Polygon Name: 2014-GAF-013

433000 434000 6157000 6156000 6155000

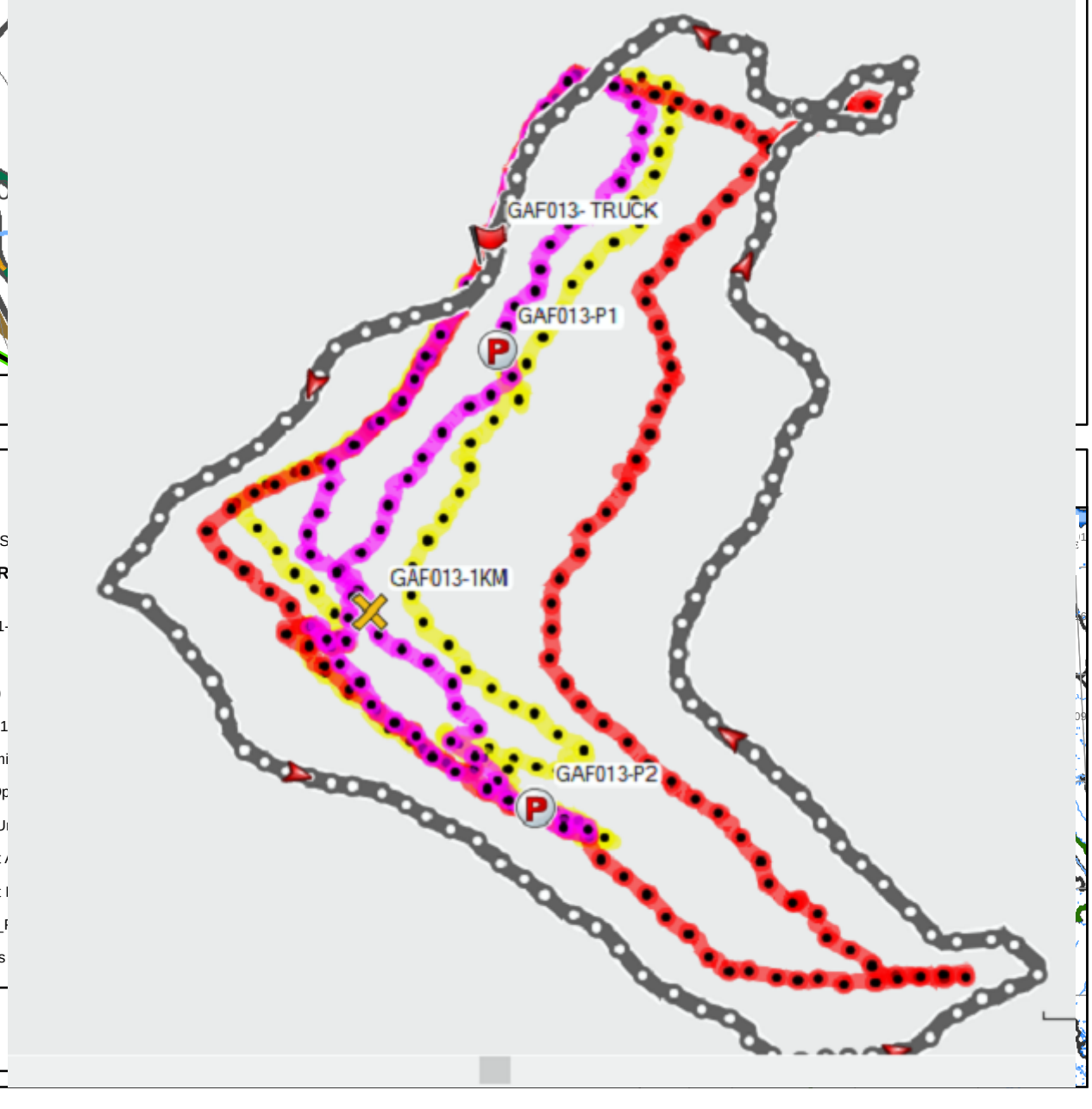
51963 83754 29623

-299930000 -299800000 -299940000 -299910000 -299810000 -299850000 -299690000

26 KM

Munro Creek

Marten River



Ministry of Forests, Lands and Natural Resource Operations

Spruce Bark Beetle Field Map

Polygon Name: 2014-GAF-013

Landscape Unit/BMU:	Gaffney
Region:	Omineca
District:	Mackenzie
Mapsheet:	093N09
Hectares:	85.95
Scale:	1:10,000
When plotted on 11x17	
Coordinate System:	PCS Albers
Datum:	North American 1983
Date Drawn:	03/06/2015
Drawn By:	msnively

Map Features

Susceptible S
2013 SB Hazard R
Hazard Classes
Low/Med (21-
Med (41-60)
High (61-80)
Very High (81
Cutting Permi
RESULTS Op
Landscape U
Road Permit A
Road Permit I
Km_Marker_P
Communities

N W E S

0

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

SPRUCE BARK BEETLE REPORT
FH16DMK010

POLYGON: GAF-013 HECTARES: 85.95

WALKTHROUGH DISTANCE: 7500

ESTIMATED INFFESTED PIXELS FROM WALKTHROUGH (Code 1-4): 12 **16.0%**

SUMMARY OF CURRENT INFESTATION

Walkthrough estmates shows some scattered Code 1 attack throughout polygon. More attack to the southwest alongside creek drainage. Very steep polygon, mix of Spruce and Balsam.

LIGHT SCATTERED ATTACK WITHIN DRAINAGES.

ACCESS

Access 2wd on Mainline Manson FSR along entire West edge of Polygon. Extremelt steep uphill slopes off mainline.

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

Very steep with slopes running up from Mainline. Lots of rocky outcrops with thin soils and Rocky Outcrops. (up to 60-70% slopes) Polygon flattens out a bit in Southwest corner down to about 20% slopes. Balsam spruce mixed throughout, attacked areas more spruce than Balsam and along drainages. Hillside more Balsam.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Moderate attack denisty scattered throughout Polygon. Pockets of Code 1 attack throughout, mainly to the south alongside Creek draw.

INCIDENCE AND SEVERITY OF ATTACK

Patchy attack, concentrated araes more so along drainages to south, Moderate attack density in these areas.

RISK OF BEETLE SPREAD

Polygon surrounded by older cutblocks and could move south out of polygon and within polygon itself.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, but very steep slopes off of mainline.

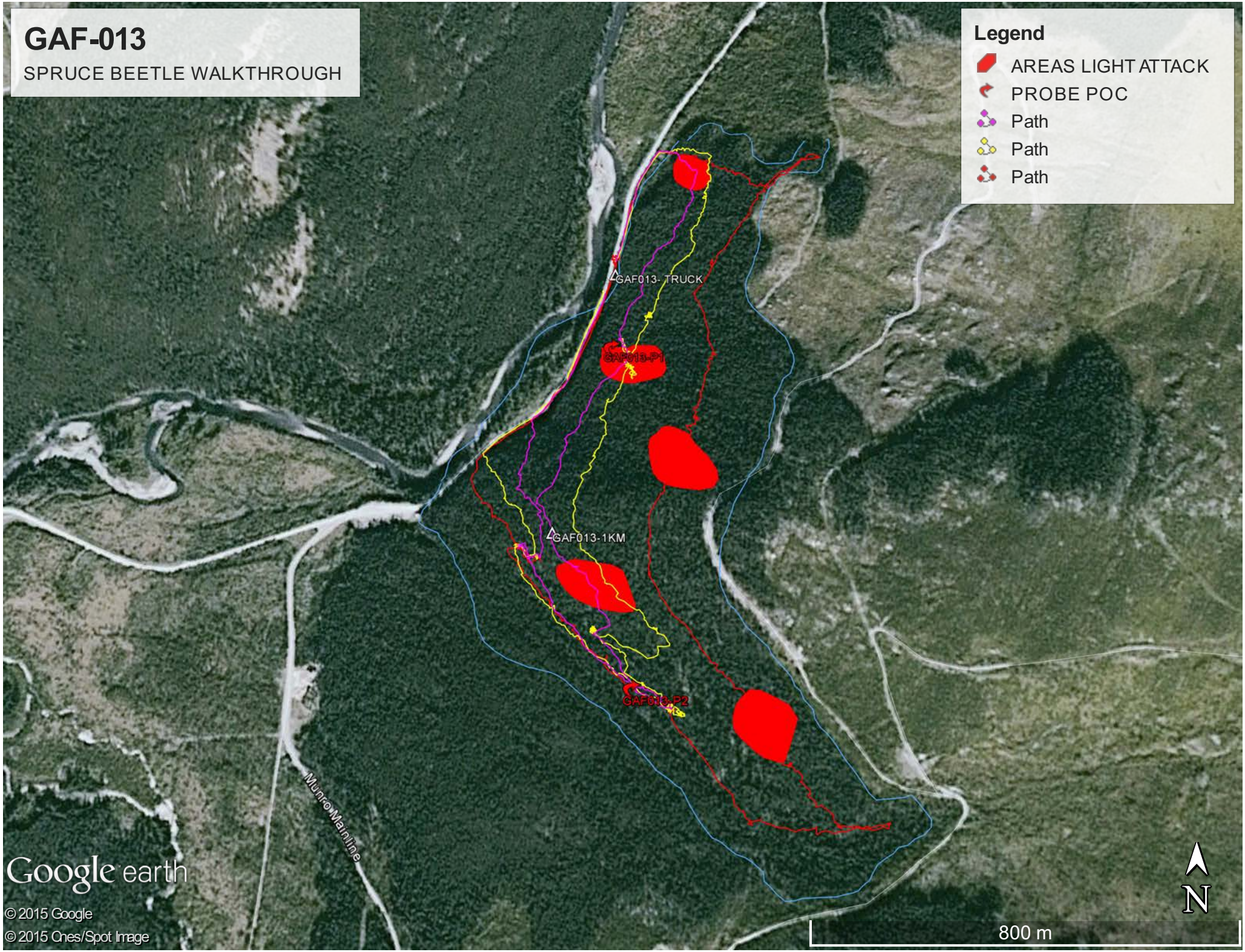
RECOMMENDATIONS

OPTION 1 **MONITOR**

Sanitation and Salvage Rating is MODERATE and isolated to within drainages. With polygon having operability issues, may want to Monitor and schedule a further Walkthrough in Fall of 2016 to identify rate of spread as trees identified in year 1

OPTION 2 **PROBE/ TRAP TREES**

Schedule further Probe and lay trap tree trails down along main road to hold infestation.


GAF-013
SPRUCE BEETLE WALKTHROUGH
Legend
AREAS LIGHT ATTACK
PROBE POC
Path
Path
Path
GAF013- TRUCK
GAF013-P1
GAF013-1KM
GAF013-P2
Munro Mainline
Google earth
© 2015 Google
© 2015 Cnes/Spot Image
N
800 m

Summary

GAF-013	HEC	85.95	METERS WALKED	7500	% TRAVERSED	8.7%
PIXELS COVERED BY WALKTHROUGH	75	INFESTED PIXELS	12	**ESTIMATED % OF BLOCK INFESTED (From Walk through)**		**16.0%**

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	42.9	0.0	0.0	0.0	0.0	0.0	0.0	26.4
25.1-30.0	5.3	74.2	5.3	0.0	0.0	0.0	0.0	0.0	47.7
30.1-35.0	7.1	71	14.2	0.0	0.0	0.0	0.0	0.0	28.4
35.1-40.0	9.4	65.8	0.0	0.0	0.0	0.0	0.0	0.0	28.2
40.1-45.0	11.6	92.8	0.0	0.0	0.0	0.0	11.6	0.0	11.6
45.1-50.0	13.8	82.8	0.0	0.0	0.0	0.0	13.8	0.0	0
50.1-55.0	16.2	32.4	0.0	0.0	0.0	0.0	16.2	0.0	0
55.1-60.0	18.7	18.7	0.0	0.0	0.0	0.0	0.0	0.0	0
60.1 +	25.3	0	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	541.7	480.6	19.5	0	0.0	0.0	41.6	0	142.3

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
1.75	< 3.9 SEVERE Attack Density	3.00	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	3.6%	3.6	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	437.1
% 2013 ATTACK	7.7%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	79.2%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

Along Steep hillside 70% Balsam 30% Spruce. North and South and on top where Probe lines taken 70-80% Spruce. Overall 50/50.

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS: 2

ACCESS - Access 2wd on Mainline Manson FSR along entire West edge of Polygon. Extremelt steep uphill slopes off mainline.

POLYGON FEATURES - Very steep with slopes running up from Mainline. Lots of rocky outcrops with thin soils and Rocky Outcrops. (up to 60-70% slopes) Polygon flattens out a bit in Southwest corner down to about 20% slopes. Balsam spruce mixed throughout, attacked areas more spruce than Balsam and along drainages. Hillside more Balsam.

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	BL	AT
17.5-25.0	3.3	13	0	0	0	0	0	0	8	0
25.1-30.0	5.3	14	1	0	0	0	0	0	9	0
30.1-35.0	7.1	10	2	0	0	0	0	0	4	0
35.1-40.0	9.4	7	0	0	0	0	0	0	3	0
40.1-45.0	11.6	8	0	0	0	0	1	0	1	0
45.1-50.0	13.8	6	0	0	0	0	1	0	0	0
50.1-55.0	16.2	2	0	0	0	0	1	0	0	0
55.1-60.0	18.7	1	0	0	0	0	0	0	0	0
60.1 +	25.3	0	0	0	0	0	0	0	0	0
TOTALS		61	3	0	0	0	3	0	25	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
4	7	0	12	0	0	0	0	0

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

Moderate attack denisty scattered throughout Polygon. Pockets of Code 1 attack throughout, mainly to the south alongside Creek draw.

INCIDENCE AND SEVERITY OF THE INFESTATION

Patchy attack, concentrated araes more so along drainages to south, Moderate attack density in these areas.

RISK OF BEETLE SPREAD

Polygon surrounded by older cutblocks and could move south out of polygon and within polygon itself.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, but very steep slopes off of mainline.

PROBE #1

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
GAF 013 UTM 0433592 6156638	842	/	1	2

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
167°	1	10m	100m	☑ SB ☐ MPB ☐ DFB

DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK 1	2	3	4	5	6	OTHER TREE SPECIES MAIN	OTHER
									BL	
12.5 - 17.4	2.0	••							•••	
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		30	2						22	

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked	Unattacked
1A	2	/	1	/	/	/	/
1B	2	/	3	/	/	/	/

COMMENTS
- attack 2 year cycle. Probe in orange flag. Line runs up 20% slope

CREW NAMES	DATE Y	M	D
JAMES / PAT	15	10	13

FS 1111A RPG 00/02 7530881049 (100/bdl)

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
GAF 013 UTM 0433623 6155883	964	/	2	2

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
100°	2	10m	100m	☒ SB ☐ MPB ☐ DFB

DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK 1	2	3	4	5	6	OTHER TREE SPECIES MAIN	OTHER
									BL	•
12.5 - 17.4	2.0	•							••	
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		35	1				3		11	1

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked	Unattacked
2A	2	/	6	/	/	/	/
2B	1	/	2	/	/	/	/

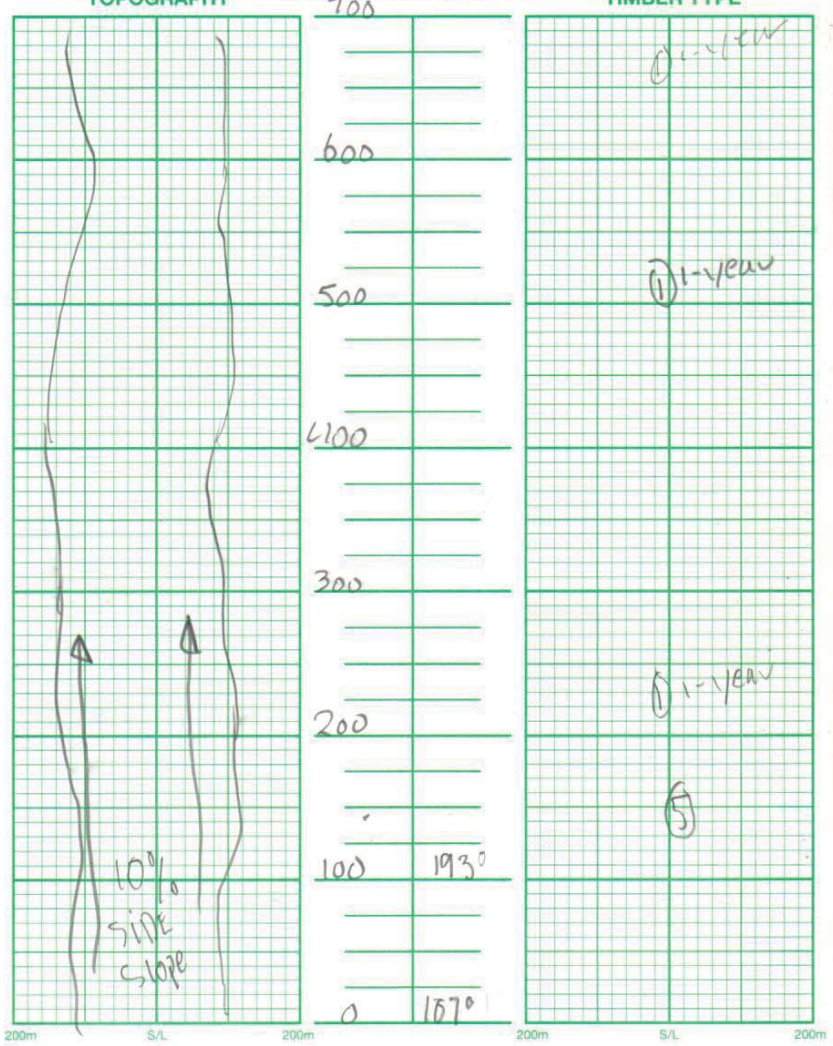
COMMENTS
- Large SX observed in polygon.
- probe in orange flag.

CREW NAMES	DATE Y	M	D
JAMES / KELLY	15	10	15

FS 1111A RPG 00/02 7530881049 (100/bdl)

Red

TOPOGRAPHY STRIP No. GAF-013 **TIMBER TYPE**



STRIP NO.: GAF-013 DIRECTION: 107° - 193°

START STRIP: 0-700

JOB NO.: Seneca/walk DATE: Oct 13, 15

CREW: Pat Poirier

REMARKS: Minimal Attack

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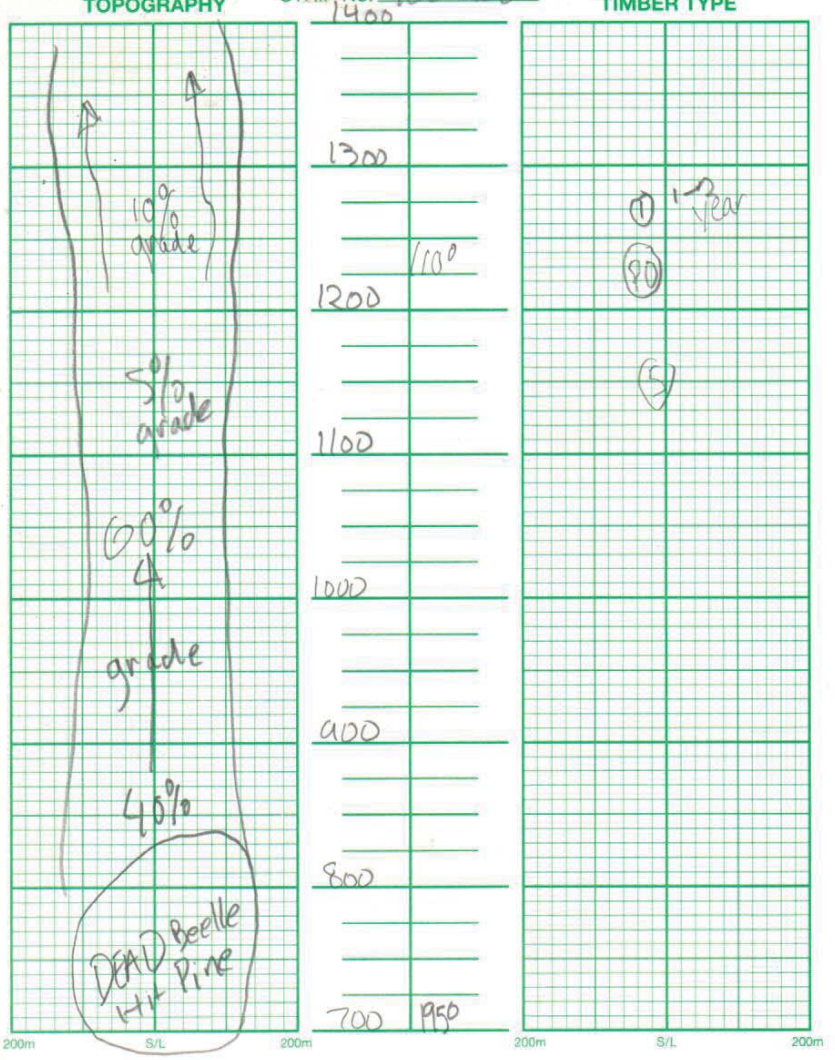
TOPOGRAPHY STRIP No. 700-1400 **TIMBER TYPE**



STRIP NO.: GAF-013 DIRECTION: 1950, 110°

START STRIP: 700-1400

JOB NO.: Seneca, walk DATE: Oct 13, 15

CREW: Pat Poirier

REMARKS: Only one D observed

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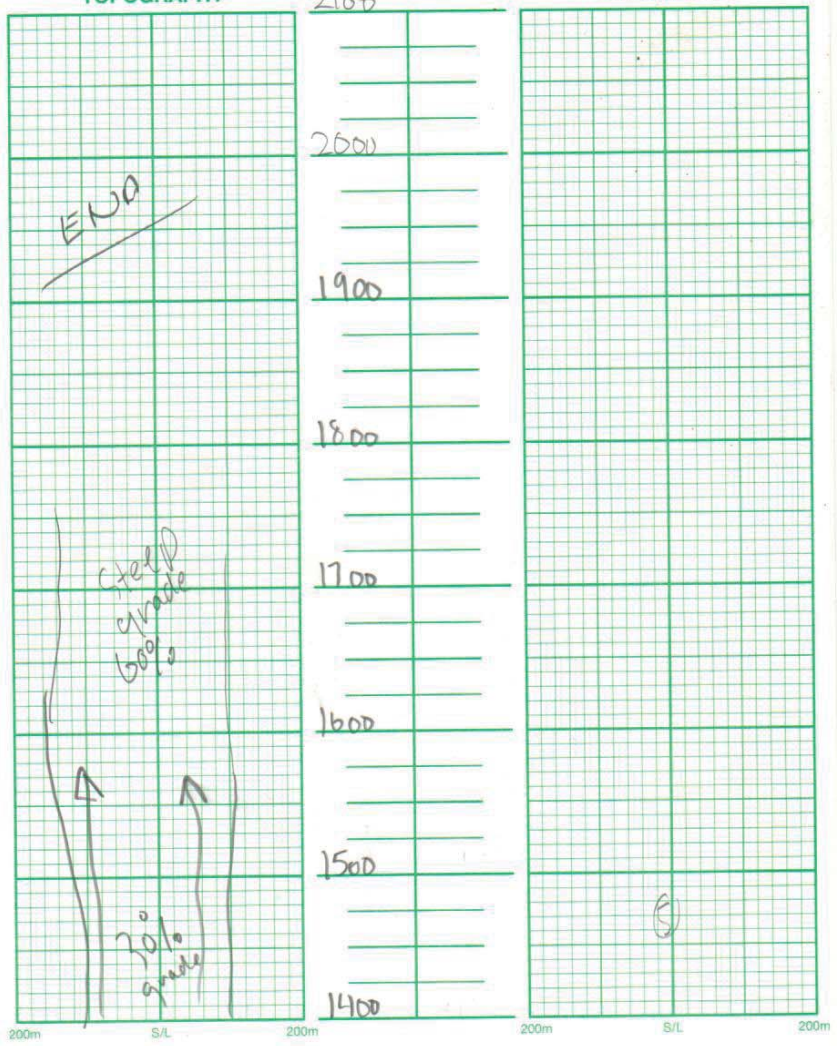
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No. 1400-2100

TIMBER TYPE



STRIP NO.: CAF-013 DIRECTION: 320°

START STRIP: 1400 - 2100

JOB NO.: Seneca/walk DATE: Oct 15, 15

CREW: Pat Poirier

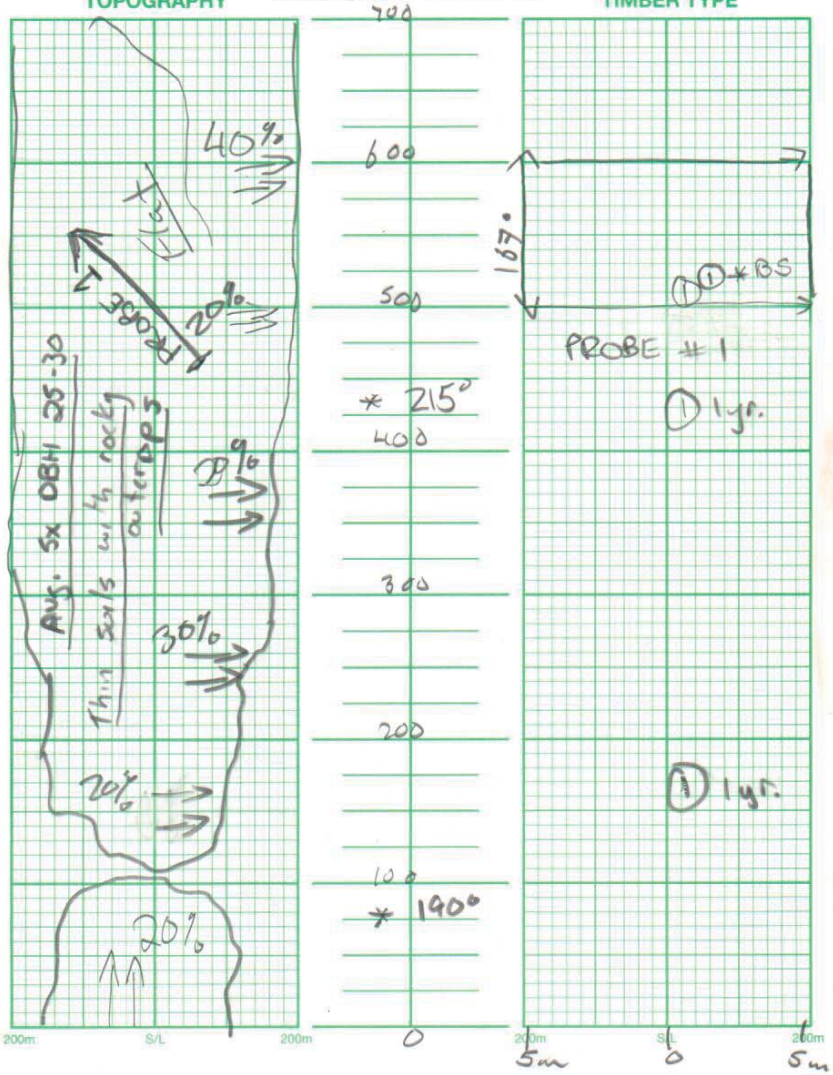
REMARKS:

irl www.irlsupplies.com Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE

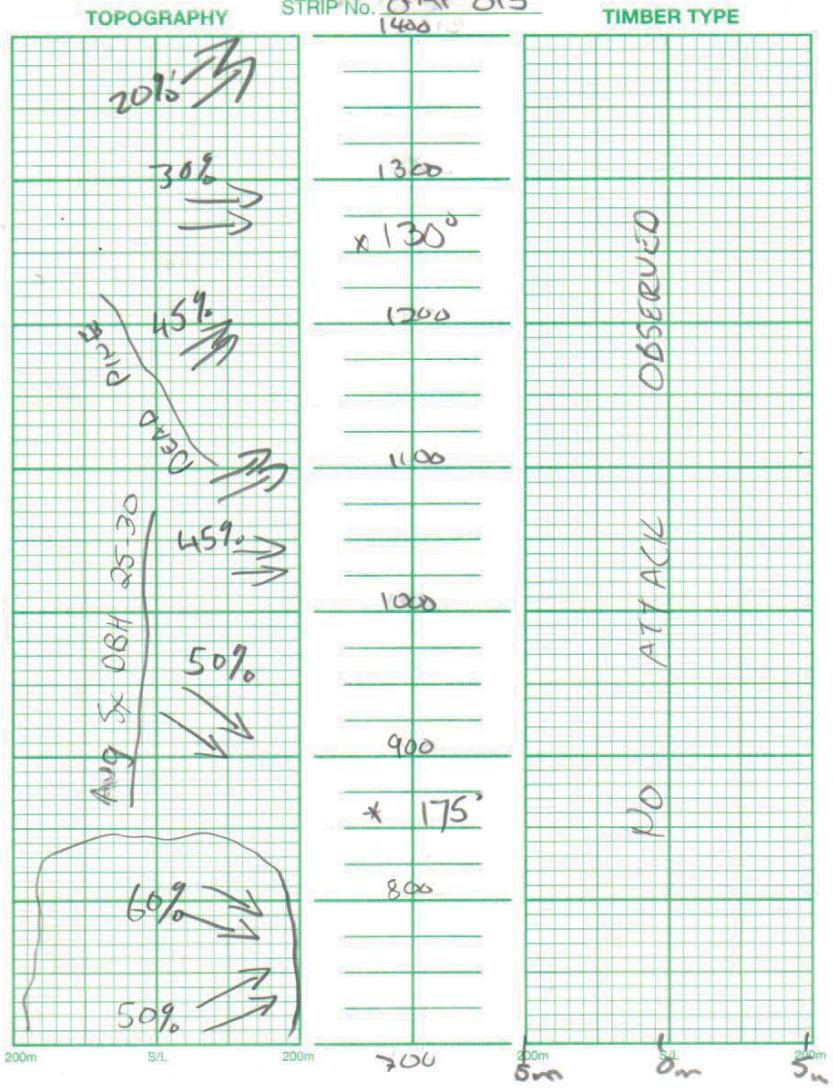


STRIP NO.: GAF-013 DIRECTION: 140° - 190° - 215°

TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE



STRIP NO.: GAF-013 DIRECTION: 215° - 175° - 130°

START STRIP: 700 - 1400

JOB NO.: SEP. WALK DATE: Oct 13 / 2015

CREW: JAMES. K

REMARKS: PO attack - steep

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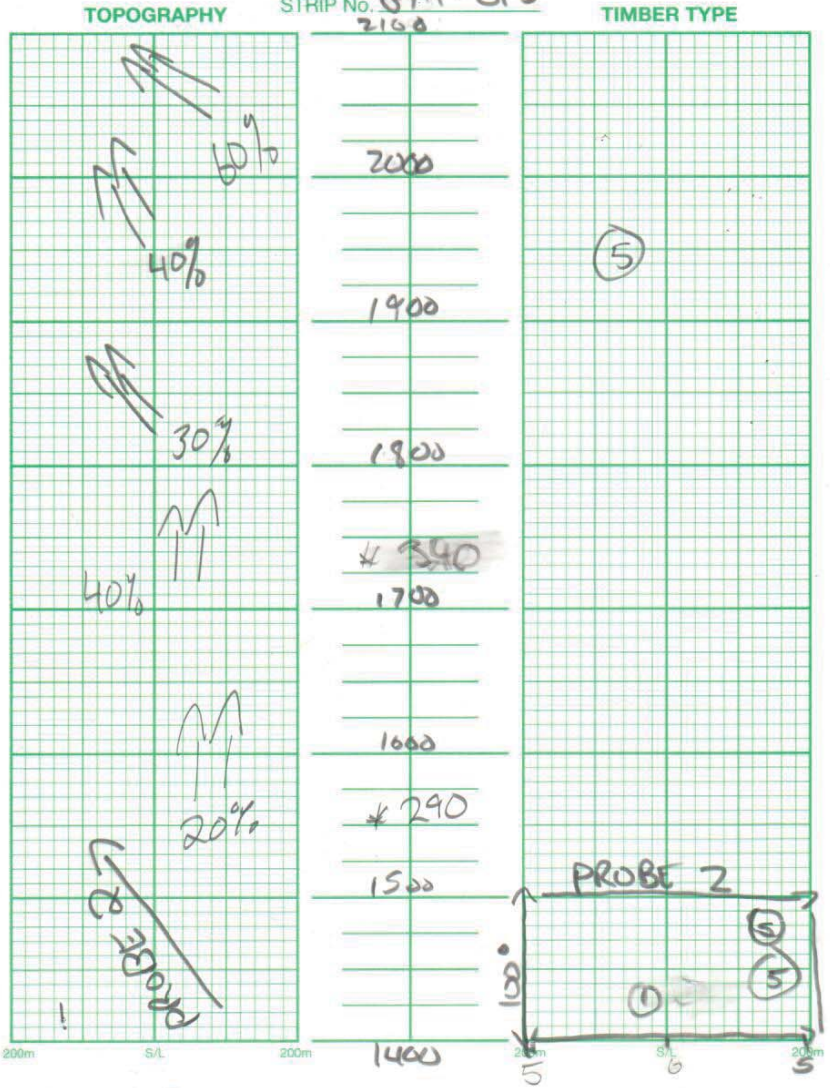
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE



STRIP NO.: GAF-013 DIRECTION: 130° - 290° - 340°

TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE

2700

2600

2500

2400

2300

2200

2100

END

200m S/L 200m

200m S/L 200m

STRIP NO.: GAF-013 DIRECTION: 340°

START STRIP: 2100 - 2800

JOB NO.: SEN. WALK DATE: OCT 13 / 2015

CREW: JAMES K.

REMARKS:

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TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE

700m

600m

500m

400m

300m

200m

100m

60° slope

20° slope

20° slope

Direction change 212°

45° slope

Direction change 50°

45° Slope

30° Slope

(5)

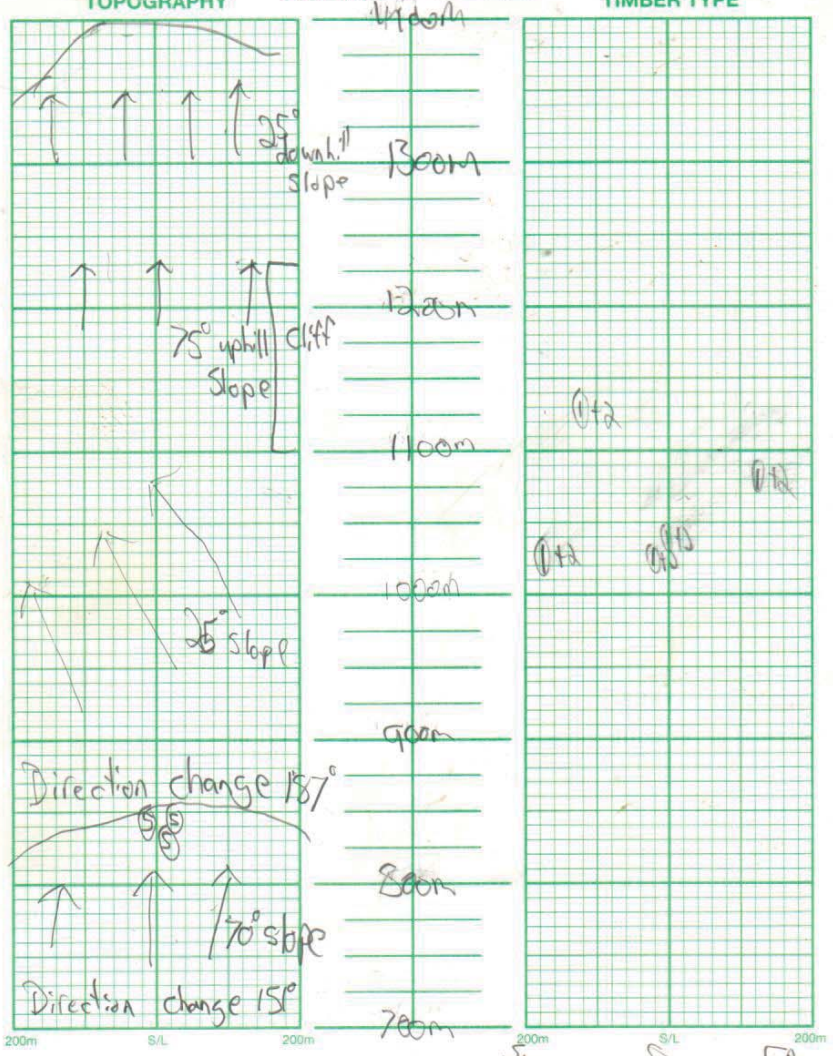
(7)

(1+2)

TOPOGRAPHY

STRIP No. GAF-013

TIMBER TYPE



STRIP NO.: GAF-013 DIRECTION: 151°(150m), 187°(535m)

START STRIP: 700m - 1400m

JOB NO.: Seneca Wallethaug DATE: Oct. 13/15

CREW: Dailen. V

REMARKS: Steep, rocky, high amounts

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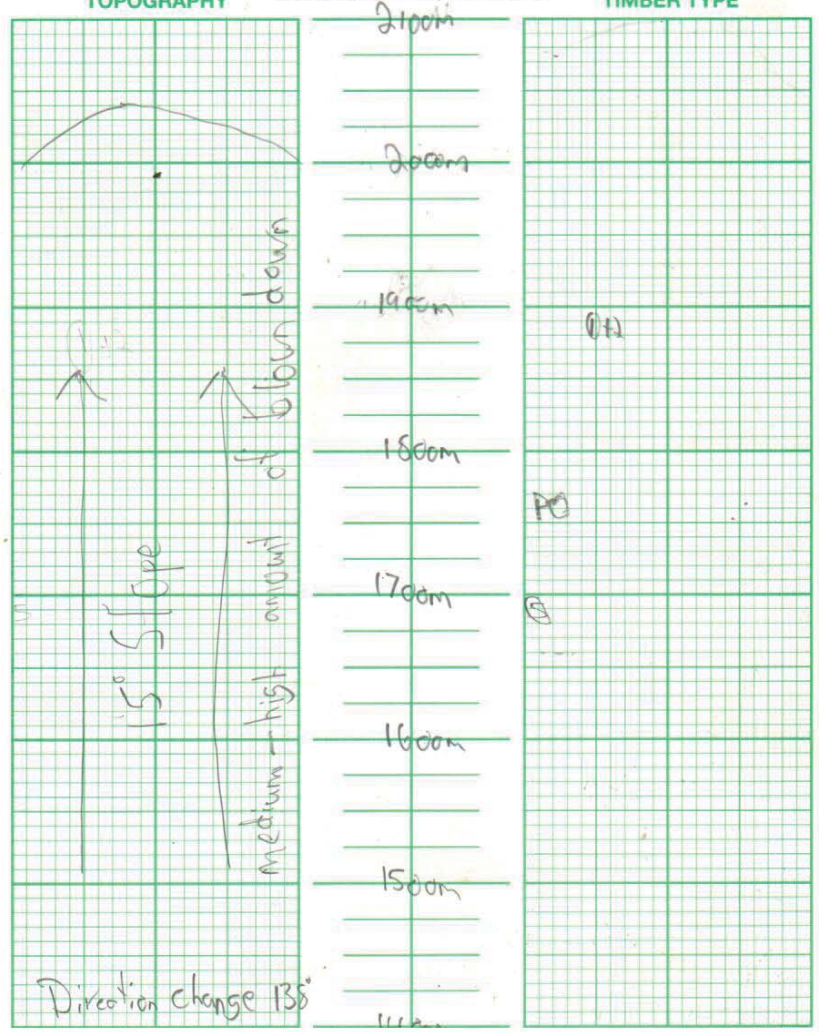
TOPOGRAPHY

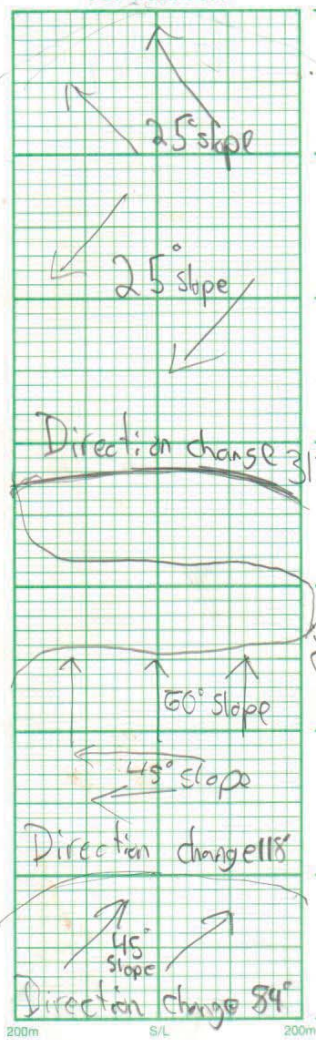
STRIP No. GAF-013

TIMBER TYPE



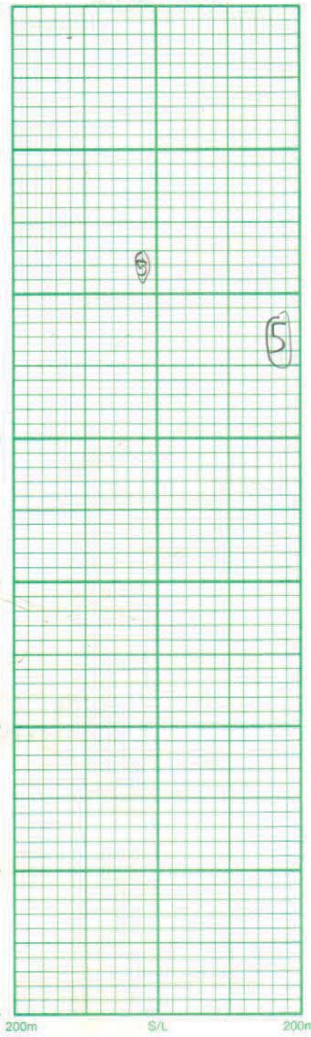
STRIP No. GAF-013

TOPOGRAPHY



2800m
2700m
2600m
2500m
2400m
2300m
2200m
2100m

TIMBER TYPE



STRIP NO.: GAF-013 DIRECTION: 84°(100m), 118°(275m),

START STRIP: 2100m - 2800m

JOB NO.: Seneca walkthrough DATE: Oct. 13/15

CREW: Dalen. V

REMARKS:

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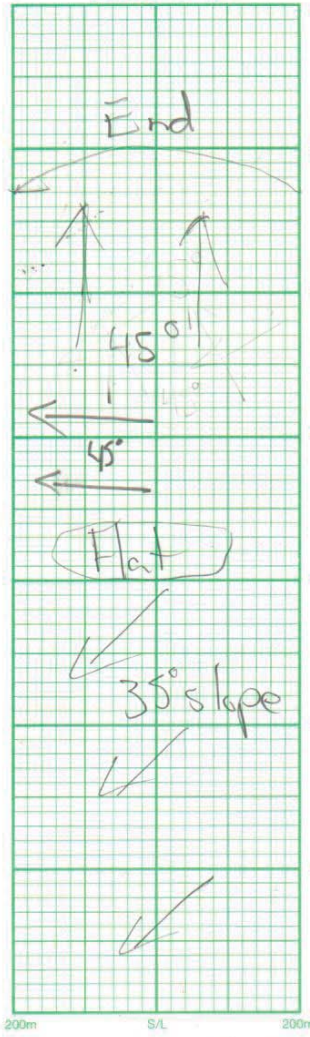
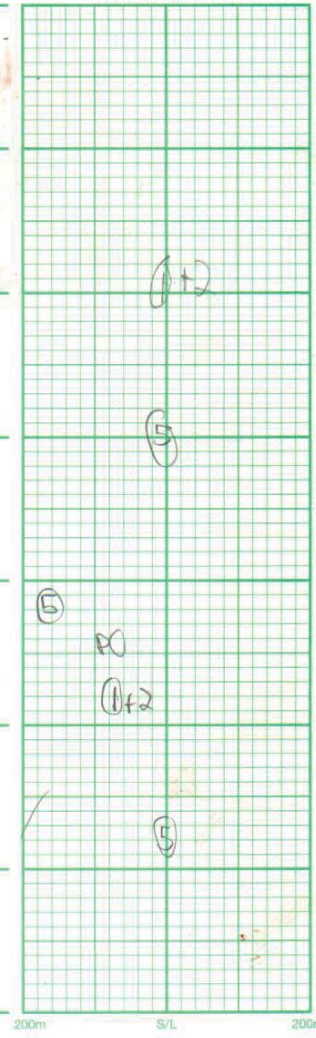
STRIP No. GAF-013

TOPOGRAPHY



3500m
3400m
3300m
3200m
3100m
3000m
2900m
2800m

TIMBER TYPE



STRIP NO.: GAF-013 DIRECTION: 317°

START STRIP: 2800m - 3400m

JOB NO.: Seneca walkthrough DATE: Oct. 13/15