SENECA ENTERPRISES LTD.
PO BOX 1902, PRINCE GEORGE, BC, V2L 5E3
Phone: (250) 561-0890, Fax: (250) 564-3275

SPRUCE BARK BEETLE REPORT FH17DPG218

POLYGON: **2016-PLEM-002** HECTARES: 50.6

WALKTHROUGH DISTANCE: 6300

ESTIMATED INFFESTED PIXELS FROM WALKTHROUGH (Code 1-4) 8 **12.7%**

SUMMARY OF CURRENT INFESTATION

Walkthrough found area to have many older attacked trees (22 Code 5) and recent attack are mainly Code 3 attack trees with a 2017 flight. Large diameter spruce in polygon. Access is ok into polygon, becomes an issue beyond as at the base of the mountains and a valley runs Southeast into the Northeast District of the province where there are points identified from flight but mainly inaccessible. Treatment here may help slow further beetle movement in that direction.

LIGHT SCATTERED ATTACK, MORE MODERATE CONCENTRATED IN NORTH/ CENTER OF POLYGON.

ACCESS

Polygon is off of Highway 97. There is no access roads drivable when probed other than powerline road. (Crew walked in from Highway)

POLYGON FEATURES (Topography, Terrain, Timber Types, Age)

Polygon is located at the bottom of some steep sloped mountains and at the fron of a large drainage that leads to sites in the NorthEast. Polygon had some steep slopes, North to South 0-45%. Very wet throughout. East portion of polygon had very low volumes of spruce with large open areas of Aspen.

SIZE, BOUNDARY and PATTERN OF INFESTATION

50 hectare polygon where most of the attack in the west half of polygon. Code 1-4 new attack found 9 trees with all of them in the west half and a concentration in the middle northern section. The west had 22 older attacked trees as well, with a few scattered throughout.

INCIDENCE AND SEVERITY OF ATTACK

One probe line had a moderate rating but concentrated in the north middle of the polygon is likely the same or higher. Due to the amount of old attack, this pushed the sanitation priority rating to the moderate. Treatment is likely needed in the more concentrated recent attacked area.

RISK OF BEETLE SPREAD

As in the corridor heading to the NorthEast, and there are points identified through this to the southeast with minimal access, has a good chance of spreading in that direction.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access off of powerlines. Are some steep slopes and very wet.

RECOMMENDATIONS

OPTION 1

TRAP TREES

Site has moderate sanitation rating but has concentrated attack in the north middle section of polygon. Several trap tree trailes could be setup as site is at the base of a mountain and the beginning of a valley that leads Southeast to sites in the NORTHEAST.

OPTION 2

MONITOR

Most of the attack is old and the area with current attack has severe slopes and open areas of aspen and may be held.

Summary

2016-PLEM-002	50.6	METERS WALKED	6300	% TRAVERSED	12.5%
PIXELS COVERED BY WALKTHROUGH	63	INFESTED PIXELS	8	**ESTIMATED % OF BLOCK INFESTED (From Walk through)**	**12.7%**

TABLE 5- Spruce Beetle Infestation Summary Sheet

OF NOTE- Results taken from a 100m Probe Line established at 1 per 50 hectares to represent

DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES
			2015		2014		2013		
			1	2	3	4	5	6	
17.5-25.0	3.3	0	0.0	0.0	0.0	0.0	0.0	0.0	3.3
25.1-30.0	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	47.7
30.1-35.0	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	63.9
35.1-40.0	9.4	9.4	0.0	0.0	0.0	0.0	0.0	0.0	84.6
40.1-45.0	11.6	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0
45.1-50.0	13.8	13.8	0.0	0.0	0.0	0.0	69.0	0.0	0
50.1-55.0	16.2	81	0.0	0.0	0.0	0.0	0.0	0.0	32.4
55.1-60.0	18.7	93.5	0.0	0.0	37.4	0.0	93.5	0.0	74.8
60.1 +	25.3	75.9	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	497.5	297.6	0.0	0	37.4	0.0	162.5	0	306.7

TABLE 4- Spruce Beetle Attack Density and Larval Density Rating

MEAN NO. OF ENTRANCE HOLES PER 225 cm2 PHLOEM SAMPLE		MEAN NO. OF LIVING LARVAE PER 225 cm2 PHLOEM SAMPLE	
	< 1 LOW Attack Density		< 4.9 LOW Mean Larval Density
	1.0- 1.9 MOD Attack Density		5.0 - 14.9 MOD Mean Larval Density
	2.0 - 3.9 HIGH Attack Density		15-24.9 HIGH Mean Larval Density
3.50	< 3.9 SEVERE Attack Density	**4.50**	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	0.0%	0.0	SANITATION AND SALVAGE HARVEST PRIORITY RATING		
% 2014 ATTACK	7.5%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)
% 2013 ATTACK	32.7%	##	MODERATE	600-999	PROBE (To Obtain Further Info)
% HOST IN STAND	61.9%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING
					815.2

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS 1

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			2015		2014		2013			
			1	2	3	4	5	6	BL	AT
17.5-25.0	3.3	0	0	0	0	0	0	0	1	0
25.1-30.0	5.3	1	0	0	0	0	0	0	9	0
30.1-35.0	7.1	1	0	0	0	0	0	0	9	0
35.1-40.0	9.4	1	0	0	0	0	0	0	9	0
40.1-45.0	11.6	1	0	0	0	0	0	0	0	0
45.1-50.0	13.8	1	0	0	0	0	5	0	0	0
50.1-55.0	16.2	5	0	0	0	0	0	0	2	0
55.1-60.0	18.7	5	0	0	2	0	5	0	4	0
60.1 +	25.3	3	0	0	0	0	0	0	0	0
TOTALS		18	0	0	2	0	10	0	34	0

BARK SAMPLES 15 cm x 15 cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN Attacked Y r	Y r ____	Unattacked
2	7	0	9	0	5	0	0	0

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2016-PLEM-002

50.6 Hectares

Legend

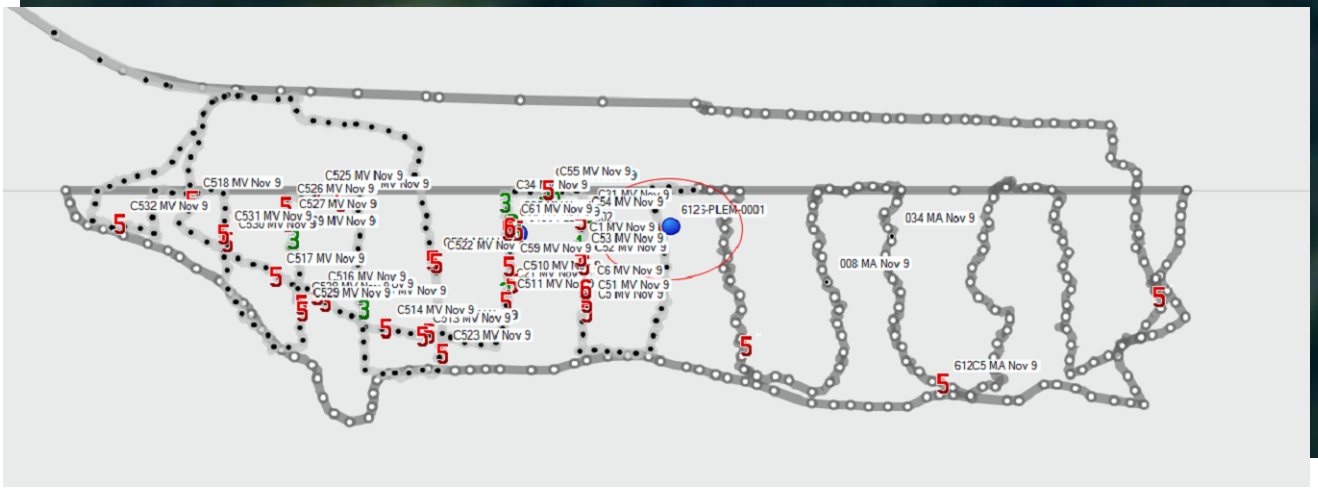
- Older Attack (Code 5-6)
- Recent Attack (Code 1-4)
- Tracks

97

John Hart Hwy

2016-PLEM-0002

2016-PLEM-0001



N

500 m

PLEM-002

SPRUCE BEETLE PROBE CARD

LOCATION 612		PAGE	OF
BEARING	DISTANCE 100 m	STRIP WIDTH 10 m	

DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES
			1	2	3	4	5	6	BL
17.5 - 25.0	3.3	•							•
25.1 - 30.0	5.3	•							• • •
30.1 - 35.0	7.1	•							•
35.1 - 40.0	9.4	•							• • • • • • • • •
40.1 - 45.0	11.6	•							
45.1 - 50.0	13.8	•					•		
50.1 - 55.0	16.2	• • • •							• •
55.1 - 60.0	18.7	• • • •			◇		•		• • •
60.1 +	25.3	• • •							•
TOTALS		18			2		2		21

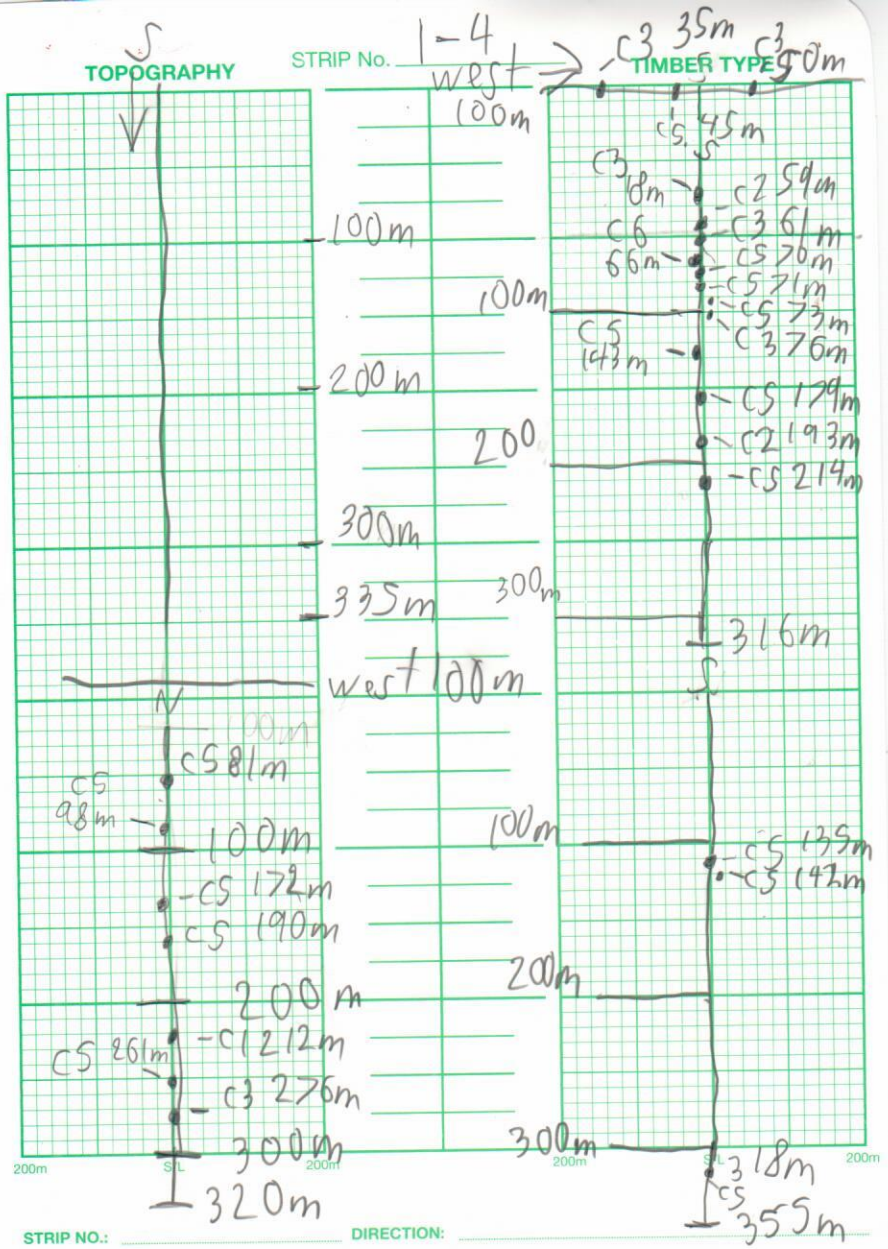
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN	
						Attacked	Unattacked
N	4		6		3		
S	3		3		2		

COMMENTS
◇ sample tree

CREW NAMES Martí Videgain
Megan Anstey

DATE Y 16 M 11 D 09

FS-1111 RPG 2000/01 7530881048 (100/bdl)



STRIP NO.: _____ DIRECTION: _____

START STRIP: _____

JOB NO.: _____ DATE: 09/11/2016

CREW: Mark Videgain Megan Anstey

REMARKS: _____

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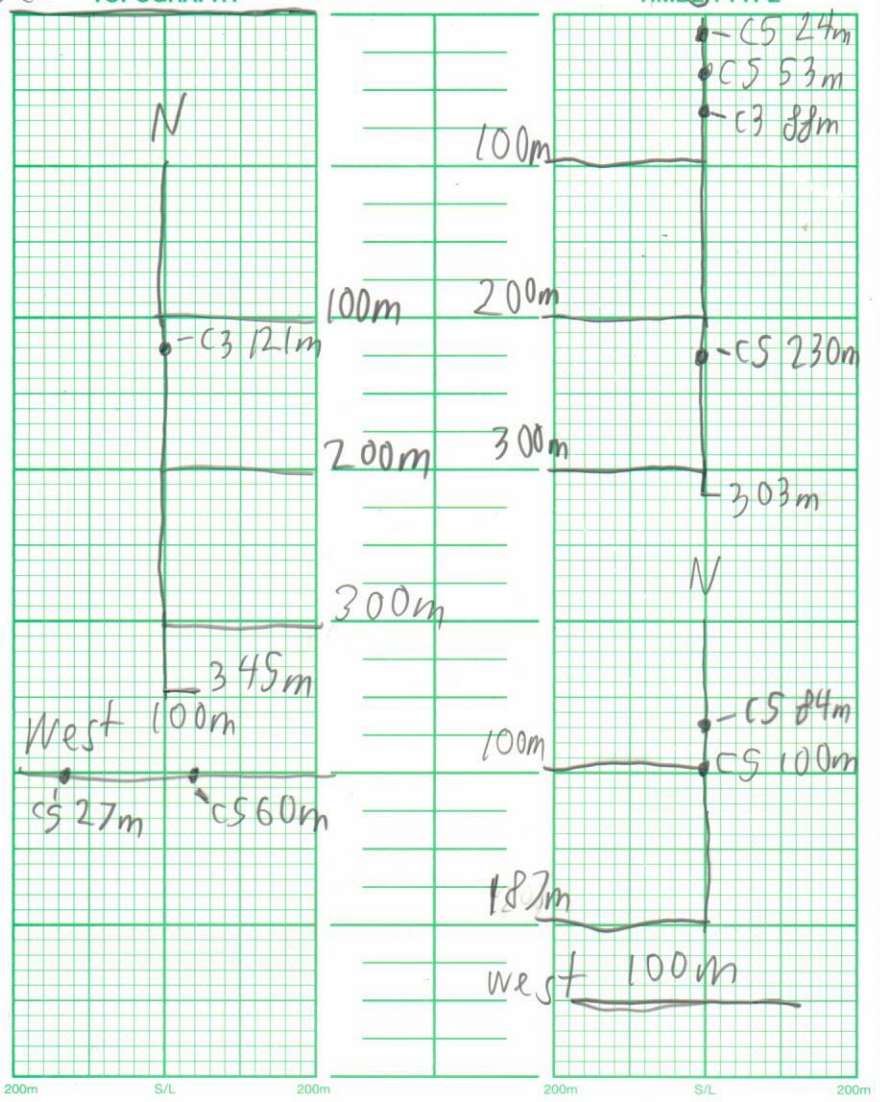
West 100m

TOPOGRAPHY STRIP No. 5-7 **TIMBER TYPE**



STRIP NO.: _____ DIRECTION: _____

START STRIP: _____

JOB NO.: _____ DATE: 09/11/2016

CREW: Mark Videgain Megan Anstey

REMARKS: _____

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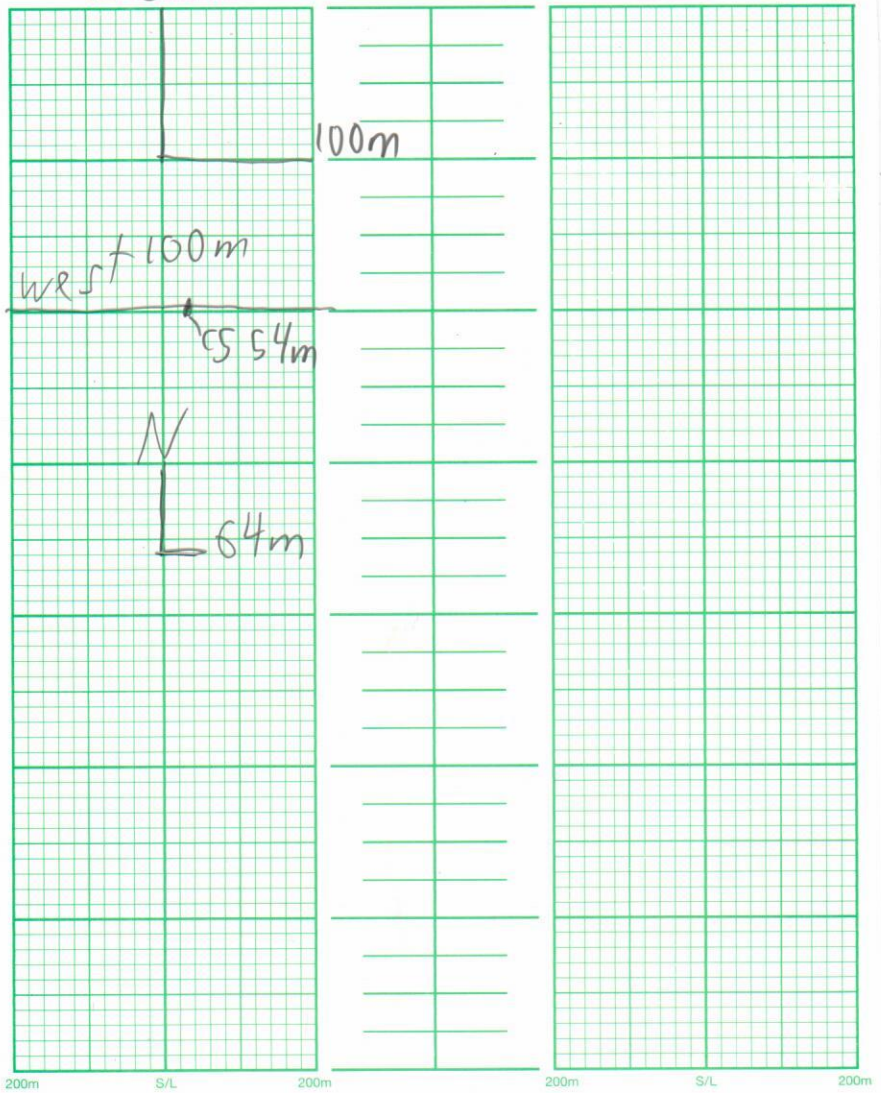
TOPOGRAPHY

STRIP No. 8-9

TIMBER TYPE



STRIP NO.: DIRECTION:

START STRIP:

JOB NO.: DATE: 09/11/2016

CREW: Marie Videgain Megan Anstey

REMARKS:

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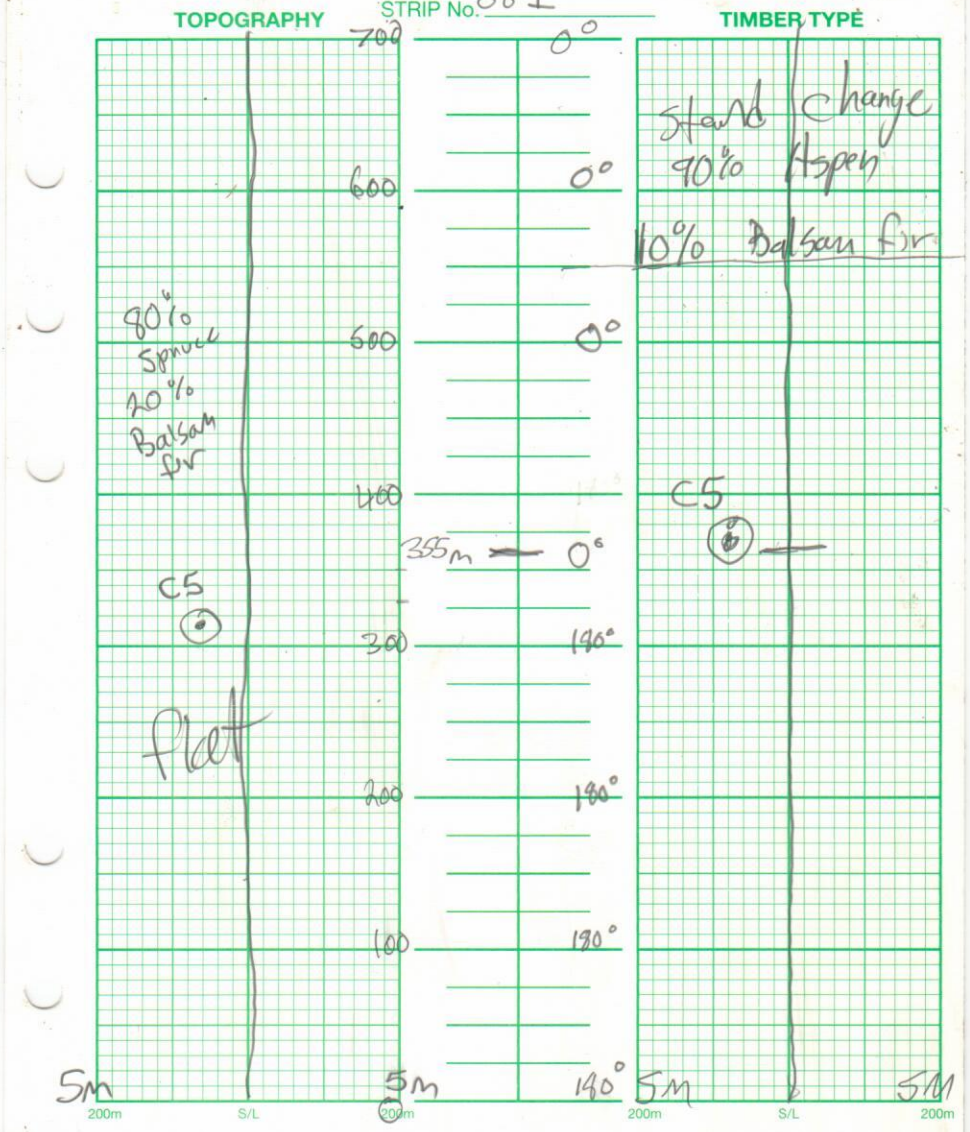

STRIP NO.: 001 DIRECTION: 180° South

START STRIP: PLEM - 0002

JOB NO.: DATE: 09/11/16

CREW: Megan Anstey Mark Videgain

REMARKS: Very open stand, few trees, devils club understory

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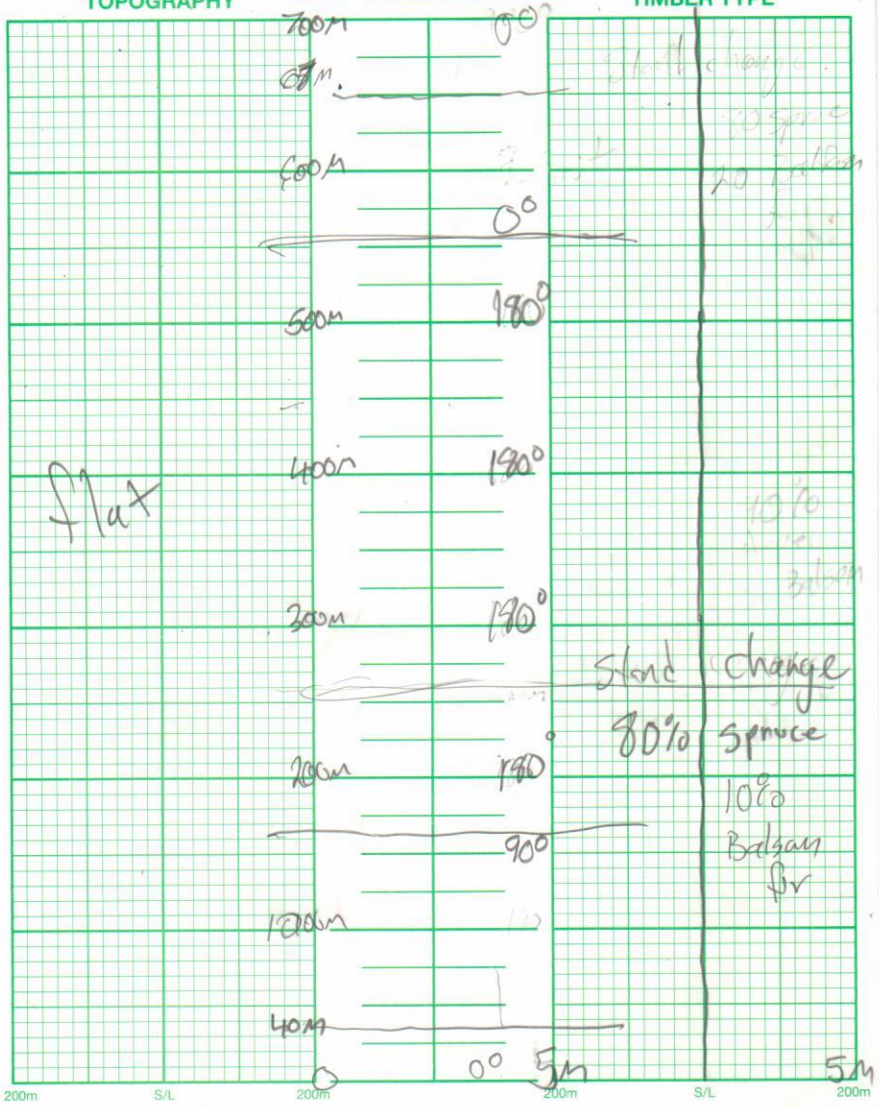
TOPOGRAPHY STRIP No. 002 **TIMBER TYPE**



STRIP NO.: 002 DIRECTION: North, South

START STRIP: PIEM - 0002

JOB NO.: DATE: 09/11/16

CREW: Megan Anstey Mark Videgosh

REMARKS:

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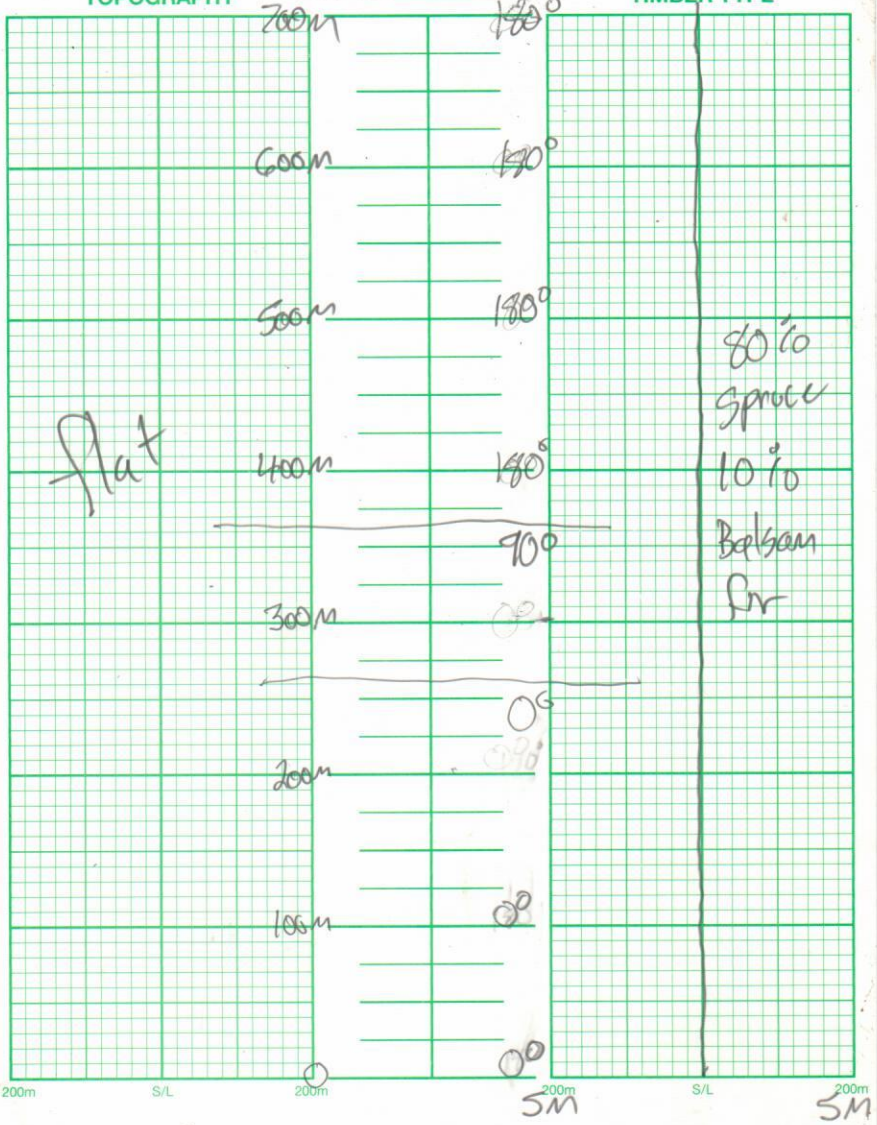
TOPOGRAPHY

STRIP No. 003

TIMBER TYPE



STRIP NO.: 003 DIRECTION: North South

START STRIP: PLEM - 002

JOB NO.: DATE: 09/11/16

CREW: Megan Anstey Mark Videyan

REMARKS:

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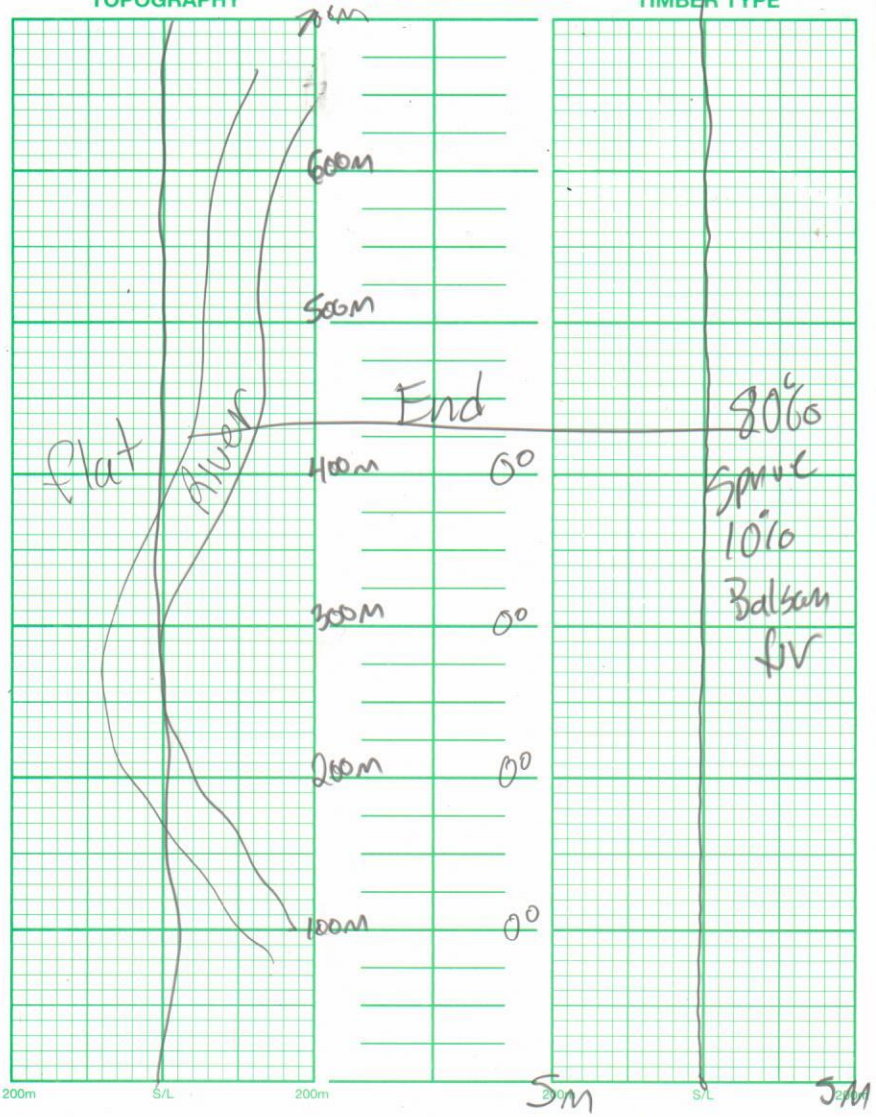
TOPOGRAPHY

STRIP No. 004

TIMBER TYPE



STRIP NO.: 004 DIRECTION: North South

START STRIP: PLEM -002

JOB NO.: DATE: 09/11/16

CREW: Megan Anstey Mark Videgain

REMARKS:

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