Polygon Name: 2015-PAR-030

AREA OF HEAVY ATTACK, STEEP SLOPE

PRG_MP_23

POC-P1

POC

Spruce Bark Beetle Field Map

Polygon Name: 2015-PAR-030

Landscape Unit/BMU:	Parsnip
Region:	Omineca
District:	Mackenzie
Mapsheet:	093O06
Hectares:	71.7
Scale:	1:10,000
When plotted on 11x17	
Coordinate System:	NAD 1983 UTM Zone 10N
Datum:	North American 1983
Date Drawn:	03/12/2015
Drawn By:	msnively

Ministry of Forests, Lands and Natural Resource Operations

Map Features

- Susceptible Spruce Bark Beetle Polygon

2013 SB Hazard Rating (20% increments)

Hazard Classes

- Low/Med (21-40)
- Med (41-60)
- High (61-80)
- Very High (81-100)
- Cutting Permit
- RESULTS Opening
- VRI Polygon
- Beetle Management Unit
- Natural Resource District
- Road Permit Active
- Road Permit Pending
- Km Markers
- Communities
- First Nations Reserves
- OGMA Legal Current
- Ungulate Winter Range
- Wildlife Habitat Area

Protected Lands Designation

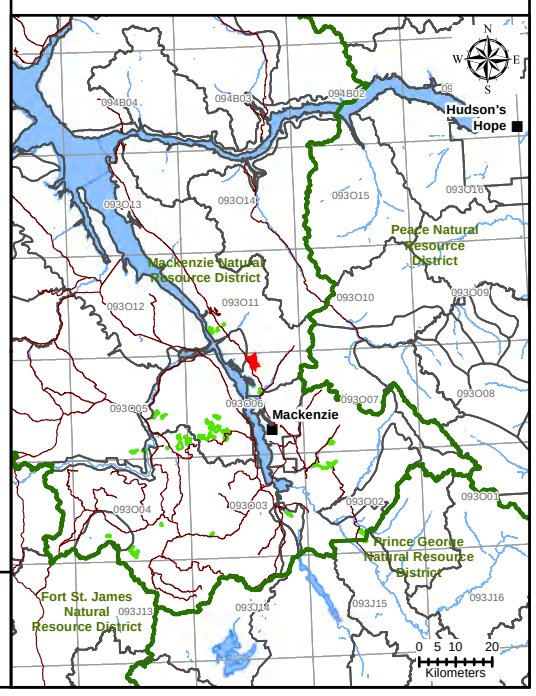
- Ecological Reserve
- Protected Area
- Provincial Park
- Contour - Index
- Contour - Intermediate
- Streams
- Lakes and Rivers
- Wetlands

0 0.1 0.2 0.4 Kilometers

Disclaimer

The accuracy and completeness of the information on this map is not guaranteed.

Key Map



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

SPRUCE BARK BEETLE REPORT FH16DMK016,017

POLYGON: **2015-PAR-030** HECTARES: 71.70

WALKTHROUGH DISTANCE: 5700

ESTIMATED INFFESTED PIXELS FROM WALKTHROUGH (Code 1-4) 24 **42.1%**

SUMMARY OF CURRENT INFESTATION

Walkthrough shows 40% of pixels infested and all are in the north portion of polygon. Has some steeper slopes but 24 pixels infested, some very highly hit and others lightly hit. Probes represent low end of attack, are areas heavier hit and open stand with lower DBH Spruce being attacked. All attack found on 1st year of 1 2 year cycle with flight expected in 2017.

HEAVY ATTACK NORTH POLYGON.

ACCESS

Access was on unplowed road to middle of polygon. Truck parked on Parsnip and Sled 3.5km

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

Steep slopes rising east to west, 0-50%. Open Stand of mix Spruce, Balsam and Aspen.

SIZE, BOUNDARY and PATTERN OF INFESTATION

North half of polygon extreme attack with all every pixel pretty mucch hit in top portion. All Code 1 attack on first year of a 2 year cycle. Mixture of Code 1 and Code 5 attack.

INCIDENCE AND SEVERITY OF ATTACK

Very high incidence and severity although 2 probe lines not really representative as has a light sanitation rating due to it being an open stand and only 1 of the 2 probe lines having code 1. Very highly hit area on relatively small DBH Spruce trees.

RISK OF BEETLE SPREAD

Polygon surrounded by timber and has a difinite high risk of spread.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, Steeper slopes

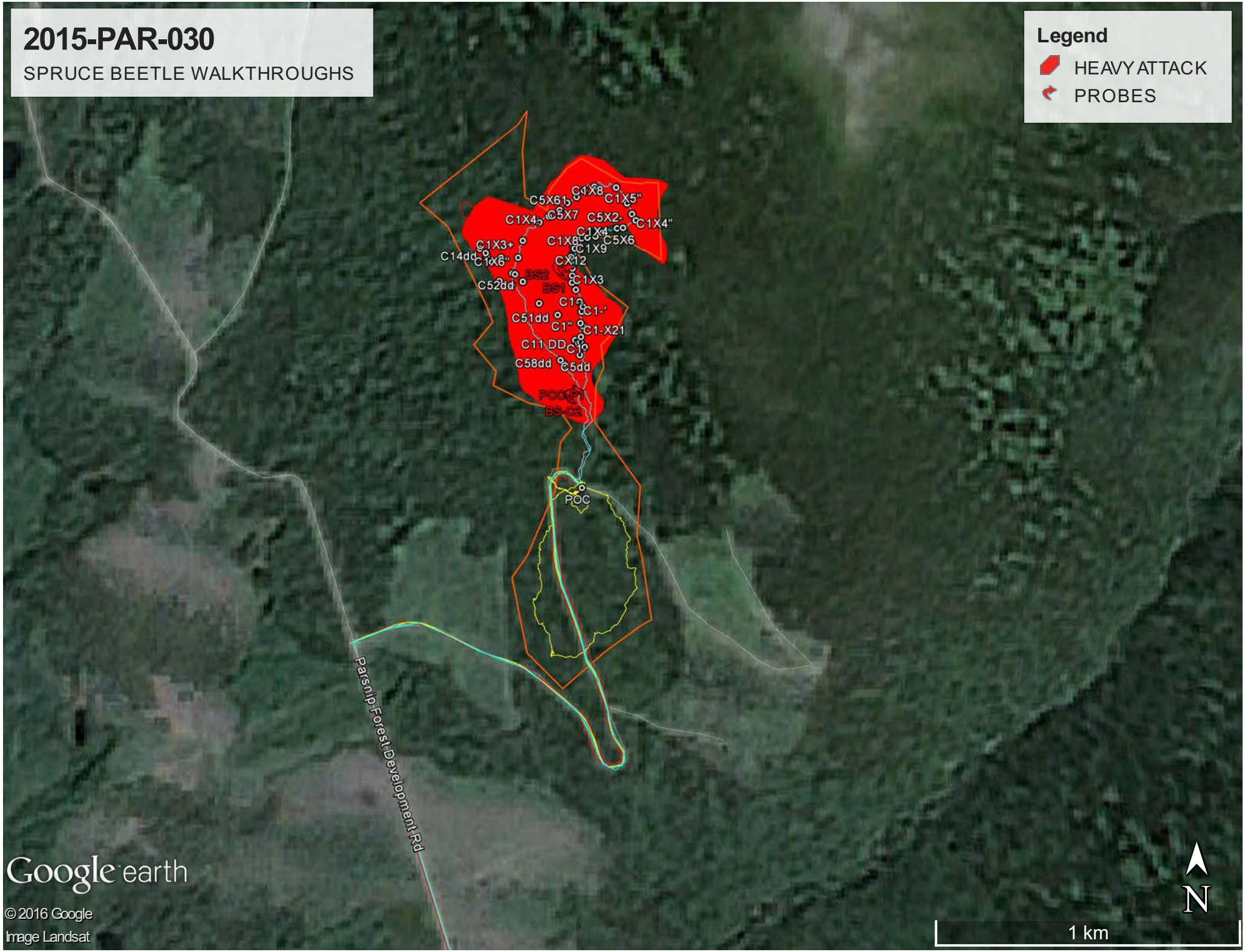
RECOMMENDATIONS

OPTION 1 **CRUISE/HARVEST**

Cruise to identify areas IN NORTH of polygon requiring harvesting to determine severity and better define area of attack as may be outside polygon as well. The NORTH of Polygon has heavier attack with significant recent attack and older attack. The attacked trees are in Year 1 of a 2 year life cycle with majority of flight expected in 2017 . It is an open stand with many code 5's throughout as well. SANITATION RATING NOT RELFLECTIVE OF ATTACK. NEEDS TO BE TREATED.WALKTHROUGH CARDS REFLECT THIS

OPTION 2 **TRAP TREES/ MONITOR**

If harvesting due to low volumes or steeper slopes, need to lay trap tree trails throughout in 20167 prior to flight. Could schedule another walkthrough late fall 2016, early2017 to reevaluate.


2015-PAR-030
SPRUCE BEETLE WALKTHROUGHS
Legend
HEAVY ATTACK
PROBES
C5X61
C1X8
C1X5"
C1X4
C5X7
C5X2-
C1X4"
C1X4-
C1X3+
C1X8
C5X6
C1X9
C14dd
C1X6"
C52dd
BS2
BS1
C1X3
C51dd
C1"
C1-X21
C11 DD
C58dd
C5dd
POC
BS-C2
POC
Parsnip Forest Development Rd
Google earth
© 2016 Google
Image Landsat
N
1 km

Summary

2015-PAR-030	HEC	71.70	METERS WALKED	5700	% TRAVERSED	7.9%
PIXELS COVERED BY WALKTHROUGH	57	INFESTED PIXELS	24	**ESTIMATED % OF BLOCK INFESTED (From Walk through)**		**42.1%**

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	23.1	0.0	0.0	0.0	0.0	3.3	0.0	26.4
25.1-30.0	5.3	26.5	0.0	0.0	0.0	0.0	0.0	0.0	31.8
30.1-35.0	7.1	14.2	0.0	0.0	0.0	0.0	0.0	0.0	85.2
35.1-40.0	9.4	56.4	0.0	0.0	0.0	0.0	0.0	0.0	56.4
40.1-45.0	11.6	46.4	11.6	5.8	0.0	0.0	0.0	0.0	46.4
45.1-50.0	13.8	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0
50.1-55.0	16.2	0	0.0	0.0	0.0	0.0	0.0	0.0	0
55.1-60.0	18.7	0	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	228.7	208	11.6	5.8	0.0	0.0	3.3	0	246.2

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
1.90	< 3.9 SEVERE Attack Density	**3.10**	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	7.6%	7.6	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	383.8
% 2013 ATTACK	1.4%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	48.2%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

Based on 2 probe lines and 3 additional bark samples. NOT REPRESENTATIVE AS ONE PROBE LINE HAD ZERO CODE 1 ATTACK.

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS 5

ACCESS - Access was on unplowed road to middle of polygon. Truck parked on Parsnip and Sled 3.5km

POLYGON FEATURES - Steep slopes rising east to west, 0-50%. Open Stand of mix Spruce, Balsam and Aspen.

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	EP
17.5-25.0	3.3	7	0	0	0	0	1	0	8	0
25.1-30.0	5.3	5	0	0	0	0	0	0	6	0
30.1-35.0	7.1	2	0	0	0	0	0	0	10	2
35.1-40.0	9.4	6	0	0	0	0	0	0	3	3
40.1-45.0	11.6	4	1	1	0	0	0	0	0	4
45.1-50.0	13.8	3	0	0	0	0	0	0	0	0
50.1-55.0	16.2	0	0	0	0	0	0	0	0	0
55.1-60.0	18.7	0	0	0	0	0	0	0	0	0
60.1 +	25.3	0	0	0	0	0	0	0	0	0
TOTALS		27	1	1	0	0	1	0	27	9

BARK SAMPLES 15 cm x 15 cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN		
						Attacked		Unattacked
						Y r	Y r ____	
10	19	0	31	0	0	0	0	0

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

North half of polygon extreme attack with all every pixel pretty mucch hit in top portion. All Code 1 attack on first year of a 2 year cycle. Mixture of Code 1 and Code 5 attack.

INCIDENCE AND SEVERITY OF THE INFESTATION

Very high incidence and severity although 2 probe lines not really representative as has a light sanitation rating due to it being an open stand and only 1 of the 2 probe lines having code 1. Very highly hit area on relatively small DBH Spruce trees.

RISK OF BEETLE SPREAD

Polygon surrounded by timber and has a difinite high risk of spread.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, Steeper slopes

* BARK SAMPLE 1 ON BACK

PROBE 1

BRITISH COLUMBIA BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
0487101 PAR-030 6148115	973	X		

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
004	1	10	100	[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~~									
17.5 - 25.0	3.3	::							::	
25.1 - 30.0	5.3	:							::	
30.1 - 35.0	7.1								: :	::
35.1 - 40.0	9.4	L:								::
40.1 - 45.0	11.6	::	•	(1)						::
45.1 - 50.0	13.8	:								
50.1 - 55.0	16.2									
55.1 - 60.0	18.7									
60.1 -	25.3									
TOTALS		16	1	1					9	9

BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked	Unattacked
P	2	1	5	/	/		
S	/	/	/	/	/		

COMMENTS (1) - BS

- open stand

CREW NAMES	DATE Y	M	D
James / Darryl	16	02	02

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

BRITISH COLUMBIA BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
PAR 030		0487070 6147717		

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
	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
12.5 - 17.4	2.0								Balsam	
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		11					1		17	

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

COMMENTS Many balsams with fairly small spruce.

CREW NAMES	DATE Y	M	D
BlakeB	16	2	3

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

BS 1

BRITISH COLUMBIA BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
0487081 6148524	1040			

BEARING	STRIP LINE NO	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
P	3	/	5	/	/		
S	1	/	1	/	/		

COMMENTS

- minimal affect on South side

CREW NAMES	DATE Y	M	D
James Kelly	16	02	02

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

PAR-030 BS 2

BRITISH COLUMBIA BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
0487065 6148549	1051			

BEARING	STRIP LINE NO	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
P	2	/	7	/	/		
S	2	/	5	/	/		

COMMENTS

CREW NAMES	DATE Y	M	D
James Kelly	16	02	02

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

PAR-030 BS 3

BRITISH COLUMBIA

BEETLE PROBE CARD

LOCATION	ELEVATION	LATITUDE	PAGE	OF
0487076 6148598	1070			

BEARING	STRIP LINE NO	STRIP WIDTH	DISTANCE	BEETLE SPECIES
				[X] 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		0							
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
P	3	/	4	/	/		
S	2	/	3	/	/		

COMMENTS

CREW NAMES	DATE Y	M	D
James / Kelly	16	02	02

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

BRITISH COLUMBIA

COMPASS AND TRAVERSE SHEET

TOPOGRAPHY

Bearing 62°

9 to 1 balsam Spruce

9 to 1 balsam Spruce

down slope 15°

TIMBER TYPE

600 500 400 300 200 100

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

C.P. No. 2	BLOCK
DIRECTION 207°	START OF STRIP 0-600 m
JOB NO. PAR 030	DATE Feb 2/16
CREW Blake B / darryl / James	
REMARKS	

FS 375 HFP 92/1 7530881021

BRITISH COLUMBIA

COMPASS AND TRAVERSE SHEET

TOPOGRAPHY

EXIT

balsam patch

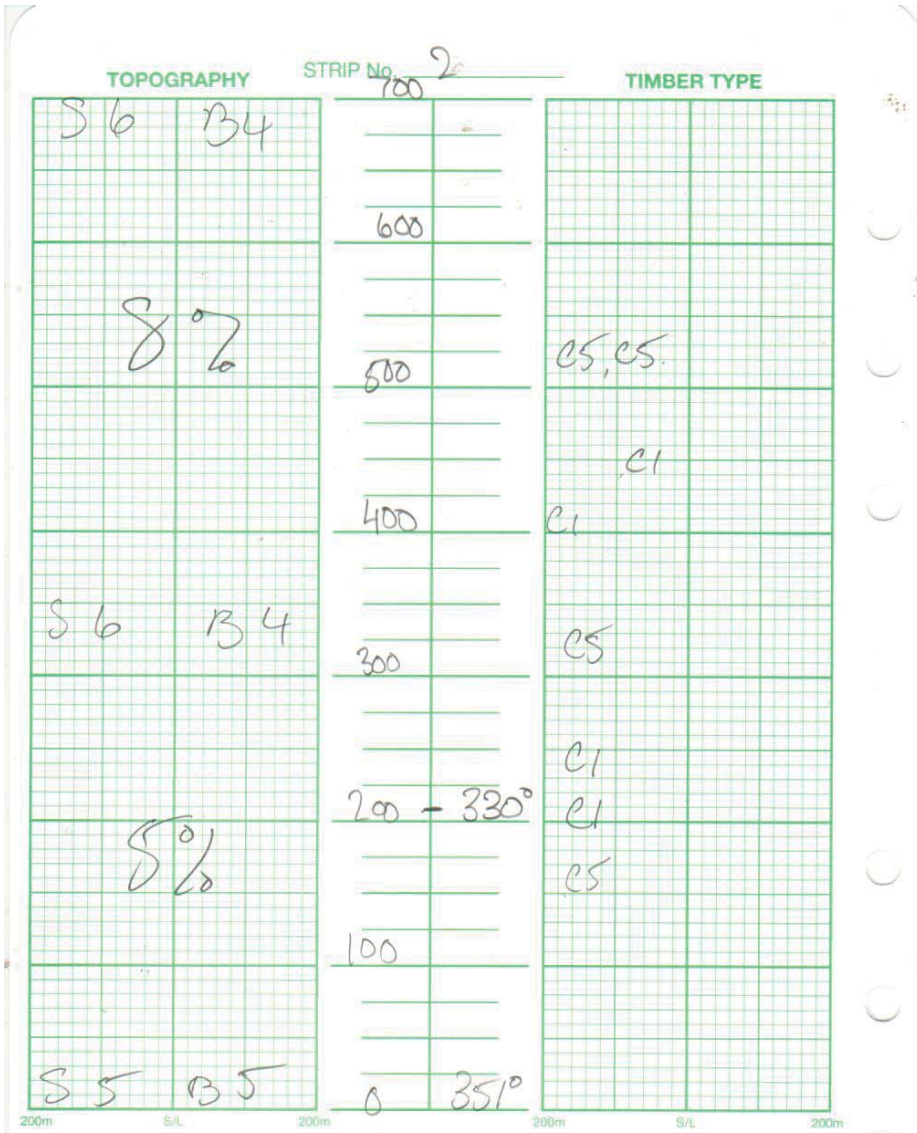
TIMBER TYPE

1200 1100 1000 900 800 700

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

C.P. No. 3	BLOCK
DIRECTION 62°	START OF STRIP 700-1200
JOB NO. PAR-030	DATE Feb 2/16
CREW Blake / darryl / James	
REMARKS	

FS 375 HFP 92/1 7530881021 (100/Blde)



STRIP NO.: 2 DIRECTION: 351°, 330°, 219°, 145°

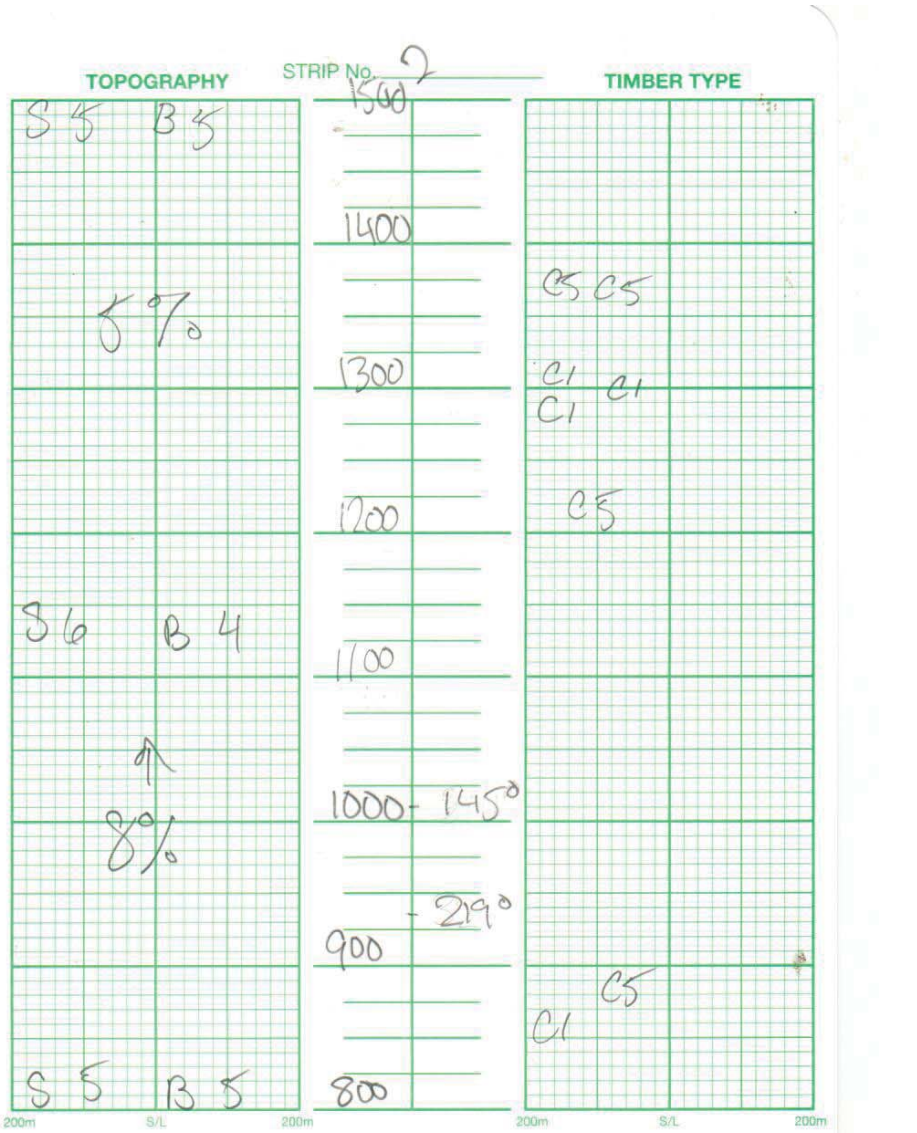
START STRIP: 0

JOB NO.: PAR-30 DATE: FEB. 2, 2016

CREW: DD, JJ

REMARKS:

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



STRIP NO.: 2 DIRECTION: 351° 330°, 219, 145°

START STRIP: 800

JOB NO.: PAR-30 DATE: FEB 2, 2016

CREW: DD, JJ

REMARKS: ITS HAMMERED

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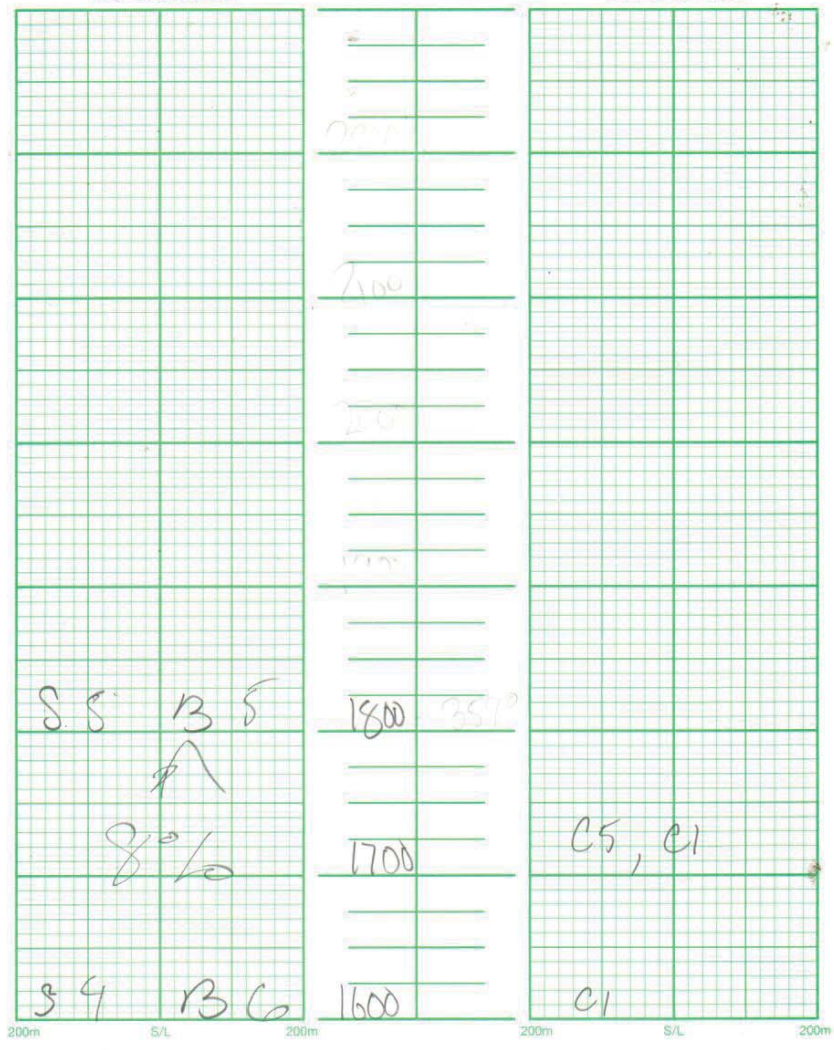
TOPOGRAPHY

STRIP No. 2

TIMBER TYPE



STRIP NO.: 2 DIRECTION: 351°, 330°, 219°, 145°

START STRIP: 1600

JOB NO.: PAR-30 DATE: FEB 2, 2016

CREW: DD, JD

REMARKS: HEAVY PAUPLER

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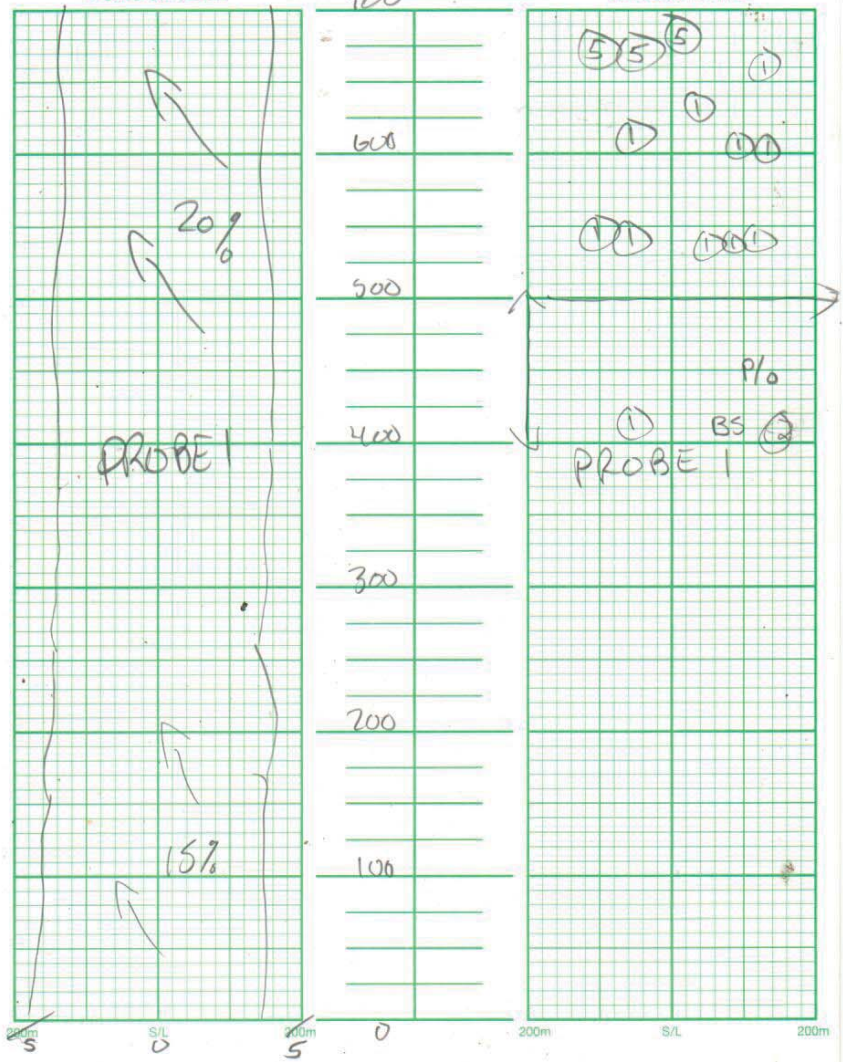
TOPOGRAPHY

STRIP No. 1

TIMBER TYPE



STRIP NO.: 1 DIRECTION: 350°

START STRIP: 0

JOB NO.: PAR-030 DATE: FEB 02/2016

CREW: James / Danny / Blake

REMARKS:

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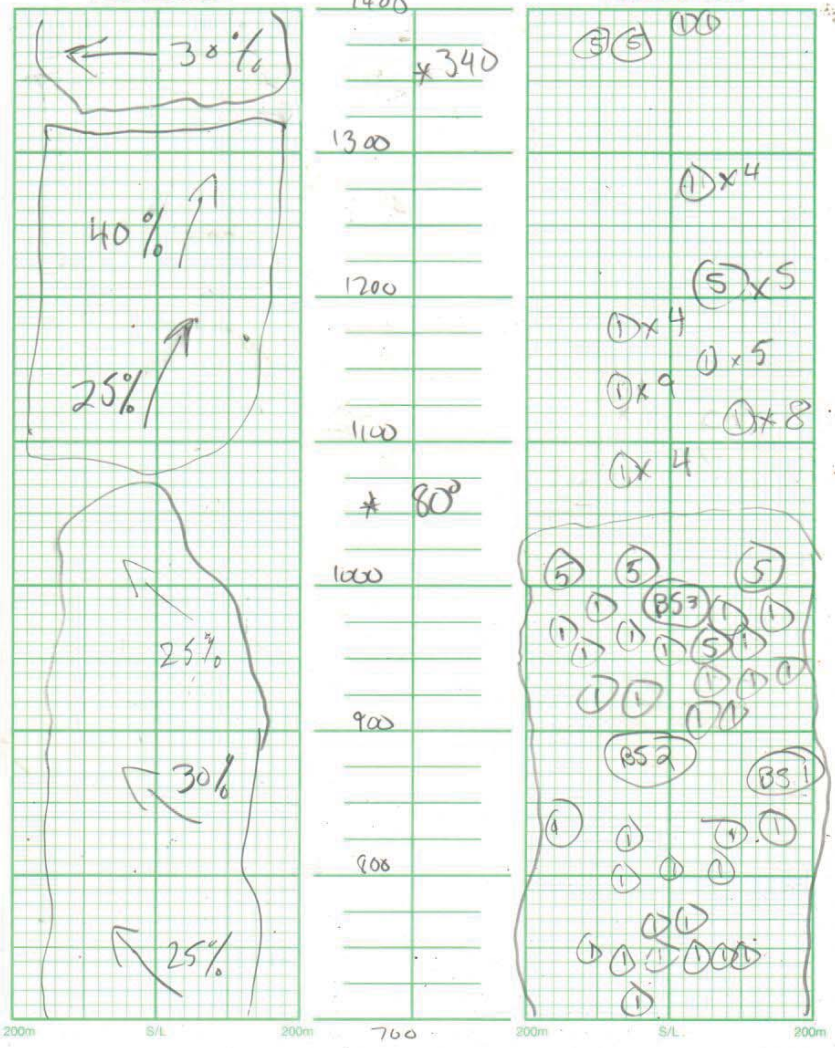
Ph: 1-800-663-6843

TOPOGRAPHY

STRIP No. 1

TIMBER TYPE



STRIP NO.: 1 DIRECTION: 356°, 80°, 340°

START STRIP: 700m

JOB NO.: PAR-030 DATE: FEB 02/2016

CREW: James / Daryl / Blake

REMARKS:

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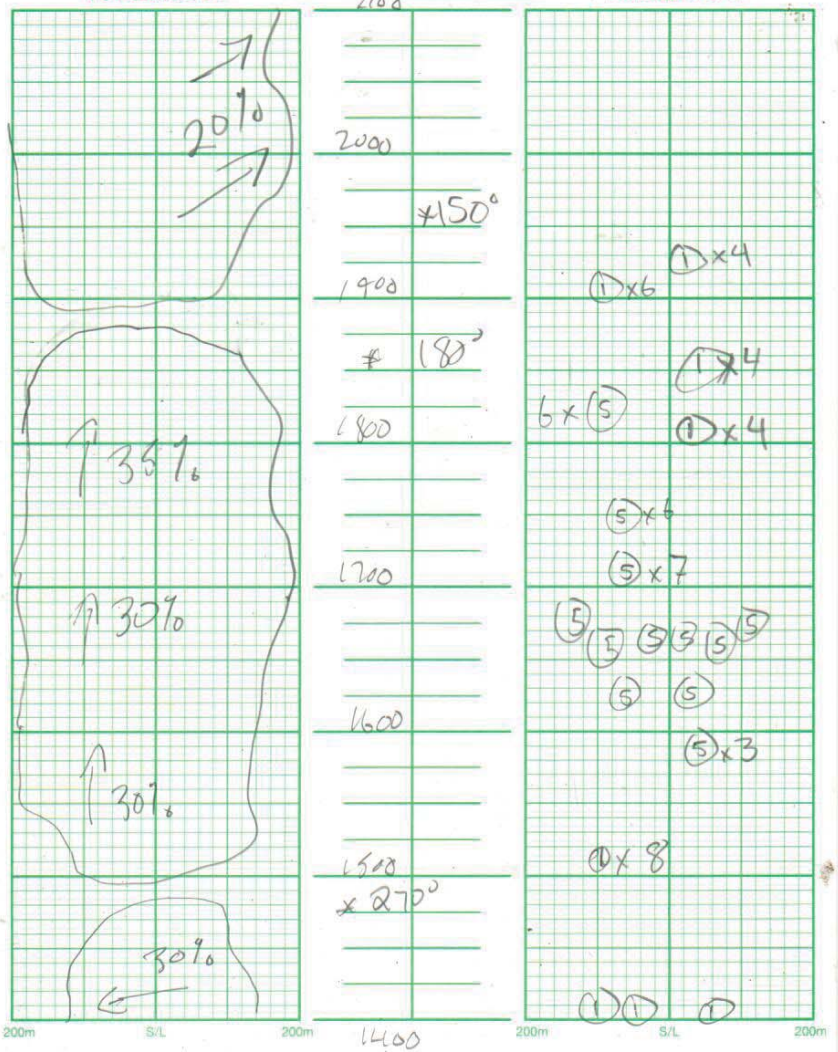
TOPOGRAPHY

STRIP No. 1

TIMBER TYPE



STRIP NO.: 1400 DIRECTION: 340°, 270°, 180°, 150°

START STRIP: 1400

JOB NO.: PAR-030 DATE: FEB 02/2016

CREW: James / Blake / Daryl

REMARKS:

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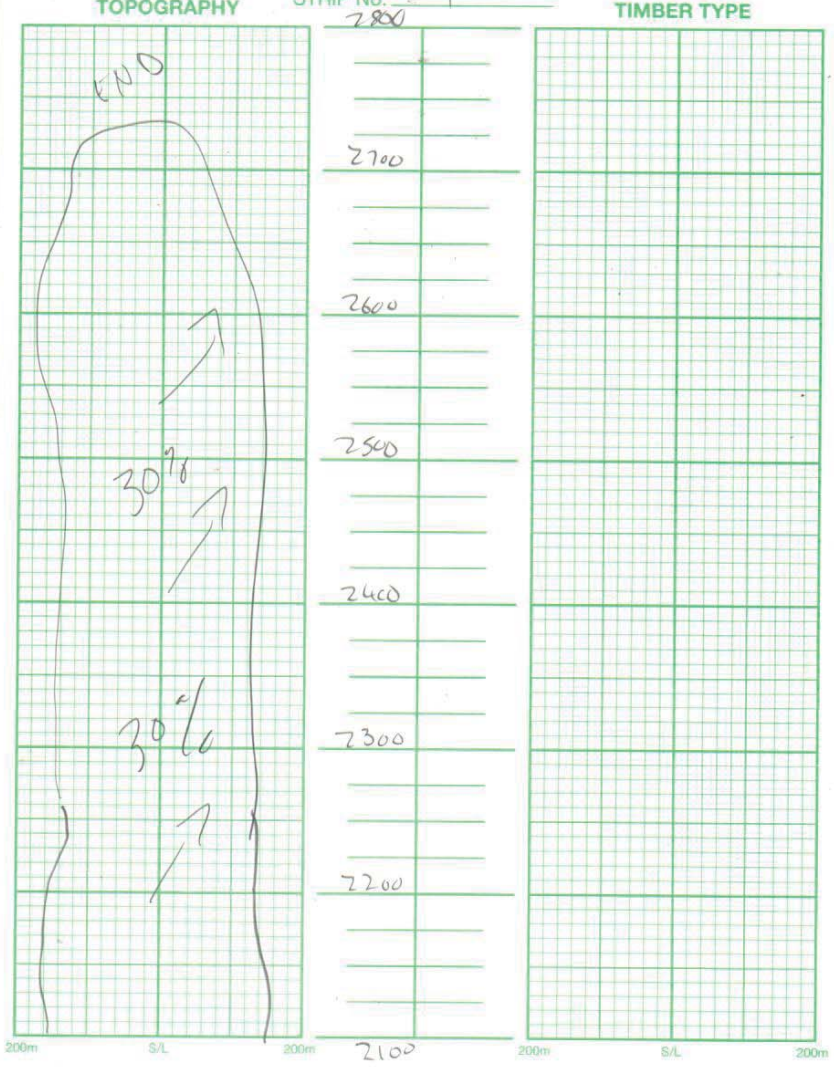
TOPOGRAPHY STRIP No. 1 **TIMBER TYPE**



STRIP NO.: 1 DIRECTION: 150°

START STRIP: 2100

JOB NO.: PAR 030 DATE: FEB 2 / 2016

CREW: James / Blake / Darryl

REMARKS:

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