

**SENECA ENTERPRISES LTD.**

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**SPRUCE BARK BEETLE REPORT
FH16DMK010**

POLYGON: GAF004

HECTARES:

48.08

WALKTHROUGH DISTANCE:

6600

ESTIMATED INFESTED PIXELS FROM
WALKTHROUGH (Code 1-4)

10 15.2%

SUMMARY OF CURRENT INFESTATION

Walkthrough estimate shows 15% of polygon has recent attack (Code 1's and 2's) with about half on a 1 year life cycle. There were 2 patches with moderate attack, roughly 7-10 hectares with old attack patchy along creek draws.

MODERATE ATTACK 2 pockets (~8 Hec),

ACCESS

Access to Polygon is Mainline to the North, Steep grade right off the road into Polygon

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

Steep entry downhill and benches at bottom, a lot of water at the bottom.

SIZE, BOUNDARY and PATTERN OF INFESTATION

Polygon is 48 hectares and isolated to a couple of areas of fresh attack, mainly located around water and blowdown area where larger diameter trees are located. There are some scattered code 5's noticed, but no large successful attacks outside of the 2 main areas/

INCIDENCE AND SEVERITY OF ATTACK

Only one probe done and done in a pocket that has heavy rating. Callow adults found and Code 1's on a 1 year cycle.

RISK OF BEETLE SPREAD

Lots of high value spruce at bottom and up other side of creek, and could cross to mature forest on other side of mainline.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Good access, is a draw at the bottom that may pose a challenge.

RECOMMENDATIONS**North- PROBE/HARVEST****OPTION 1**

Sanitation and Salvage Rating is high in the areas that have recent attack with half of the beetle on a 1 year life cycle. If Harvesting nearby, schedule a probe/ cruise first prior to harvesting trees to better identify area. (Near GAF005A and GAF013)

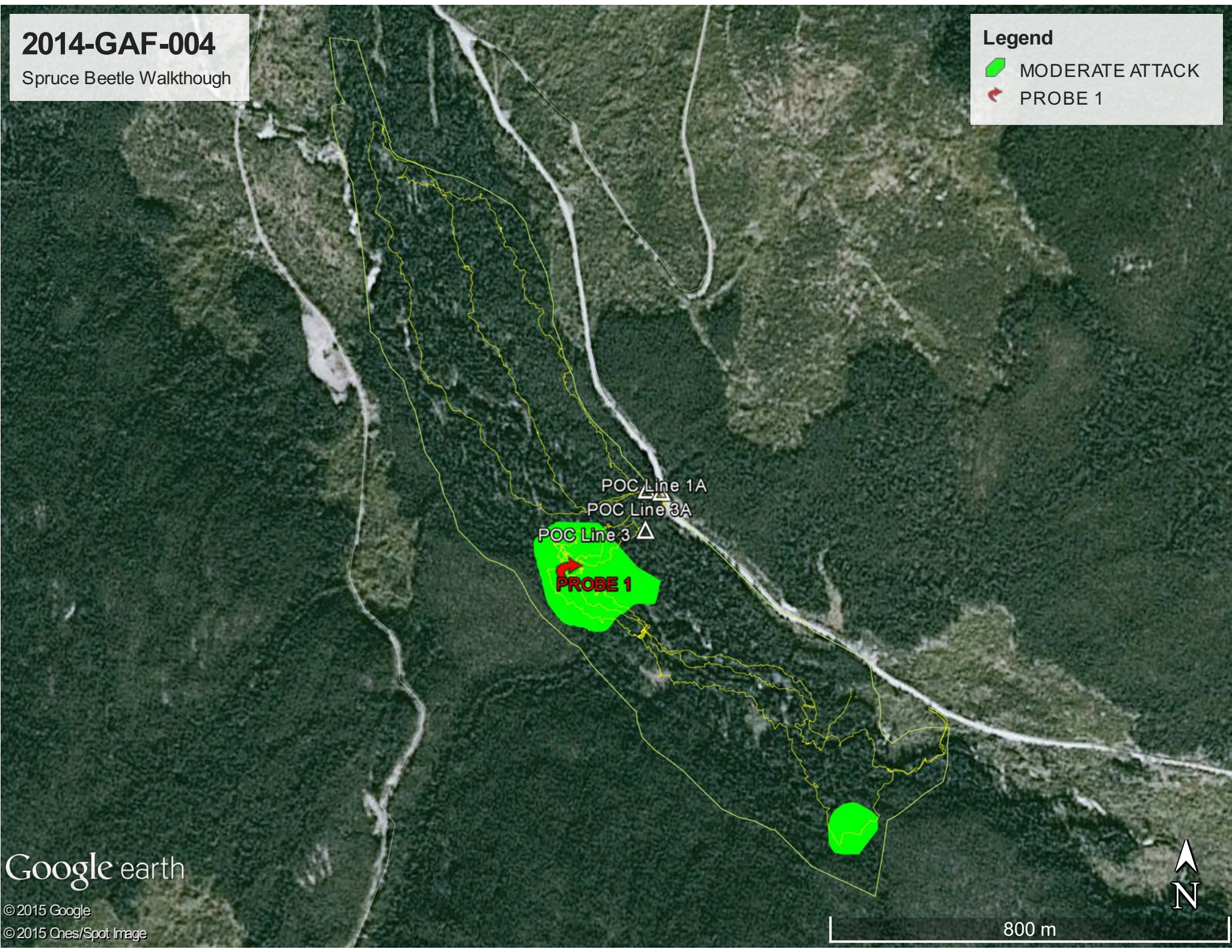
OPTION 2**TRAP TREES/ MONITOR**

Schedule Cruising and lay trap tree trails down along main road to hold infestation while awaiting harvest plans. Monitor rest as very scattered old attack along creek draw.

2014-GAF-004
Spruce Beetle Walkthrough

Legend

-  MODERATE ATTACK
-  PROBE 1



Google earth

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Summary						
GAF004	HEC	48.08	METERS WALKED	6600	% TRAVERSED	13.7%
PIXELS COVERED BY WALKTHROUGH	66	INFESTED PIXELS	10	ESTIMATED % OF BLOCK INFESTED (From Walk through)		15.2%

TABLE 5- Spruce Beetle Infestation Summary Sheet

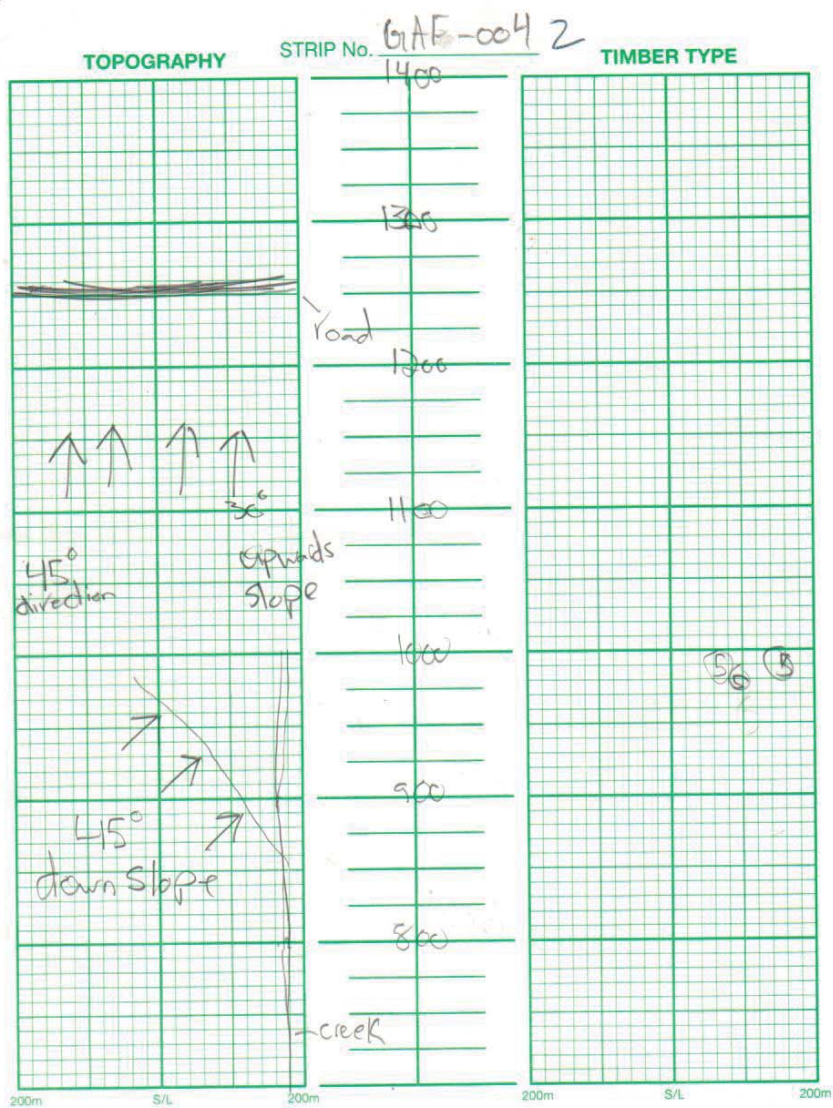
DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES
			2015		2014		2013		
			1	2	3	4	5	6	
17.5-25.0	3.3	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0
25.1-30.0	5.3	15.9	0.0	0.0	0.0	0.0	10.6	0.0	0
30.1-35.0	7.1	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0
35.1-40.0	9.4	28.2	0.0	0.0	0.0	0.0	9.4	0.0	0
40.1-45.0	11.6	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0
45.1-50.0	13.8	27.6	13.8	0.0	0.0	0.0	13.8	0.0	0
50.1-55.0	16.2	16.2	16.2	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	247.5	183.7	30.0	0	0.0	0.0	33.8	0	0

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		< 4.9 LOW Mean Larval Density
1.50	< 3.9 SEVERE Attack Density	0.00	< 4.9 LOW Mean Larval Density

TABLE 2- Spruce Beetle Management Options after Walkthrough						
% 2015 ATTACK	12.1%	##	SANITATION AND SALVAGE HARVEST PRIORITY RATING			
% 2014 ATTACK	0.0%	##	LIGHT	0-599	LEAVE (Monitor, Trap Trees, Baits, etc)	1553.5
% 2013 ATTACK	13.7%	##	MODERATE	600-999	PROBE (To Obtain Further Info)	
% HOST IN STAND	100.0%	##	HEAVY	1000+	RECOMMEND CRUISING/ LOGGING	

PROBE # 1 | **SPRUCE BEETLE
PROBE CARD**

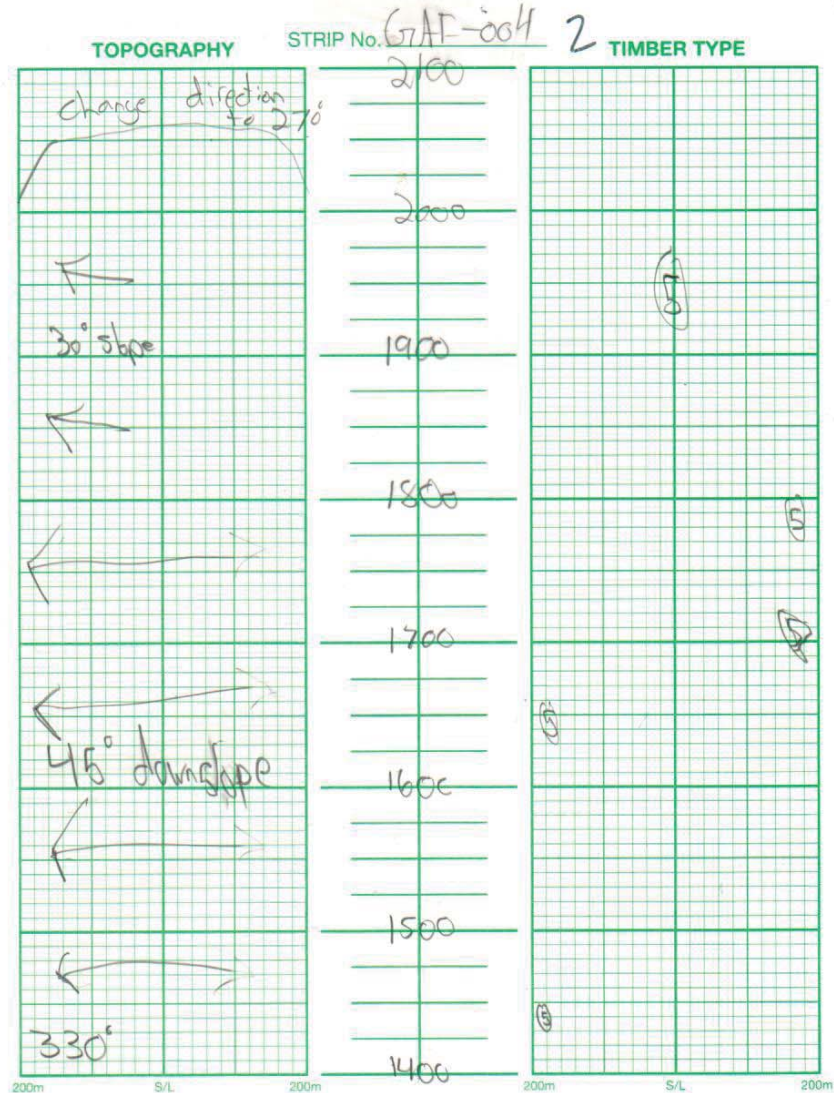
LOCATION GAF-004		0433419 6154141		PAGE 1 OF 1					
BEARING 315°		DISTANCE 100 m		STRIP WIDTH 10 m					
DIAMETER CLASS	SURFACE AREA FACTOR	NUMBER OF HEALTHY HOSTS	BARK BEETLE CODE BY YEAR OF ATTACK						OTHER TREE SPECIES
			1	2	3	4	5	6	
17.5 - 25.0	3.3	•••							
25.1 - 30.0	5.3	•••					•		
30.1 - 35.0	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		192					5		
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	/	/	/	3	/	/		
1B	1	/	/	/	3	/	/		
COMMENTS - Probe taken along creek. Large Sx along line open stand. - Sample tree located in warm south.									
CREW NAMES JAMES / PAT / DANIEL						DATE Y M D 15 10 11			



STRIP NO.: G7AF-004 DIRECTION: 45°
 START STRIP: 700m-1400m
 JOB NO.: Seneca walkthrough DATE: Oct. 11/15
 CREW: Darren Vidgren
 REMARKS:



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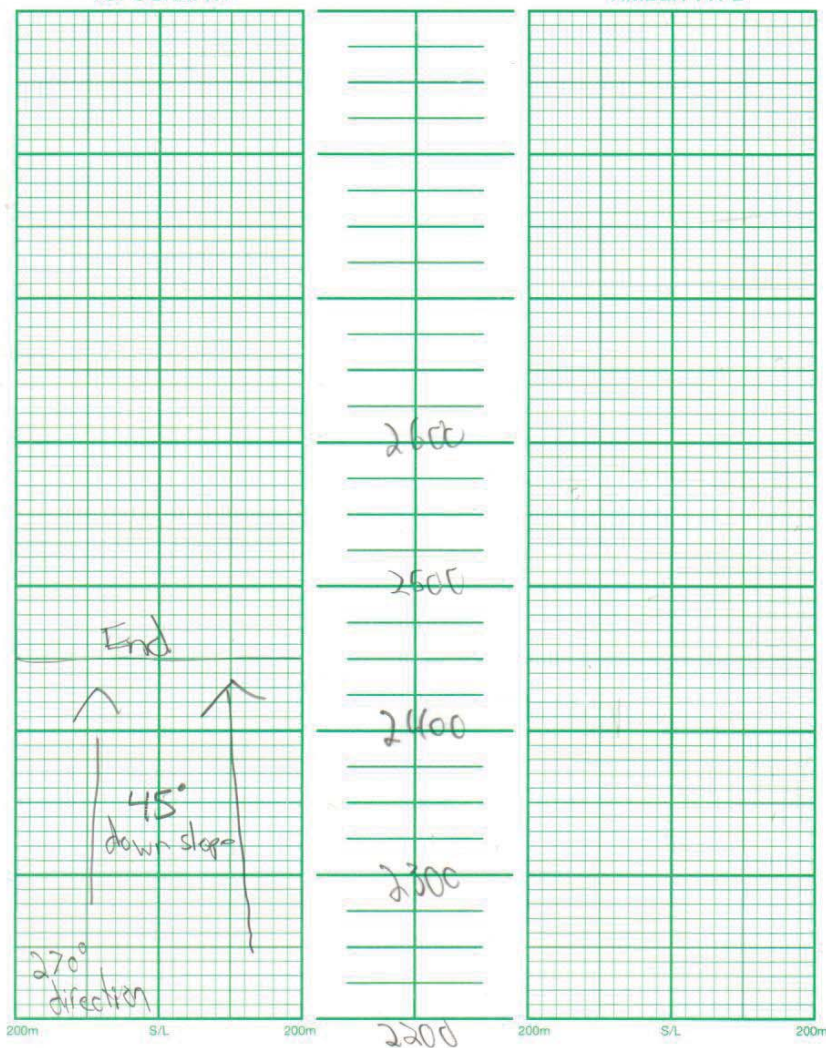


STRIP NO.: G7AF-004 DIRECTION: 330°
 START STRIP: 1400m-2100m
 JOB NO.: Seneca walkthrough DATE: Oct. 11/15
 CREW: Darren Vidgren
 REMARKS:



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STRIP No. GAF-001 2 **TIMBER TYPE**

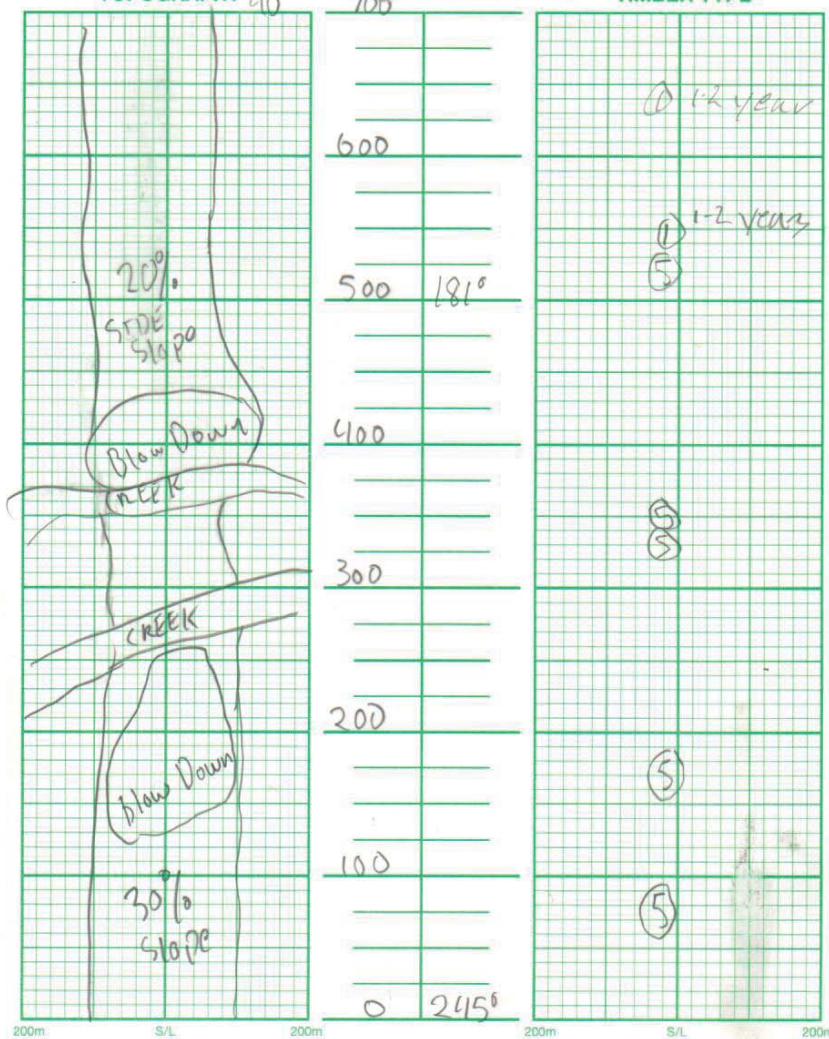


STRIP NO.: G9AF-004 DIRECTION: 270°
START STRIP: 2200m-2500m
JOB NO.: Sensor walk DATE: Oct. 11/15
CREW: D.V

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Lcls 2-410 40 40 30.5 25 20 20
 45 1-50 40 45 70 70
 TOPOGRAPHY STRIP No. GAF-004 3
 TIMBER TYPE Blue



STRIP NO.: GRF-004 DIRECTION: 2450, 181
START STRIP: 0-700
JOB NO.: Seneca/walk DATE: Oct 11, 15
CREW: JP

REMARKS: _____  www.insupplies.com
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STRIP No. 12

STRIP NO.: DIRECTION: 3520, 98

START STRIP:

JOB NO.: **DATE:**

CREW: _____

REMARKS: _____



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