

**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: 2014-BLA-024

HECTARES:

74.45

WALKTHROUGH DISTANCE:

4300

ESTIMATED INFESTED PIXELS FROM

WALKTHROUGH (Code 1-4)

4

9.3%

SUMMARY OF CURRENT INFESTATION

Walkthrough has <10% of polygon having recent attack. Some strip attack and several trees showing unsuccessful Pitchouts. Attack is spread out and noticed more where some blowdown was present. Very flat stand with wet areas throughout. Low attack densities also noticed.

LIGHT SCATTERED ATTACK**ACCESS**

Access is good by 4wd off of Finlay Main

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

Very flat Polygon with wet areas and a couple of draws within. Polygon is 75% spruce. Polygon has Manson Rover to the east, powerline access to the North with old cutblocks on the west.]

SIZE, BOUNDARY and PATTERN OF INFESTATION

Polygon has Light scattered attack with <10% of pixels infested with recent attack. Light attack in these areas where blowdown and wet areas are where tree attacked. Several trees noticed unsuccessful attack and pitch outs.

INCIDENCE AND SEVERITY OF ATTACK

Low attack density and low larval density from Probes and bark sample that was taken. Very scattered throughout polygon.

RISK OF BEETLE SPREAD

Several Pitchouts noticed and beetle will continue to lightly move through polygon and may reattack weakened trees.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, on mainline Finlay. Flat.

RECOMMENDATIONS**OPTION 1****MONITOR**

As lower attack densities and many pitchouts, monitor polygon.

OPTION 2**TRAP TREES/ MONITOR**

as access good, could lay trap tree trail to capture further attack.

2014-BLA-024

S[RUCE BEETLE WALKTHROUGH

Legend

-  Light Scattered Attack
-  Probe Line



Summary						
2014-BLA-024	HEC	74.45	METERS WALKED	4300	% TRAVERSED	5.8%
PIXELS COVERED BY WALKTHROUGH	43	INFESTED PIXELS	4	ESTIMATED % OF BLOCK INFESTED (From Walk through)		9.3%
TABLE 5- Spruce Beetle Infestation Summary Sheet						

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	36.3	0.0	0.0	0.0	0.0	0.0	0.0	9.9
25.1-30.0	5.3	58.3	0.0	0.0	0.0	0.0	0.0	0.0	15.9
30.1-35.0	7.1	78.1	0.0	0.0	0.0	0.0	0.0	0.0	56.8
35.1-40.0	9.4	84.6	9.4	0.0	9.4	0.0	0.0	0.0	0
40.1-45.0	11.6	81.2	0.0	0.0	0.0	0.0	0.0	0.0	0
45.1-50.0	13.8	69	0.0	0.0	0.0	0.0	0.0	0.0	41.4
50.1-55.0	16.2	16.2	16.2	0.0	0.0	0.0	32.4	0.0	16.2
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	509.8	442.4	25.6	0	9.4	0.0	32.4	0	140.2

TABLE 4- Spruce Beetle Attack Density and Larval Density Rating

MEAN NO. OF ENTRANCE HOLES PER 225 cm2 PHLOEM SAMPLE	< 1 LOW Attack Density	MEAN NO. OF LIVING LARVAE PER 225 cm2 PHLOEM SAMPLE	< 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
0.83	< 3.9 SEVERE Attack Density	3.17	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	5.0%	5.0	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	1.8%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	614.9
% 2013 ATTACK	6.4%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	78.4%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

From 2 probe lines, 1 bark sample on attacked trees.

SUMMARY OF ALL CARDS FS1111							NUMBER OF CARDS		3	
ACCESS -		Access is good by 4wd off of Finlay Main								
POLYGON FEATURES -		Very flat Polygon with wet areas and a couple of draws within. Polygon is 75% spruce. Polygon has Manson Rover to the east, powerline access to the Norh with old cutblocks on the west.]								
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	11	0	0	0	0	0	0	3	0
25.1-30.0	5.3	11	0	0	0	0	0	0	3	0
30.1-35.0	7.1	11	0	0	0	0	0	0	8	0
35.1-40.0	9.4	9	1	0	1	0	0	0	0	0
40.1-45.0	11.6	7	0	0	0	0	0	0	0	0
45.1-50.0	13.8	5	0	0	0	0	0	0	3	0
50.1-55.0	16.2	1	1	0	0	0	2	0	0	1
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		56	2	0	1	0	2	0	17	1
BARK SAMPLES 15 cm x 15 cm	NO. ENTRANC E HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN				
						Attacked Y r	Y r	Unattacked		
6	5	0	19	1	3	1		0		0
SIZE, BOUNDARY AND PATTERN OF THE INFESTATION										
Polygon has Light scattered attack with <10% of pixels infested with recent attack. Light attack in these areas where blowdown and wet areas are where tree attacked. Several trees noticed unsuccessful attack and pitch outs.										
INCIDENCE AND SEVERITY OF THE INFESTATION										
Low attack density and low larvael density from Probes and bark sample that was taken. Very scatterd throughout polygon.										
RISK OF BEETLE SPREAD										
Several Pitchouts noticed and beetle will continue to lightly move through polygon and may reattack weakened trees.										
ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES										
Good access, on mainline Finlay. Flat.										

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

Polygon has Light scattered attack with <10% of pixels infested with recent attack. Light attack in these areas where blowdown and wet areas are where tree attacked. Several trees noticed unsuccessful attack and pitch outs.

INCIDENCE AND SEVERITY OF THE INFESTATION

Low attack density and low larvael density from Probes and bark sample that was taken. Very scattered throughout polygon.

RISK OF BEETLE SPREAD

Several Pitchouts noticed and beetle will continue to lightly move through polygon and may reattack weakened trees.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, on mainline Finlay. Flat.

BRITISH
COLUMBIA

AROB 1

BEETLE PROBE CARD

LOCATION: BIA-024 104 0445228 3 6172411		ELEVATION	LATITUDE		PAGE OF						
BEARING: 28°	STRIP LINE NO: R061	STRIP WIDTH: 10m	DISTANCE: 100m	BEETLE SPECIES: ☒ 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	N/A								At	Ac
17.5 - 25.0	3.3									N/A	N/A
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		34	1							10	1
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN					
						Attacked	Unattacked				
North											
South											
COMMENTS: Code 3 35-40cm is blowdown attack ①-Bark Sample 1											
CREW NAMES: Aaron Cadebank						DATE: Y M D 2015 10 20					

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

BRITISH
COLUMBIA

AROB 2

BEETLE PROBE CARD

LOCATION: BIA-024 0445629 0445618 6172635 6172730 690m		ELEVATION	LATITUDE		PAGE OF						
BEARING: 350°	STRIP LINE NO: 2100-2200	STRIP WIDTH: 10m	DISTANCE: 100m	BEETLE SPECIES: ☐ 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	23						2	6		
TOTALS											
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN					
						Attacked	Unattacked				
COMMENTS:											
CREW NAMES: Brandon Sparks						DATE: Y M D 15 10 21					

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



BRITISH
COLUMBIA



BARK SAMPLE BEETLE PROBE CARD

LOCATION 104 0445636 6172641		ELEVATION		LATITUDE		PAGE OF				
BEARING	STRIP LINE NO BS2	STRIP WIDTH	DISTANCE	BEETLE SPECIES ☐ 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	0	0	0	0	0	0	0	0		
South	0	0	0	0	0	0	0	0		
COMMENTS										
CREW NAMES Aaron Colebank						DATE Y M D 2015 10 20				

COMPASS AND TRAVERSE SHEET

C.P. No.	BLACK	
DIRECTION	450/3P	START OF STRIP
JOB. NO.		DATE
CREW	Brandon Sparks	Oct 20/2015
REMARKS		

COMPASS AND TRAVERSE SHEET

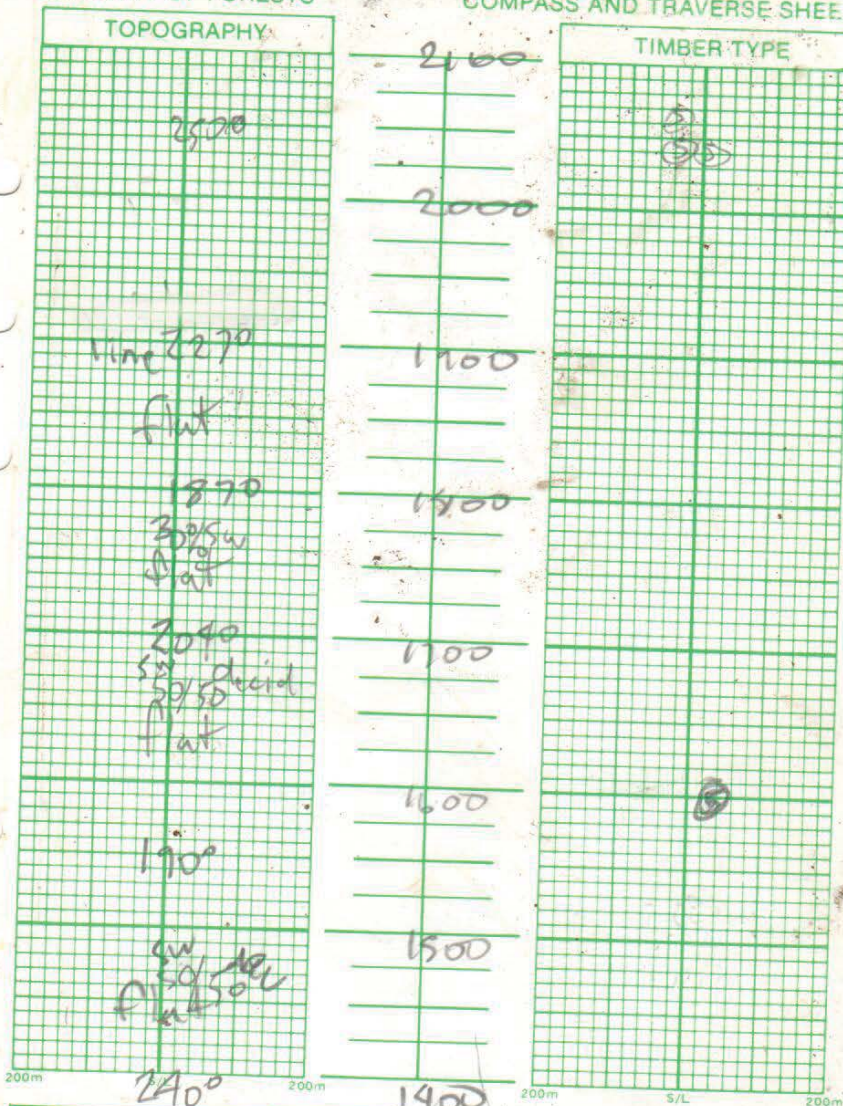
C.P. No.	BLOCK	B19 024
DIRECTION	320°, 336°, 290°	START OF STRIP
JOB NO.		DATE Oct 26/2015
CREW	Brandon Sparks	
REMARKS		

MINISTRY OF FORESTS

COMPASS AND TRAVERSE SHEET

TOPOGRAPHY

TIMBER TYPE



C.P. No.	BLOCK	START OF STRIP
DIRECTION	240°, 190°, 209°, 187°, 227, 250	DATE
JOB NO.		
CREW	Brandon Sparks	
REMARKS		

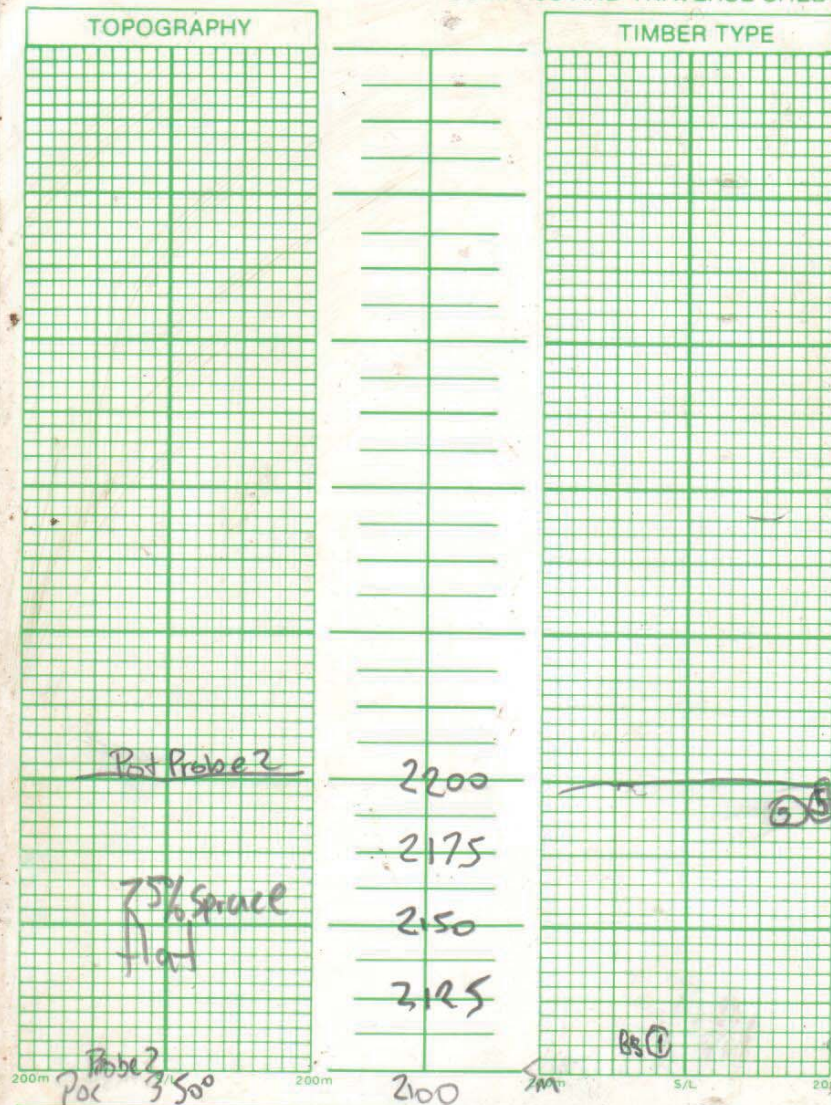
FS 375 VAL 88/07

MINISTRY OF FORESTS

COMPASS AND TRAVERSE SHEET

TOPOGRAPHY

TIMBER TYPE



C.P. No.	BLOCK	START OF STRIP
DIRECTION	350°	DATE
JOB NO.		
CREW	Brandon Sparks	
REMARKS		

FS 375 VAL 88/07

TOPOGRAPHY

STRIP No.

BLA-024

TIMBER TYPE

flat
70/30 Sw/At
80/20 Sw/At
flat
80/20 Sw/At
flat
P/O beside line is
likely 2013 and 2014
flat
70/30 Sw/At
70/30 Sw/At
flat
flat
28° bearing
60/40 Sw/At

350m

300m

250m

200m

150m

100m

50m

0m

Probe ends @ 90

BSI
Attention
150000

P/O
BSI
Probe starts
@ 190m

200m S/L 200m 200m S/L 200m

STRIP NO.:

BLA-024

DIRECTION:

28°

START STRIP:

10 U 0445188 6172268

JOB NO.:

BLA-024

DATE:

Oct 20th 2015

CREW:

Aaron Colebank

REMARKS:



www.irisupplies.com
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No.

BLA-024

TIMBER TYPE

160° bearing
60/40 Sw/At
flat
flat
60/40 Sw/At
flat
44° bearing
water 475m-500m
Scale change
flat
78° bearing

1000

900

800

700

600

500

400

350

200m S/L 200m 200m S/L 200m

STRIP NO.:

DIRECTION:

START STRIP:

JOB NO.:

DATE:

CREW:

REMARKS:



www.irisupplies.com
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No.

BLA-0241

TIMBER TYPE

90/10 Sw/bl flat 160° bearing	1600	(P/O)
*Scale change	1550	
90/10 Sw/At flat	1400	
90/10 Sw/At 238° bearing	1300	
50/50 Sw/At 236° bearing 60/40 Sw/At flat	1200	
flat	1100	
70/30 Sw/At	1000	

STRIP NO.: _____ DIRECTION: _____

START STRIP: _____

JOB NO.: _____ DATE: _____

CREW: _____

REMARKS: _____



www.irisupplies.com
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No.

BLA-024

TIMBER TYPE

finish	1950	
flat	1900	
80/20 Sw/ba 152° bearing	1850	
80/20 Sw/bl flat	1800	(P/O)
80/20 Sw/bl flat	1750	
70/30 Sw/bl 220° bearing @ 1650m	1700m	
flat	1650m	
70/30 Sw/bl	1600m	(S) (G)

STRIP NO.: _____ DIRECTION: _____

START STRIP: _____

JOB NO.: _____ DATE: _____

CREW: _____

REMARKS: _____



www.irisupplies.com
Ph: 1-800-663-6843