SENECA ENTERPRISES LTD.
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SPRUCE BARK BEETLE REPORT FH17DPG218

POLYGON: **2016-CLE-0031** HECTARES: 22.4

WALKTHROUGH DISTANCE: 2660

ESTIMATED INFFESTED PIXELS FROM WALKTHROUGH (Code 1-4) 10 **37.6%**

SUMMARY OF CURRENT INFESTATION

Walkthrough estimate shows 37% of polygon has Code 1-4 attack. Will be some flight 2017 due to cde 3's and some code 1's on a 1 year life cycle. Minimal risk of spread as surrounding points have little to no activity and polygon is boundaried to the east by cutblock. Low sanitation rating.

LIGHT SCATTERED ATTACK

ACCESS

Polygon is alongside Clearwater FSR. River runs through middle of polygon

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

Minimal slopes throughout, some small draws. Boundary on the west is river, cutblock and mainline road most of the east side. Overall 50% Spruce Balsam mix.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Polygon 22 hectares with 37% infested pixels. Beetle moving from river west to east and light to moderate scattered attack.

INCIDENCE AND SEVERITY OF ATTACK

From 3 probe lines show that much of the attack was Code 1's hwith some code 3's. So will be flight in 2017, but minimal attack and sporadic. Polygon has cutblock to most of the east and will have ittle chance to spread.

RISK OF BEETLE SPREAD

Polygon has pockets of attack that are scattered throughout polygon/. Boundried by cutblock to the east, and weasn;t any beetle to the south.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, minimal slopes. Alongside mainline road with river along west side.

RECOMMENDATIONS

OPTION 1 **MONITOR**

Sanitation and Salvage Rating is low from 3 probe lines, spread should be minimal as cutblock blocks movement to the east. Other probe sites in the immediate area have minimal attack, just some older attack.

OPTION 2 **TRAP TREES/ MONITOR**

With access good, could lay a trap tree trail off of mainline. Is an area further south along mainline where moderate attack and trap trees may be utilized. (Around sites 2016-CLE0061, 0062 and 0067)

Summary

2016-CLE-0031	22.4	METERS WALKED	2660	% TRAVERSED	11.9%
PIXELS COVERED BY WALKTHROUGH	26.6	INFESTED PIXELS	10	**ESTIMATED % OF BLOCK INFESTED (From Walk through)**	**37.6%**

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	3.3	0.0	0.0	0.0	0.0	0.0	0.0	29.7
25.1-30.0	5.3	90.1	0.0	0.0	5.3	0.0	0.0	0.0	53
30.1-35.0	7.1	92.3	7.1	0.0	0.0	0.0	0.0	0.0	134.9
35.1-40.0	9.4	150.4	0.0	0.0	9.4	0.0	0.0	0.0	47
40.1-45.0	11.6	139.2	11.6	0.0	11.6	0.0	0.0	0.0	116
45.1-50.0	13.8	55.2	0.0	0.0	0.0	0.0	0.0	0.0	13.8
50.1-55.0	16.2	48.6	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	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0
TOTALS	649.4	604.4	18.7	0	26.3	0.0	0.0	0	394.4

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
2.20	< 3.9 SEVERE Attack Density	**7.80**	>24.9 EXTREME Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough

% 2015 ATTACK	2.9%	2.9	SANITATION AND SALVAGE HARVEST PRIORITY RATING		
% 2014 ATTACK	4.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)
% 2013 ATTACK	0.0%	##	MODERATE	600-999	PROBE (To Obtain Further Info)
% HOST IN STAND	62.2%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING
					347.1

SUMMARY OF ALL CARDS FS1111

NUMBER OF CARDS 3

ACCESS - Polygon is alongside Clearwater FSR. River runs through middle of polygon

POLYGON FEATURES - Minimal slopes throughout, some small draws. Boundary on the west is river, cutblock and mainline road most of the east side. Overall 50% Spruce Balsam mix.

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			2015		2014		2013			
			1	2	3	4	5	6	BL	AT
17.5-25.0	3.3	1	0	0	0	0	0	0	9	0
25.1-30.0	5.3	17	0	0	1	0	0	0	1	9
30.1-35.0	7.1	13	1	0	0	0	0	0	16	3
35.1-40.0	9.4	16	0	0	1	0	0	0	2	3
40.1-45.0	11.6	12	1	0	1	0	0	0	4	6
45.1-50.0	13.8	4	0	0	0	0	0	0	1	0
50.1-55.0	16.2	3	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	1	0	0	0	0	0	0	0	0
TOTALS		67	2	0	3	0	0	0	33	21

BARK SAMPLES 15 cm x 15 cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE ADULTS	NO. CALLOW	FRESH (GREEN) BLOWDOWN Attacked Yr	Yr ____	Unattacked
5	11	0	39	1	18	0	0	0

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

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INCIDENCE AND SEVERITY OF THE INFESTATION

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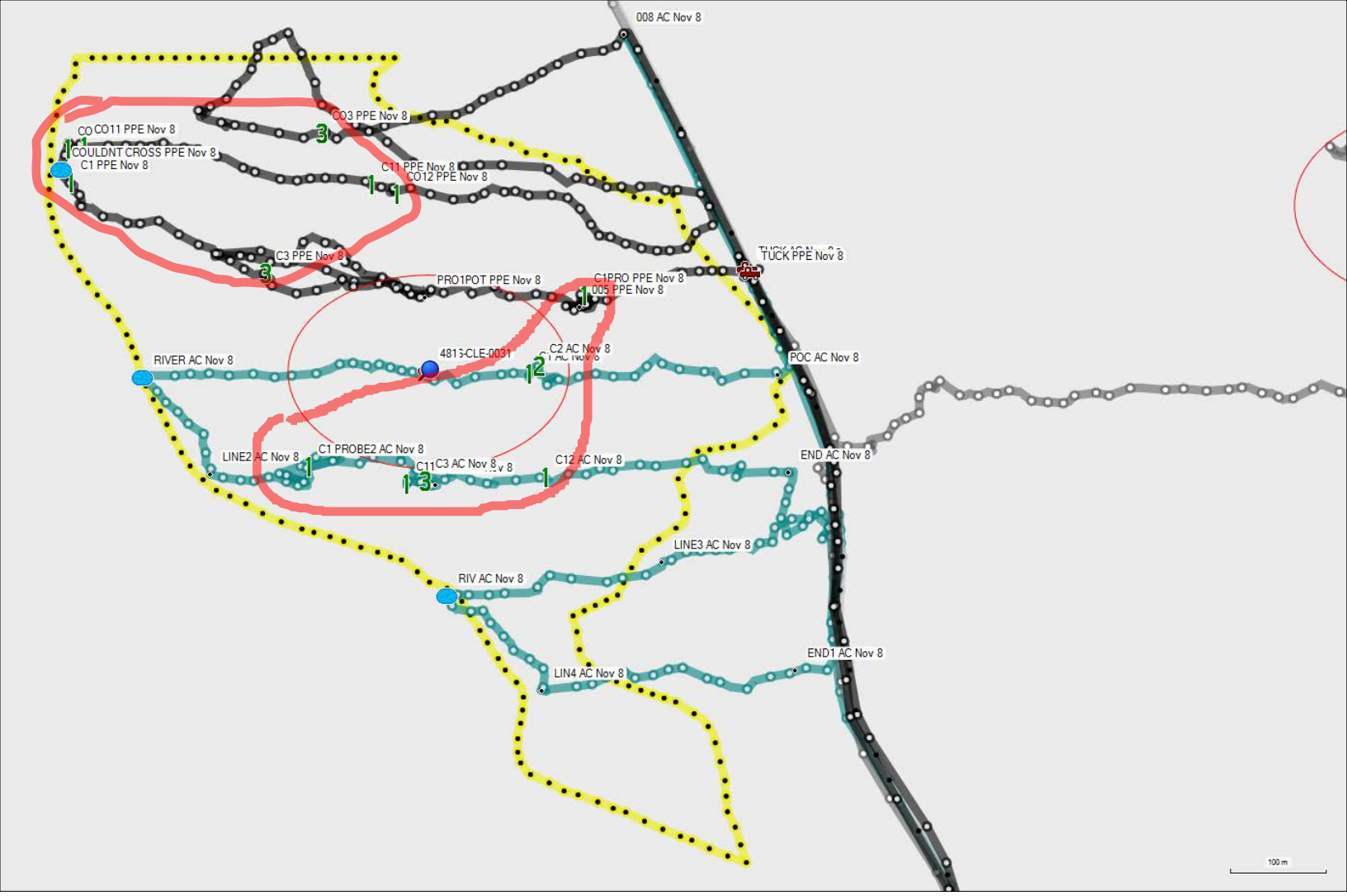
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CO3 PPE Nov 8
CO CO11 PPE Nov 8
COULDNT CROSS PPE Nov 8
C1 PPE Nov 8
C11 PPE Nov 8
CO12 PPE Nov 8
C3 PPE Nov 8
TUCK PPE Nov 8
PRO1POT PPE Nov 8
C1PRO PPE Nov 8
005 PPE Nov 8
RIVER AC Nov 8
4813-CLE-0031
C2 AC Nov 8
POC AC Nov 8
LINE2 AC Nov 8
C1 PROBE2 AC Nov 8
C11C3 AC Nov 8
C12 AC Nov 8
END AC Nov 8
LINE3 AC Nov 8
RIV AC Nov 8
END1 AC Nov 8
LIN4 AC Nov 8
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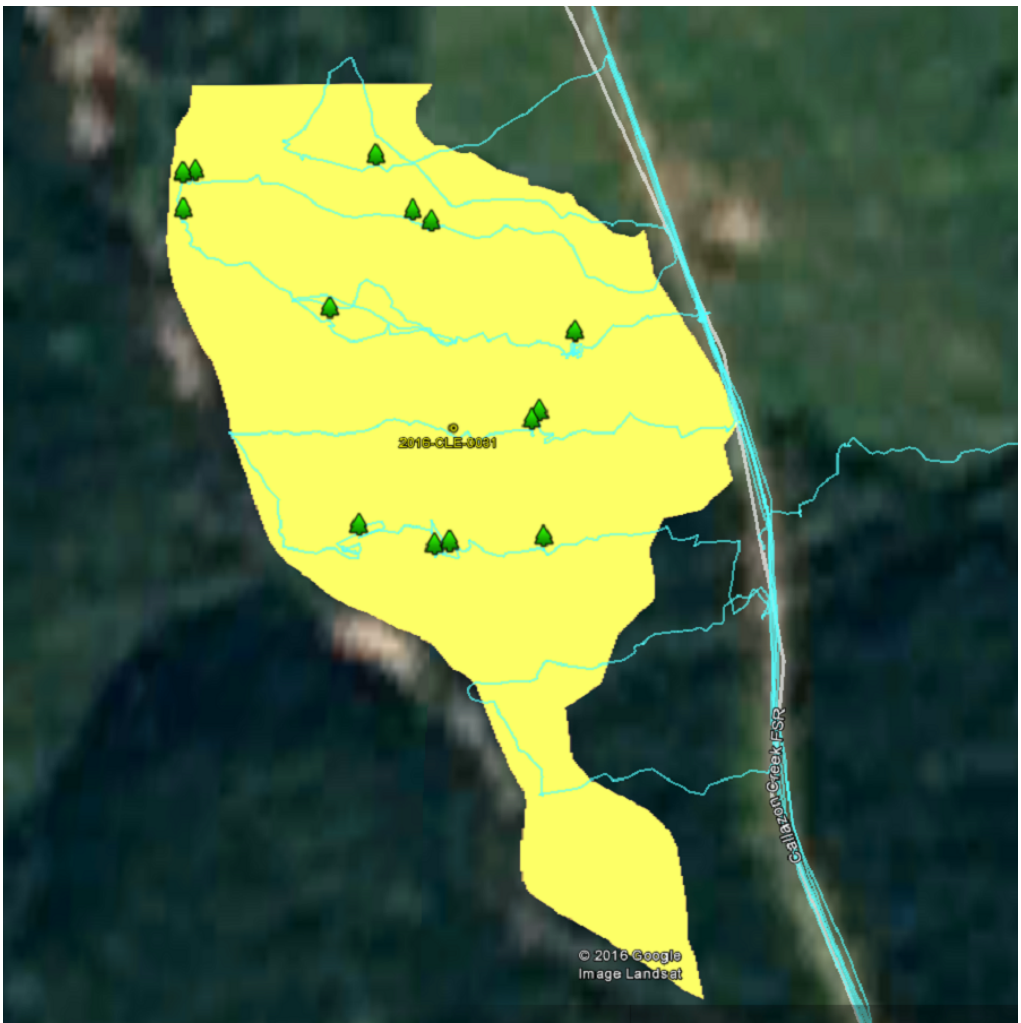
2016-CLE-0001
Callazon Creek FSR
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Image Landsat

511

BRITISH COLUMBIA

SPRUCE BEETLE PROBE CARD

LOCATION		PAGE	OF
Probe2 cle-051	10U0501133 6172268	elev- 870m	
BEARING	DISTANCE	STRIP WIDTH	
90° east.	520m-620m	10m	

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
17.5 - 25.0	3.3								Bl
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		9 2							11

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

(6) - Bark Sample

CREW NAMES: Aaron Colebank

DATE: Y 2016 M 11 D 08

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

BRITISH COLUMBIA

SPRUCE BEETLE PROBE CARD

ATION S1319 615880S		PAGE	OF
RING 5	DISTANCE 100	STRIP WIDTH 5	

METER LASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK 1	2	3	4	5	6	OTHER TREE SPECIES
5 - 25.0	3.3								Bl
1 - 30.0	5.3								
1 - 35.0	7.1								
1 - 40.0	9.4								
.1 - 45.0	11.6				(A)				
.1 - 50.0	13.8								
.1 - 55.0	16.2								
.1 - 60.0	18.7								
60.1 +	25.3								
TOTALS		29			1				21

RK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN Attacked	Unattacked
W							
E	3		8		5		

COMMENTS

(6) = BS

CREW NAMES: RPG

DATE: Y 16 M 11 D 8

S 1111 RPG 2000/01 7530881048 (100/bdl)

90031

BRITISH COLUMBIA

SPRUCE BEETLE PROBE CARD

LOCATION 501329 / 6172425		PAGE	OF
BEARING W	DISTANCE 100	STRIP WIDTH 5	

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	
17.5 - 25.0	3.3								6
25.1 - 30.0	5.3	1							
30.1 - 35.0	7.1	1							1
35.1 - 40.0	9.4	2			1				2
40.1 - 45.0	11.6								2
45.1 - 50.0	13.8	2							1
50.1 - 55.0	16.2	1							
55.1 - 60.0	18.7								
60.1 +	25.3								
TOTALS		29			1				22

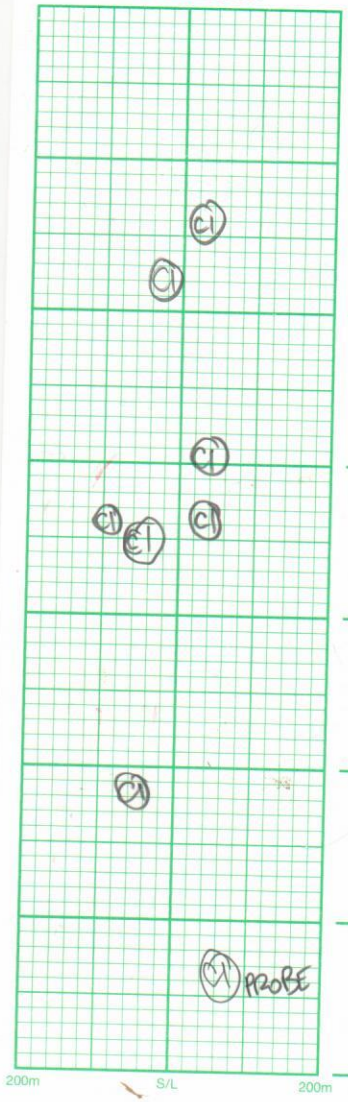
BARK SAMPLES 15cm x 15cm	NO. ENTRANCE HOLES	NO. PARENT ADULTS	NO. LARVAE	NO. PUPAE	NO. CALLOW ADULTS	FRESH (GREEN) BLOWDOWN	
						Attacked	Unattacked
N	5		2		3		
S	5		7		8		

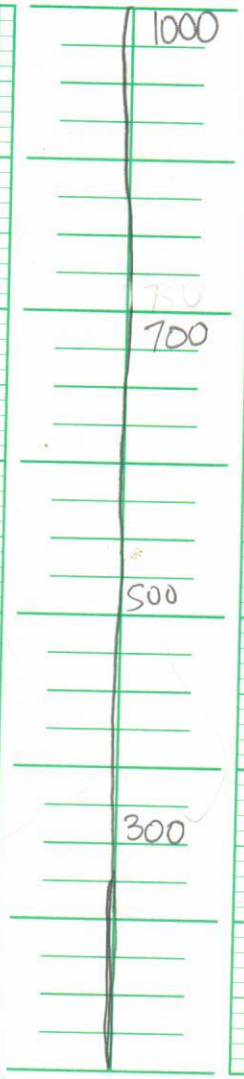
COMMENTS

CREW NAMES PELLETIER PATRICK

DATE Y 16 M 11 D 8

TOPOGRAPHY STRIP No. CL0031





TIMBER TYPE

STRIP NO.: CL0031 DIRECTION:

START STRIP:

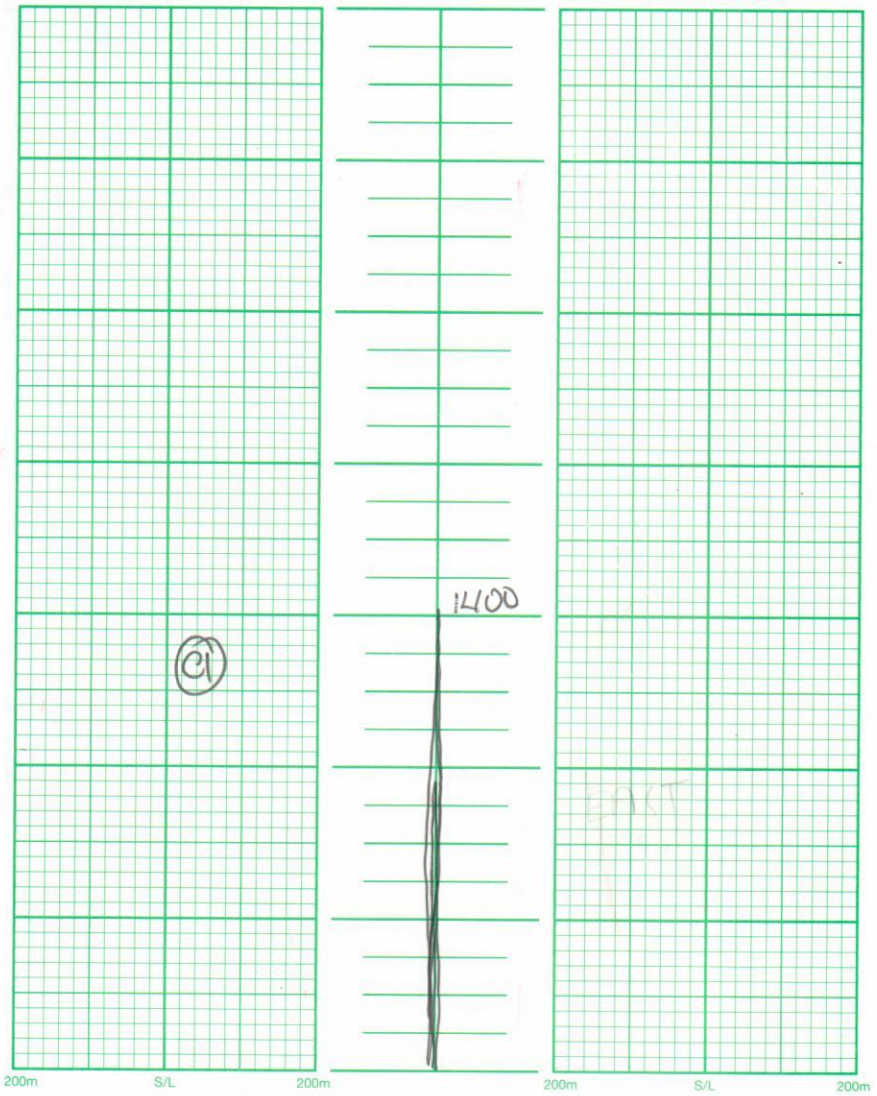
JOB NO.: DATE: NOV 8 2016

CREW: PATRICK PELLETIER

REMARKS:

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

TOPOGRAPHY STRIP No. CL 0031 **TIMBER TYPE**



STRIP NO.: _____ **DIRECTION:** _____

START STRIP: _____

JOB NO.: _____ **DATE:** _____

CREW: _____

REMARKS: _____

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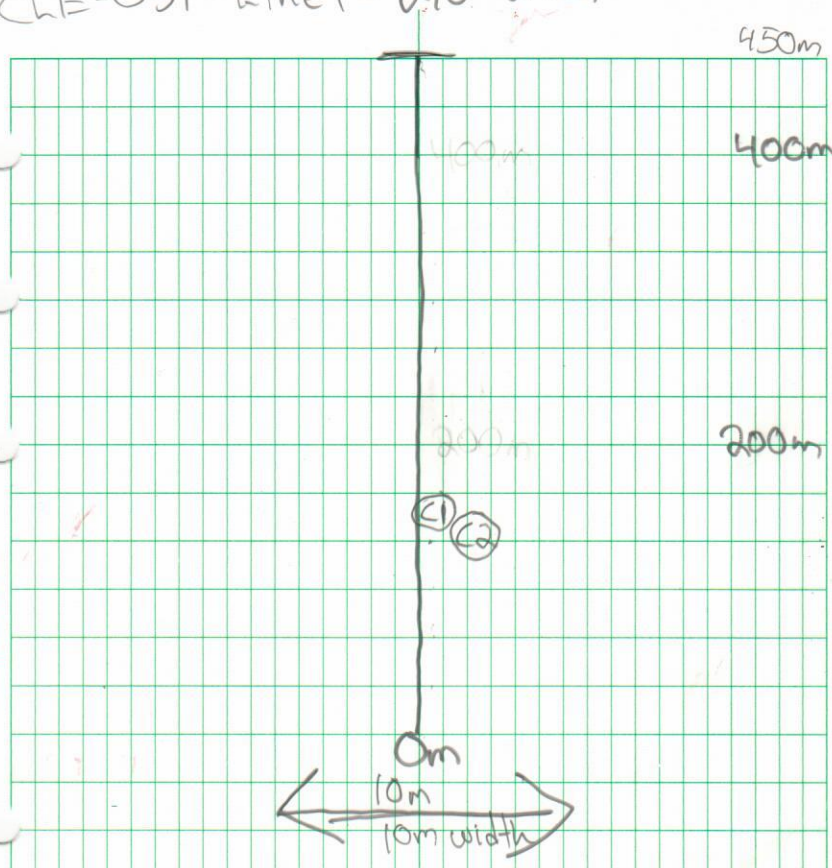
CLE-031-Line1-270° west



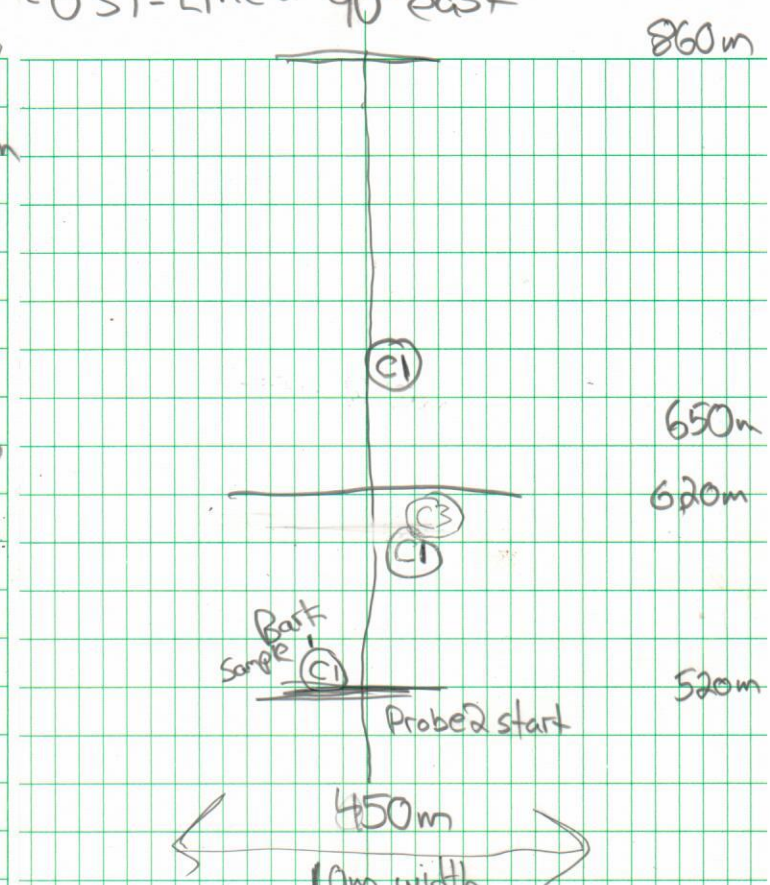
Line1-0-450m - P.O.C. 10U 0501467 6172363

Aaron Colebank Nov 8th, 2016

flat, easy walking, flooded in parts

Roadside

-031-Line2-90° east



Line2-450m-860m - POC- 10U 0501063 6172260

Aaron Colebank Nov 8th, 2016

flat ground

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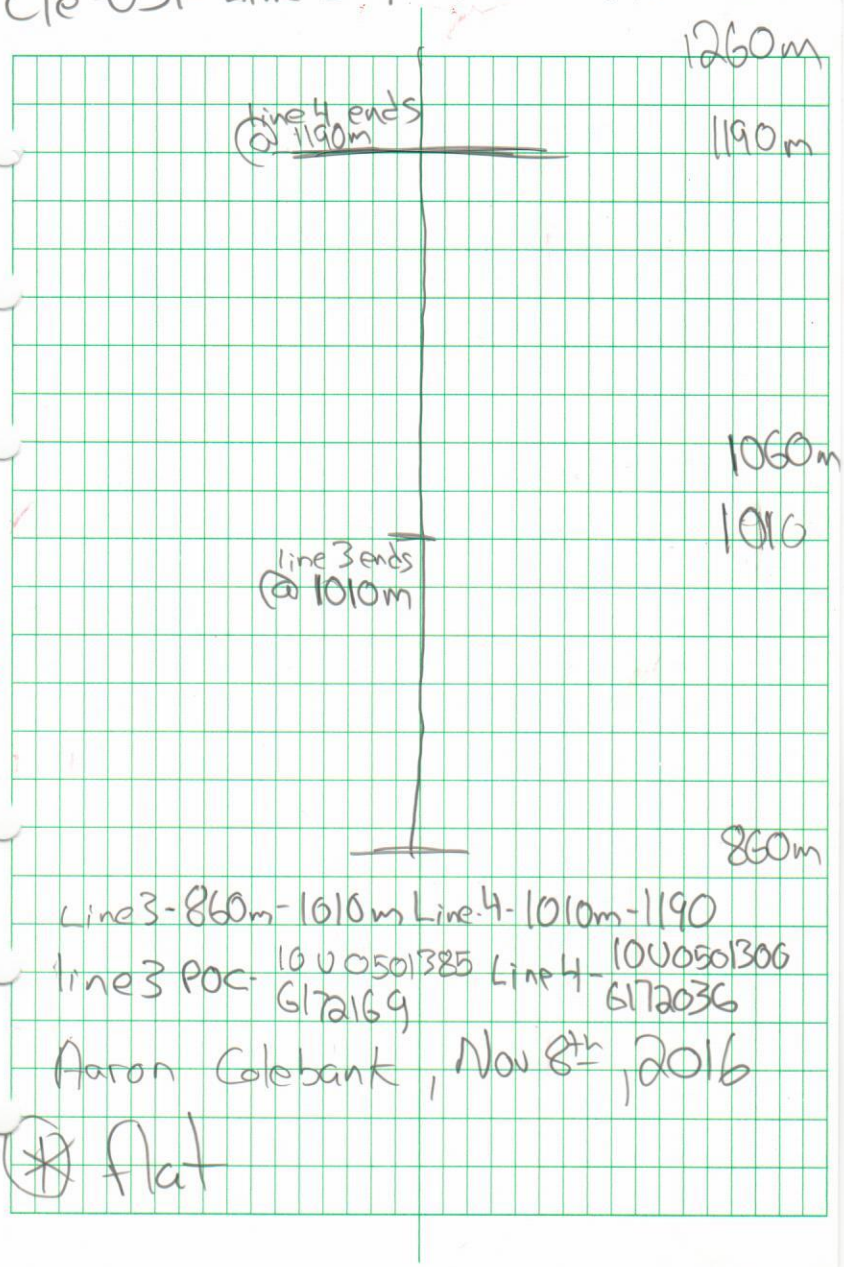
DUKSBAK WATERPROOF

FIELD

Cle-031- Line 3+4 - 90°east & 270° west



Line3-860m-1010m Line4-1010m-1190

line3 POC- 10U0501385 6172169 Line4- 10U0501306 6172036

Aaron Colebank, Nov 8th, 2016

(*) flat

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FIELD