Polygon Name: 2014-BLA-029

A15384
CP C17
30/07/2013
ACTIVE

435000 436000 437000

6177000 6176000 6175000

-300370000
-300280000
-300480000
-300290000

1559555
1533743

900 1000 1100

3- CODE 1'S
1- CODE 3

3- CODE 3'S

Ministry of Forests, Lands and Natural Resource Operations

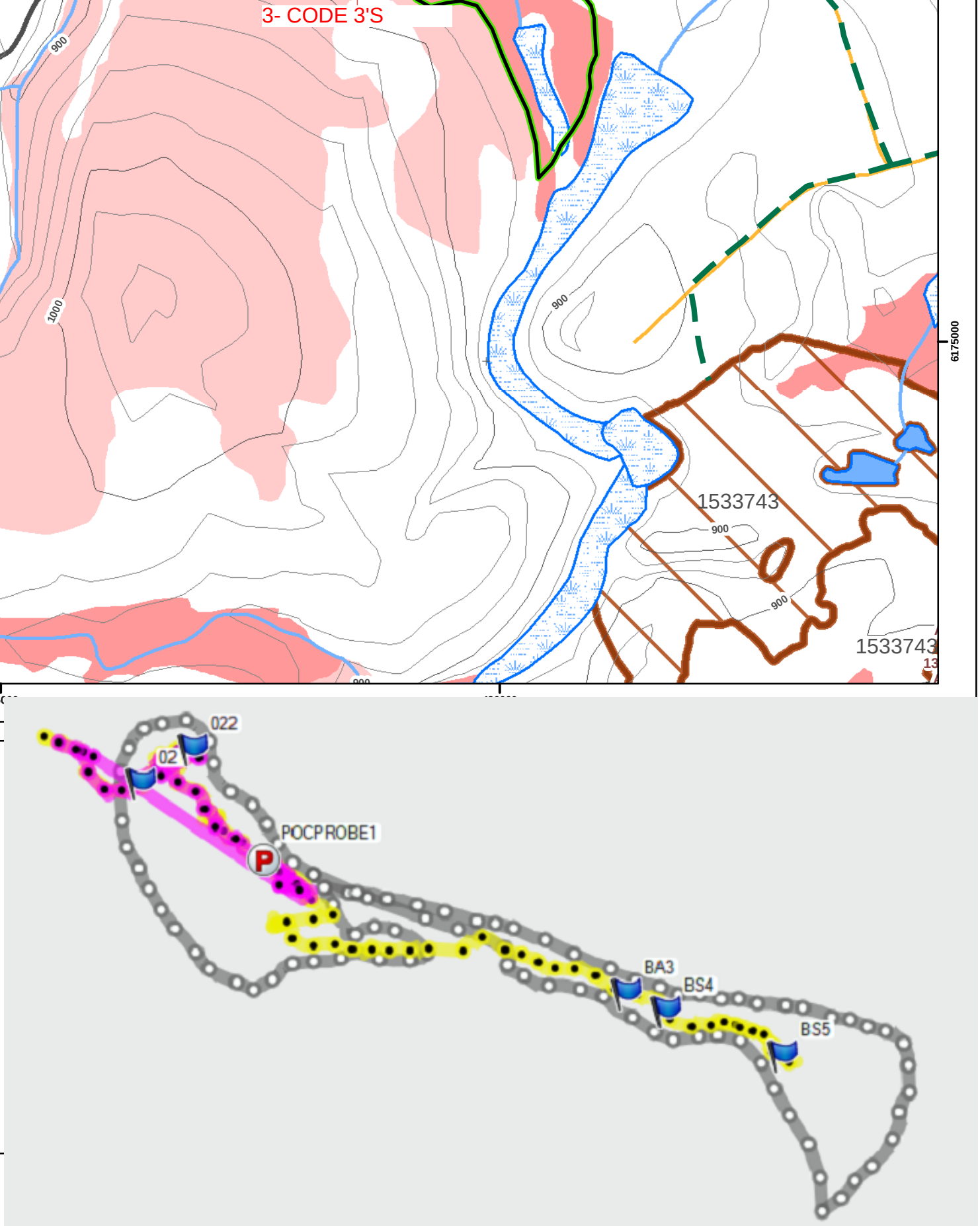
Spruce Bark Beetle Field Map

Polygon Name: 2014-BLA-029

Landscape Unit/BMU:	Blackwater
Region:	Omineca
District:	Mackenzie
Mapsheet:	093N09
Hectares:	19.03
Scale:	1:10,000

When plotted on 11x17

Coordinate System:	PCS Albers
Datum:	North American 1983
Date Drawn:	03/06/2015
Drawn By:	msnively



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: BLA-029 HECTARES: 19.03

WALKTHROUGH DISTANCE: 1300

ESTIMATED INFFESTED PIXELS FROM WALKTHROUGH (Code 1-4): 3 **23.1%**

SUMMARY OF CURRENT INFESTATION

Walkthrough shows 30% of pixels infested. Of these many are Code 1's on a 1 and 2 year cycle. Polygon has difficult access and crew walked in from Road on West and walked downhill into polygon. Fairly flat throughout and steeper slope on west side. Trees sampled have a moderate attack and mean larvael density.

MODERATE SCATTERED ATTACK

ACCESS

Access ATV and Crews walked in to the north of the Polygon.

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

North section of Polygon moderate slope, flat in the rest. Polygon surrounded to the north and east by swamp.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Moderate scattered attack withMix of code 1s and 3s (Hit 2014 and 2015) Did 3 additional bark samples to confirm trees on a 1 and 2 year life cycle.

INCIDENCE AND SEVERITY OF ATTACK

1 probe line established, 3 bark samples. Of the 3 samples, showing moderate attack density and all showing beetle on a 1 and 2 year life cycle. Attacked areas are scattered in the low lieing areas along creek and swamp edge.

RISK OF BEETLE SPREAD

Mooderate rate of spread as there is a moderate attack density, 60% Spruce stand to the south.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

There is a trail identified coming into the north of Polygon that crosses a swamp. Crew walked in from road on west to the top of the hill and down into polygon. Couple drainages wihtin polygon.

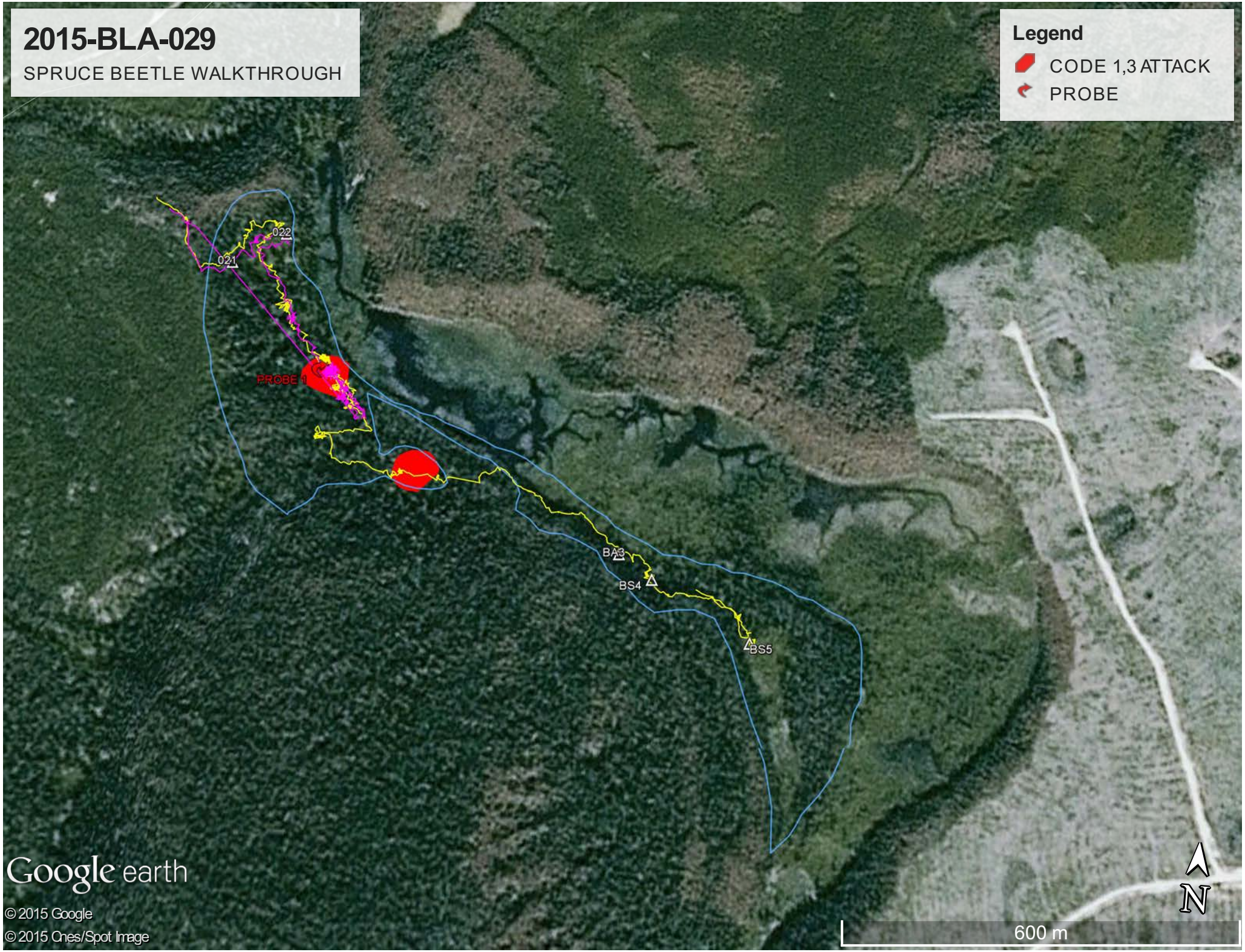
RECOMMENDATIONS

OPTION 1 **PROBE/ TRAP TREES**

Moderate scattered attack. Recommend Probe to identify the exact areas of infestation. While awaiting Harvesting Plans, recommend holding current infestation with trap trees.

OPTION 2 **CRUISING LOGGING**

Schedule Cruising/ Logging if operationally viable with access constraints.


2015-BLA-029
SPRUCE BEETLE WALKTHROUGH
Legend
CODE 1,3 ATTACK
PROBE
022
021
PROBE 1
BA3
BS4
BS5
Google earth
© 2015 Google
© 2015 Cnes/Spot Image
N
600 m

Summary

BLA-029	HEC	19.03	METERS WALKED	1300	% TRAVERSED	6.8%
PIXELS COVERED BY WALKTHROUGH	13	INFESTED PIXELS	3	**ESTIMATED % OF BLOCK INFESTED (From Walk through)**		**23.1%**

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	6.6	0.0	0.0	0.0	0.0	0.0	0.0	52.8
25.1-30.0	5.3	5.3	0.0	0.0	0.0	0.0	0.0	0.0	58.3
30.1-35.0	7.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	42.6
35.1-40.0	9.4	28.2	0.0	0.0	0.0	0.0	0.0	0.0	9.4
40.1-45.0	11.6	11.6	0.0	0.0	0.0	0.0	11.6	0.0	0
45.1-50.0	13.8	13.8	27.6	0.0	0.0	0.0	0.0	0.0	0
50.1-55.0	16.2	48.6	16.2	0.0	0.0	0.0	16.2	0.0	0
55.1-60.0	18.7	0	0.0	0.0	18.7	0.0	0.0	0.0	0
60.1 +	25.3	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	236.8	146.5	43.8	0	18.7	0.0	27.8	0	163.1

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
0.67	< 3.9 SEVERE Attack Density	**8.83**	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	18.5%	##	SANITATION AND SALVAGE HARVEST PRIORITY RATING		
% 2014 ATTACK	7.9%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)
% 2013 ATTACK	11.7%	##	MODERATE	600-999	PROBE (To Obtain Further Info)
% HOST IN STAND	59.2%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING

1580.8

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS 1

ACCESS - Access ATV and Crews walked in to the north of the Polygon.

POLYGON FEATURES - North section of Polygon moderate slope, flat in the rest. Polygon surrounded to the north and east by swamp.

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	2	0	0	0	0	0	0	16	0
25.1-30.0	5.3	1	0	0	0	0	0	0	11	0
30.1-35.0	7.1	1	0	0	0	0	0	0	6	0
35.1-40.0	9.4	3	0	0	0	0	0	0	1	0
40.1-45.0	11.6	1	0	0	0	0	1	0	0	0
45.1-50.0	13.8	1	2	0	0	0	0	0	0	0
50.1-55.0	16.2	3	1	0	0	0	1	0	0	0
55.1-60.0	18.7	0	0	0	1	0	0	0	0	0
60.1 +	25.3	1	0	0	0	0	0	0	0	0
TOTALS		13	3	0	1	0	2	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
6	4	1	53	1	12	0	0	0

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

Moderate scattered attack withMix of code 1s and 3s (Hit 2014 and 2015) Did 3 additional bark samples to confirm trees on a 1 and 2 year life cycle.

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There is a trail identified coming into the north of Polygon that crosses a swamp. Crew walked in from road on west to the top of the hill and down into polygon. Couple drainages wihtin polygon.

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
BLA-029 POC 0935352 6176091				

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
137°	Probe 1	100m	10m	[X] 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
12.5 - 17.4	2.0	N/A							N/A	N/A
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	•					1			
45.1 - 50.0	13.8	••	2S							
50.1 - 55.0	16.2	••	•				1			
55.1 - 60.0	18.7				1					
60.1 -	25.3	•								
TOTALS		13	3		1		2		34	

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked		Unattacked
N	••	Ø	••••	Ø	•	Ø	Ø	Ø
S	•	Ø	••••	Ø	•	Ø	Ø	Ø

COMMENTS N side 0S 2 woodborer larvae found
0S: 90% 2yr life cycle

CREW NAMES	DATE Y	M	D
Aaron Colebank, Brandon Sparks	15	10	15

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

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
Bark Sample 4		0935910 6175766		

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
90°				[ ] 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
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										

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked		Unattacked
S	•	•	••••	Ø	•			
N	Ø	Ø	••••	Ø	••			

COMMENTS

CREW NAMES	DATE Y	M	D
Brandon Sparks, Aaron Colebank	15	10	15

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

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
B55		0485864 C1758559		

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
100°				☐ SB ☐ MPB ☐ DFB

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	MAIN	OTHER
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										

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

COMMENTS

CREW NAMES: Brandon Sparks Aaron Colebank

DATE: Y 15 M 10 D 15

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

code 4 and 1

BRITISH COLUMBIA — BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
B55		0486072 6175696		

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
94°				☐ SB ☐ MPB ☐ DFB

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	MAIN	OTHER
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										

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN	
						Attacked	Unattacked
North	Ø	Ø	•••••	Ø	•		
South	Ø	Ø	•••	•	•••••		

COMMENTS

CREW NAMES: Brandon Sparks Aaron Colebank

DATE: Y 15 M 10 D 15

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

TOPOGRAPHY

STRIP No. Bla-029

TIMBER TYPE

probe 1 finishes

15% Slope

Probe 1 starts 137°

(*) scale change

120° bearing

80/20 Sw/ba

15% Slope

90/10 Sw/ba

20% Slope

146° bearing

18° bearing

500 450m 400m 350m 300 200 100 0

5m

Sample

Ruse

old attack on 30% of tree, no beetles found

Sample

200m S/L 200m

5m

STRIP NO.: Bla 029 DIRECTION: 18°

START STRIP: 10 4 0435169 6976243

JOB NO.: BLA029 DATE: Oct 15th 205

CREW: Aaron Colebank, Brandon Sparks

REMARKS: *Dwae [illegible] probe lots (allow)

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TOPOGRAPHY

STRIP No. BLA029

TIMBER TYPE

20% Slope

94° bearing

15% Slope

60/40 Sw/ba

100° bearing

70/30 Sw/ba

25% Slope

20% Slope

70/30 Sw/ba

bearing change 86 @ 580m

20% Slope

1200 1100 1000 900 800 700 600 500

(1) (1) - sample

P10 1 sample

(3) (3) (2)

200m S/L 200m

STRIP NO.: DIRECTION:

START STRIP:

JOB NO.: DATE:

CREW:

REMARKS:

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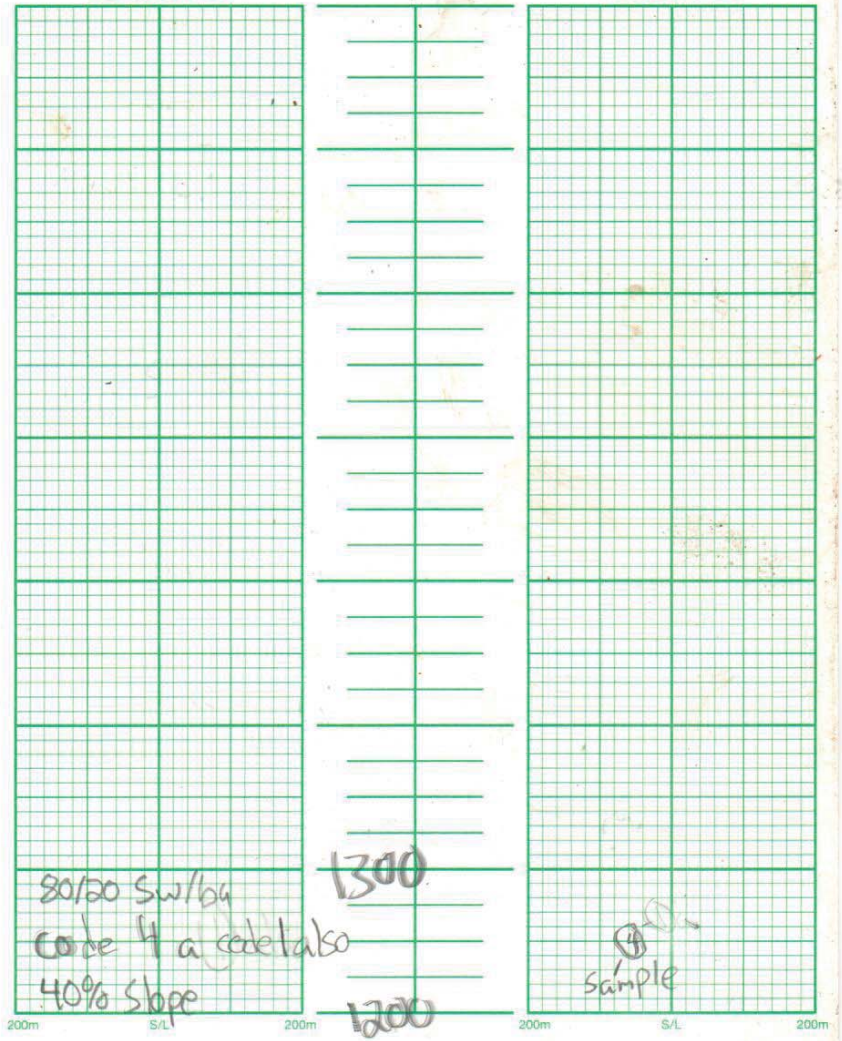
TOPOGRAPHY STRIP No. BLA029 **TIMBER TYPE**



STRIP NO.: _____ DIRECTION: _____

START STRIP: _____

JOB NO.: _____ DATE: _____

CREW: _____

REMARKS: _____

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