harvest methods and constraints for the particular treatment unit.

Within the block there are a number of seasonal creeks. These creeks have channel widths ranging between 20 and 60 centimetres and are classified as S6. The sediment hazard of the creeks ranges from low to moderate. For creek locations see the accompanying maps. In general creek channels are poorly defined and the sediment hazard is low for the 30 centimetre creeks and moderate for the 60 centimetre creeks. Water quality in the S6 creeks will be managed using a 20 metre riparian management area in which a 10 metre machine free zone will be delineated on either side of the creek. Additional seepage areas are identified and protected with 10 metre machine free zones. Within the machine free zone all non-merchantable trees will be left standing to provide rooting structures which will stabilise drainage patterns. Machine free zones will also reduce sedimentation by confining skidding to designated crossings. The remaining 10 metres within the RMA will be clearcut and harvested as per the harvest methods and constraints for each treatment unit.

Wildlife: Wildlife use of this block is low. Bear, wolf, moose, marten, a variety of rodents and a number of bird species are known to inhabit the area. Moose prints were noted in the middle of the block along the creek. Wildfor Consultants has completed 1:20,000 scale habitat mapping in this area. The block encompasses subalpine - fir huckleberry and subalpine - fir false azalea habitat units rated as having low to moderate grizzly bear value. The avalanche chute along the south eastern boundary is identified as a Sitka alder - cow parsnip habitat unit with high value grizzly bear habitat. To provide visual cover and bedding sites, future clearcuts adjacent to this area will have a 20 metre buffer delineated along the chute.

Harvesting this area with multiple entries and small clearcuts will provide wildlife with thermal and visual cover and retain a mosaic of seral stages in the block. The mosaic of seral stages will create a wide range of forage communities and habitats. Within the clearcuts visual cover and structural diversity will be increased by retaining non-merchantable trees within the machine free zones and by retaining patches of acceptable advance regeneration.

Traplines / Guide Territories: This area lies within Trapline 608T033 and Guide Territory 630G001. Prior to commencement of logging operations, the owners of the above licences will be notified of Skeena Cellulose's intent to harvest this area.

Mining Claims: No mining claims or survey lines were noted in the area.

Aboriginal Activity: This block lies within the claimed traditional house territory of Luutkudziiwus and Xism Wits'iin. No aboriginal activities were noted in this area. Prior to logging, the traditional house chiefs will be contacted regarding Skeena Cellulose's plans to harvest this block. If historical sites are found during the course of logging, activities will cease until an assessment of the site is completed and a protection plan is implemented.

PROTECTION:

Hazard Abatement: Once logging is completed, the slash hazard on this block will be low. Where possible, skid whole trees to landings where tops and other debris can be burned in the fall of H+1. Slash loading throughout the block will be assessed post harvest. Areas of excessive slash loading will be piled and burnt after waste surveys have been completed.

Pest Treatment: Timber on this block is infected with *Echinodontium tinctorium* and *Phellinus pini*. These fungi will not be a problem in the future stand because they typically produce volume losses in mature forests only. The *Pissodes strobi* hazard rating is indicated as unlikely due to the elevation of the block (Spruce Weevil Hazard Rating Kispiox Forest District 1:250,000 Map; 1994). Pest damage will be assessed during surveys conducted at H+2 and H+6. No particular problems are anticipated.

Adjacent Area: Timber adjacent to the block does not pose any significant protection risks because the stands are identified as predominantly balsam forests approximately 200 years old.

SILVICULTURE PLAN:**Site Preparation:**

TU	SITE PREPARATION - PREFERRED	TIMING	SITE PREPARATION - ALTERNATIVE
1	Hand screef and direct plant	H+1	Light Piling
2	Hand screef and direct plant	H+1	Light Piling
3	Hand screef and direct plant	H+1	Raised Microsites / Light Piling

Upon completion of logging, conduct a plantability survey to determine the number of available plantable spots. If the number of plantable spots falls below 1100 per hectare, site preparation will be required. The need for site preparation is not anticipated.

TU 1, 2: If site preparation is required, use low ground pressure machinery. Activities will be completed on dry soils during the summer months to reduce the compaction potential of the fine textured soils. Light piling is recommended to increase the number of plantable spots but ensure that the displacement and erosion hazards are minimized.

TU 3: If site preparation is required on this unit, use low ground pressure equipment. Site preparation will be completed on dry summer soils to reduce the compaction hazard of the fine textured clay and silt soils. The preferred treatment is construction of raised microsites to improve soil temperature and aeration of the planted seedlings and control vegetation on these brush prone sites. Alternatively if there are a sufficient number of raised microsites acceptable vegetation control and planter access may be created by piling the unit.

Reforestation:

TU	AREA (ha)	REGEN METH	SPECIES	STOCK TYPE & AGE	SOW (yr)	PLANT (yr)	STEMS / HA	AMOUNT (k)
1	24.0	Plant	Bl	PSB 313 1+0	H	H+1	850	20.4
			Se	PSB 313 1+0	H	H+1	550	13.2
2	16.7	Plant	Bl	PSB 415 1+0	H	H+1	850	14.2
			Se	PSB 415 1+0	H	H+1	550	9.2
3	1.9	Plant	Bl	PSB 415 1+0	H	H+1	850	1.6
			Se	PSB 415 1+0	H	H+1	550	1.0
Total								59.6

Alternative reforestation scenarios could include substitution of PSB 415 for 313 or PSB 415 for 615 if vegetative cover is greater than 30 percent at the time of planting. Other alternative scenarios could include altering the relative percentages of species planted.

Regeneration surveys will be conducted at H+3. Blocks will be surveyed using the even-aged survey methodology and patches of advance regeneration will be tallied as acceptable well-spaced trees if they are acceptable layer 2, 3, or 4 trees. Layer 1 trees will be tallied as ghost trees and will not contribute to the stocking of the site.

Seed Source: Seedlot availability is as per the five year development plan, 1995-1999. Prior to harvest, a seed source will be established for all species prescribed. All seed or seedlings used to implement this prescription will be ecologically adapted to the site and used in accordance with the Provincial Seed Transfer Guidelines.

Brushing and Weeding:

TU	BRUSH HAZARD	BRUSH SPECIES (%cover/height cm)	PREFERRED TREATMENT	ALTERNATIVE TREATMENT	TIMING
1	Low	Fireweed 40/100 cm, Raspberry 10/60 cm, Huckleberry 5/40 cm @ H+5	No Treatment	Manual / Chemical (ground)	H+8-12
2	High	Fireweed 60/120 cm, Thimbleberry 30/70 cm, Black twinberry 5/70 cm, Huckleberry 3/40 cm @ H+5	Manual	Chemical (ground)	H+6-12
3	Moderate	Fireweed 30/100 cm, Spiny wood fern 20/70, Lady fern 10/70, Black twinberry 5/70, Highbush cranberry 3/70 @ H+5	Manual	No Treatment	H+6-12

The impact of competing vegetation on seedling performance will be assessed during surveys conducted at H+3 and H+6. If either survey indicates that less than 900 seedlings per hectare will meet free growing criteria within the time frame listed below, either manual or chemical brushing will be conducted.

Manual treatment will consist of removing all vegetation greater than half the height of the tree from within a 1.0 metre radius around each crop tree. Assessments of resprouting will be completed the fall after treatment. A repeat treatment will be required if competing vegetation has overtopped the tree within this time period.

Prescription of a ground based chemical treatment is acceptable for TU 1 and 2 but is not acceptable in TU 3 because this unit encompasses frequent seepage sites. Ten metre pesticide free zones will be delineated prior to treatment and chemicals will be applied selectively to competing vegetation around encumbered crop trees. Vegetation within the pesticide free zones will be treated manually as described above.

Free Growing Stocking Standards:

TU	Net Area (ha)	SPECIES		Target Prefer Accept ¹ (WSsph)	Min. Prefer Accept ¹ (WSsph)	Min. Prefer Accept ¹ (WSsph)	Regen Delay (Yrs)	FREE GROWING STANDARDS				MAX DENS (sph)	POST SPACING	
		Preferred	Acceptable					Early (Yrs)	Late (Yrs)	Hgt (M)	Comp %		Max (Sph)	Min (Sph)
1	24.0	Bl Se	Pl ⁶ Hm	1200	700	600	7	15	20	1.6 ² 0.8 ³	125	5000	1200	700
2	16.7	Bl Se	Pl ⁶	1200	700	600	7	15	20	1.6 ² 0.8 ³	125	5000	1200	700
3	1.9	Bl ⁵ Se ⁵		1000	500	400	4	12	20	0.6	125	5000	1000	500

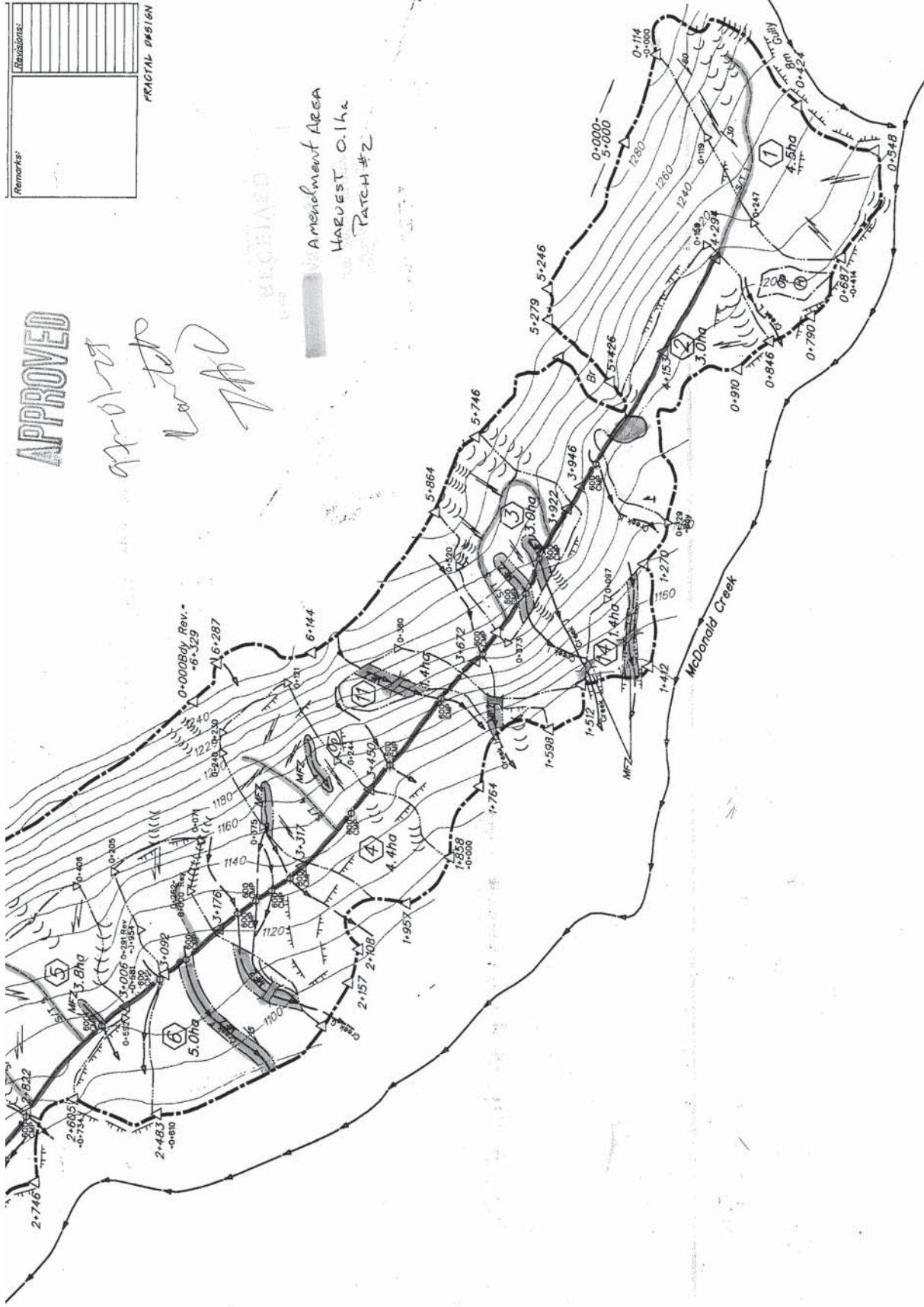
- 1: Minimum inter-tree spacing is 2.0 metres.
- 2: Free growing height pine.
- 3: Free growing height all other species.
- 4: Free growing height all other species.
- 5: Risk of frost damage.
- 6: Risk of snow damage.

If surveys conducted at H+6 indicate conifer densities exceed the maximum density of 5000 stems per hectare, the stand will be spaced to reduce inter-tree competition. Spacing will be conducted when crown closure is achieved or prior to the latest free growing date. Post spacing densities will be between 1200 and 700 stems per hectare if pest levels are low. If pest surveys indicate significant mortality will occur on this site, spacing densities will be increased to a maximum of 2000 stems per hectare.

APPROVED

144
12-10-56

Amendment Area
Harvest 0.1ha
Patch #2



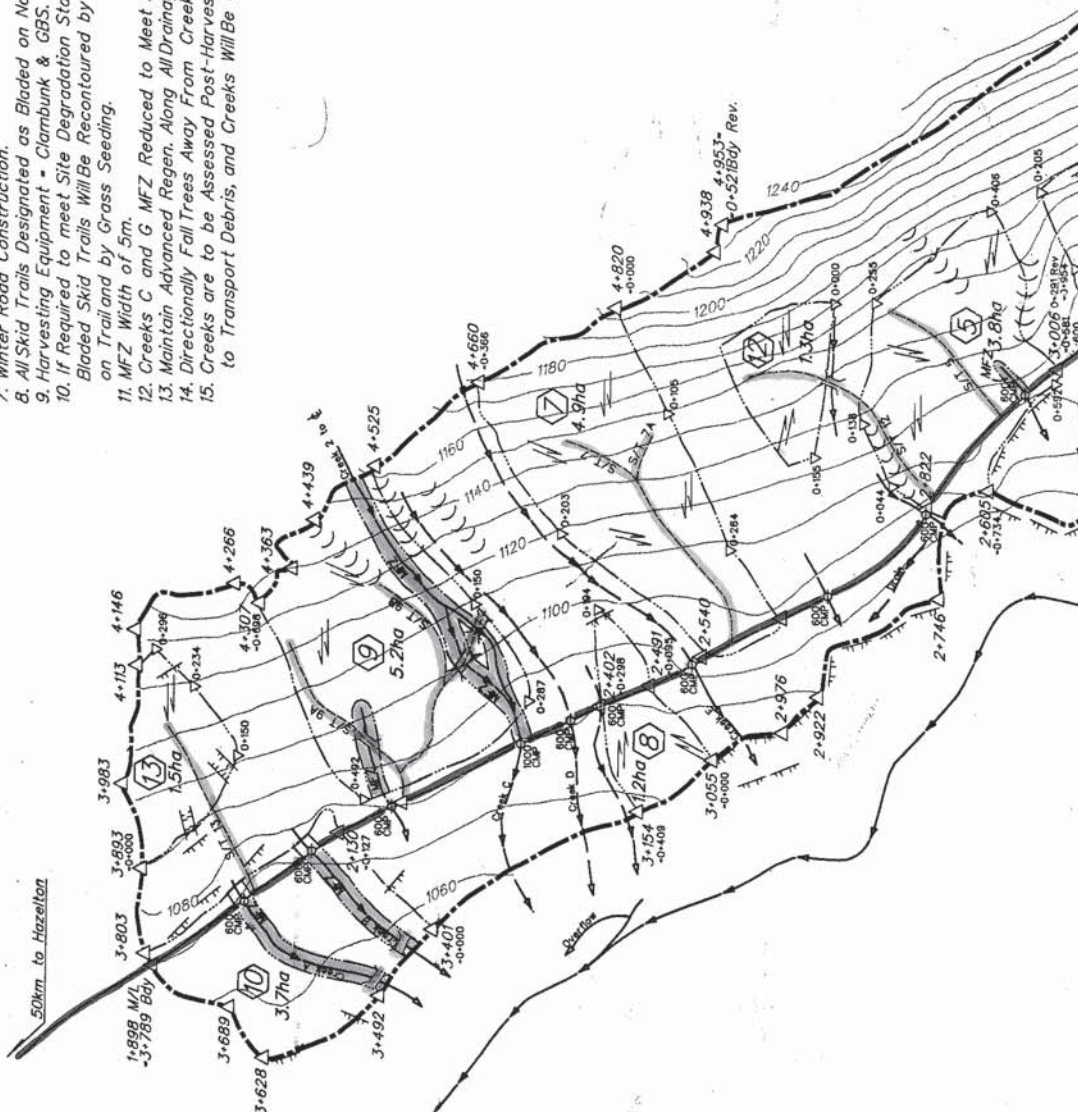
Scale 1:5000

Logging Plan Map

Notes:

1. All Sub-units - Conv. Winter Logging
2. Roadside Processing (15m Dist.)
3. Steep Sections (>45%) to be Tipped Downslope and Hoe-Forwarded
4. Access Road "Dakota Br."
5. Adverse Skidding Required Below Road (<25%)
6. Debris Piles to be Piled & Burned.
7. Winter Road Construction.
8. All Skid Trails Designated as Bladed on North Side of Road.
9. Harvesting Equipment - Clambunk & GPS.
10. If Required to meet Site Degradation Standards.
Bladed Skid Trails Will Be Recontoured by Replacing Sidecast on Trail and by Grass Seeding.
11. MFZ Width of 5m.
12. Creeks C and G MFZ Reduced to Meet Skidding Requirements.
13. Maintain Advanced Regen. Along All Drainages Where Operationally Feasible.
14. Directionally Fall Trees Away From Creeks Where Operationally Feasible.
15. Creeks are to be Assessed Post-Harvest to Determine Their Potential to Transport Debris, and Creeks Will be Cleaned Accordingly.

50km to Hazelton



Flagging Legend:

Harvest System: Orange/Black
Machine: Free Zones (MFZ): Label
New Forestry (NFP): Label
Skid Trail: Pink/Black
Road Location: Pink
Falling Bdy: Orange

® - Helipad

APPROVED

6210-46

F.L. A16831
C.P. 502
BLK. 10

Gr. Area 92.6ha	Nº Nat. ha
Net Area 46.9ha	NºUNN. 0.3 ha

Chart: Upper Nattlan
Location:

1 FGFND:

	Roads (Built)
	Roads (Located)

andings (Conv/Cable)

Skid/BS Trail

Skid Direction
Skid Bridge

 Solid Line
 Dashed Line
 Block Boundary

Harvest Sys. Bdy.	

Timber Type Line	Slope (Percent)
---	3

Contours

Creek (Persistent)

Creek (Ephemeral)

Break

Ridge

Gully

Swamp
Rock

Tree Swamp

Non-commercial
NCC, N₂, Br

Slide A5

[illegible]

History

Stand Tending ⊕ Disturbance

Regen.

55° 25' 00" Lat.

127° 08' 00" Long.

Area Supervisor: J. O'Donnell

Engineering Tech: Coast
Eng. Completion Date: 11/12/95

Revisions:	Remarks:
-------------------	-----------------

--	--	--	--	--

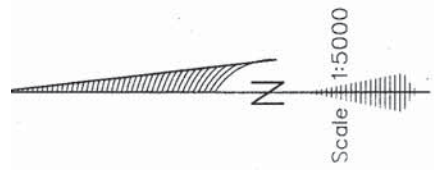
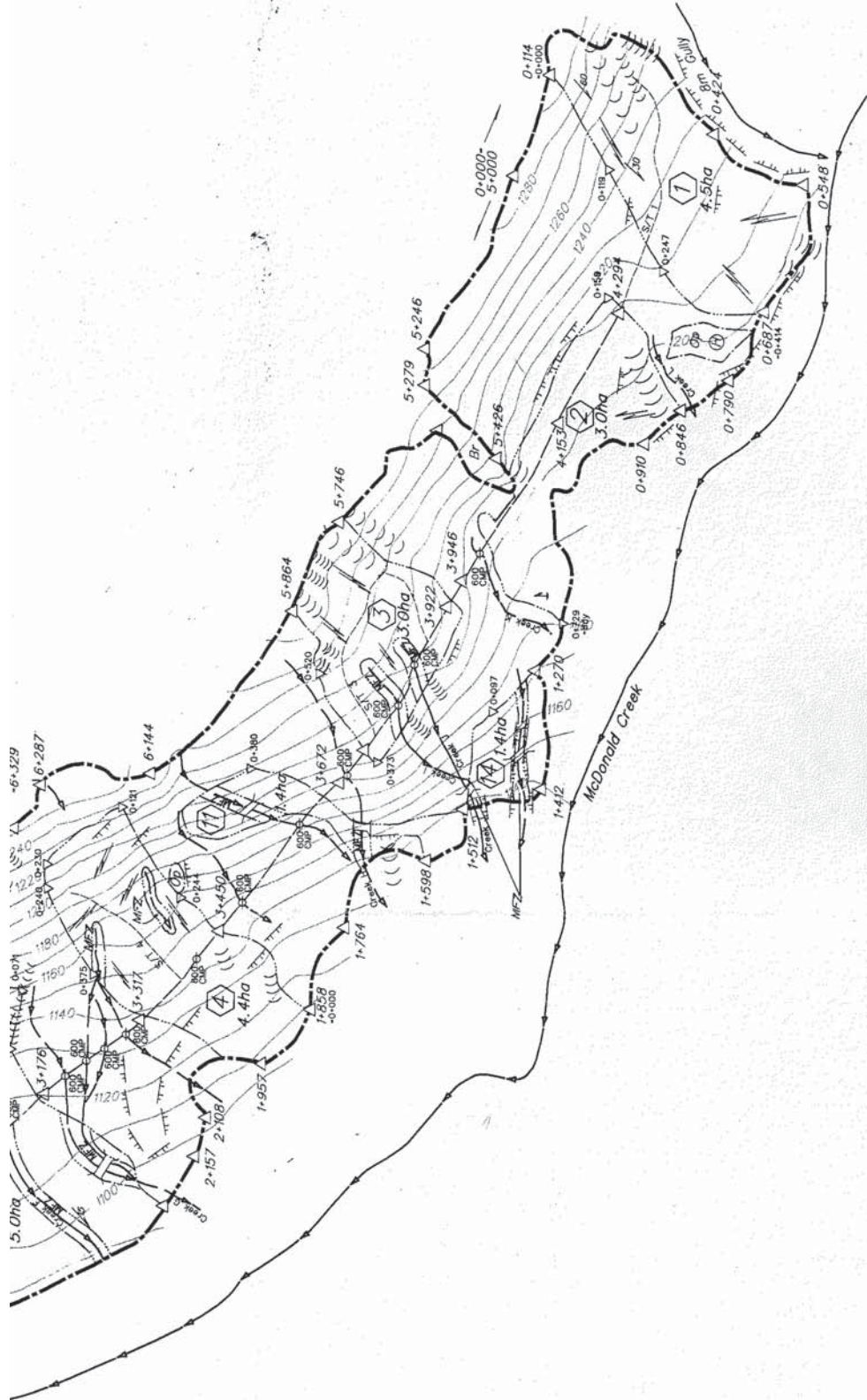
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

--	--	--	--

Page 129
END 2014 000000

FNR-2011-00128

FRAGTAL DESIGN



BC FOREST SERVICE
Klappan Forest District
SEP 11 1997
Time RECEIVED