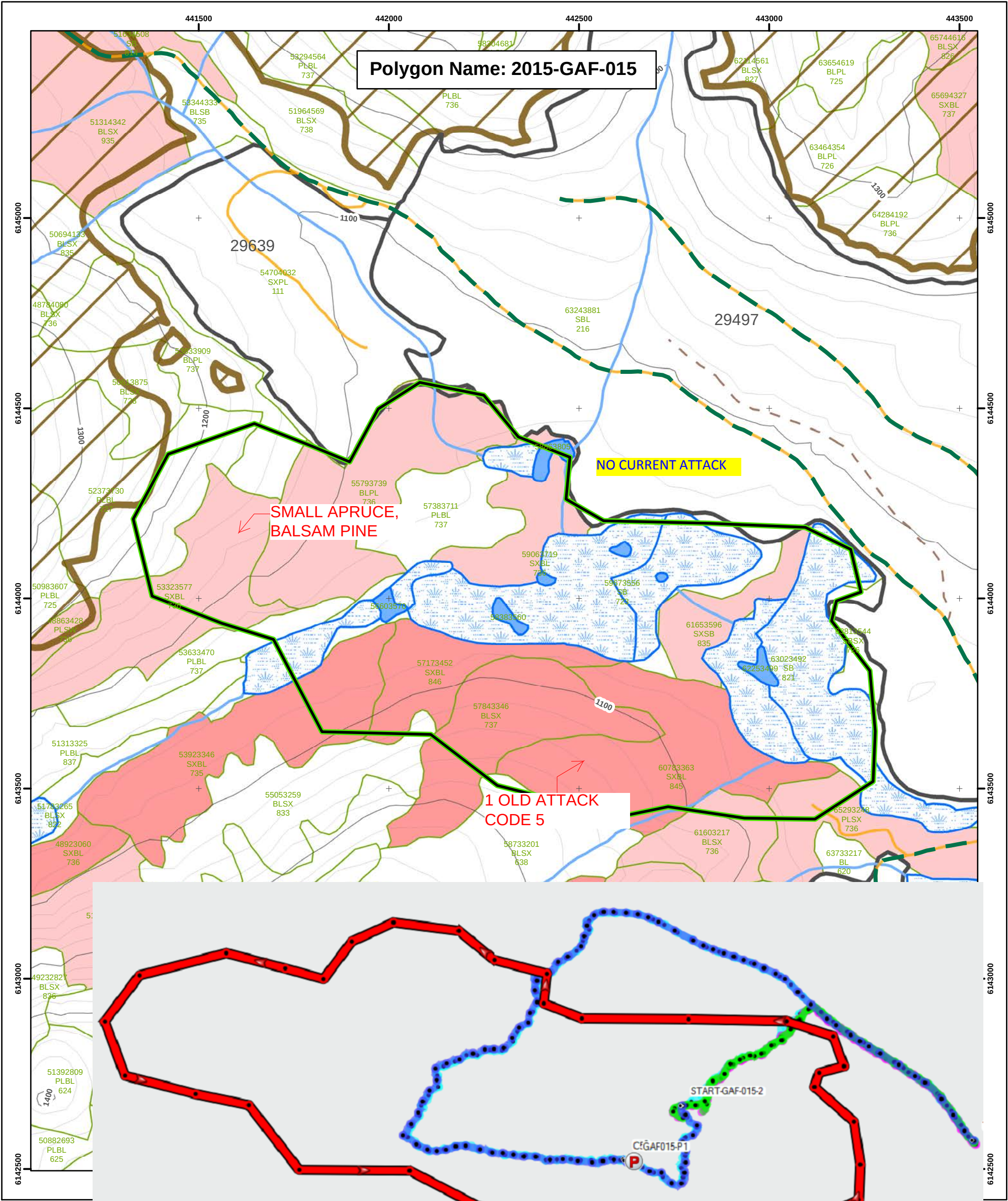






Mitigating Forest  
Natural Resource Operations

### Spruce Bark Beetle Field Map

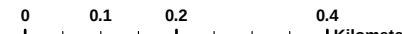
**Polygon Name: 2015-GAF-015**

|                       |                       |
|-----------------------|-----------------------|
| Landscape Unit/BMU:   | Gaffney               |
| Region:               | Omineca               |
| District:             | Mackenzie             |
| Mapsheet:             | 093O05                |
| Hectares:             | 139.81                |
| Scale:                | 1:10,000              |
| When plotted on 11x17 |                       |
| Coordinate System:    | NAD 1983 UTM Zone 10N |
| Datum:                | North American 1983   |
| Date Drawn:           | 01/11/2015            |
| Drawn By:             | msnively              |

 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)  |
|  | VRI Polygon         |
|  | Cutting Permit      |
|  | RESULTS Opening     |
|  | Landscape Unit      |
|  | Road Permit Active  |
|  | Road Permit Pending |
|  | Km Markers          |
|  | Communities         |



 First Nations Reserves

 Mackenzie District

 OGMA Legal Current

 Ungulate Winter Range

 Wildlife Habitat Area

**Protected Lands Designation**

 Ecological Reserve

 Protected Area

 Provincial Park

 Contour - Index

 Contour - Intermediate

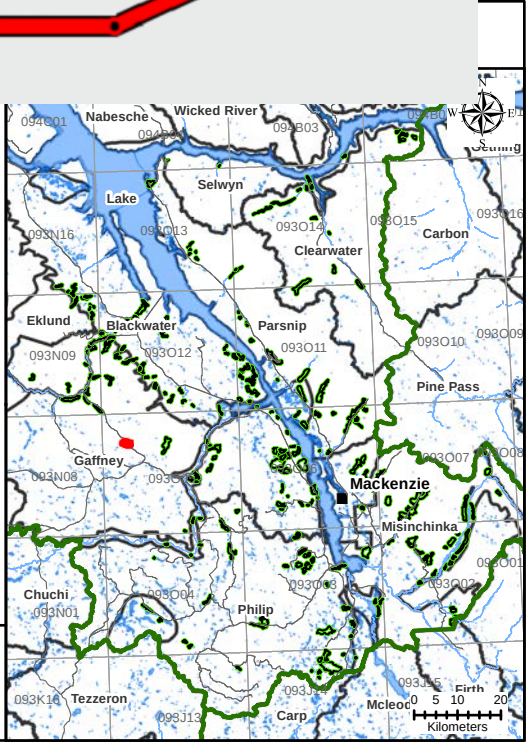
 Streams

 Lakes and Rivers

 Wetlands

**Disclaimer**

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



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Phone: (250) 561-0890, Fax: (250) 564-3275

**SPRUCE BARK BEETLE REPORT  
FH16DMK010**

POLYGON: 2015-GAF-015      HECTARES: 139.81

WALKTHROUGH DISTANCE: 2700

ESTIMATED INFESTED PIXELS FROM  
WALKTHROUGH (Code 1-4)      0      0.0%**SUMMARY OF CURRENT INFESTATION**

Walkthrough found no current attack and very light spruce component. Spruce mainly in southern area where tracks and probe completed, west portion of polygon dominated by pine balsam and open areas with very small dbh spruce.

NO CURRENT ATTACK]

**ACCESS**

Access is off of Munroe Mainline 7.5km, parked further back at pullout, short walkin.

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

Flat with slopes rising to the south. Only large diameter spruce was only southern boundary. Polygon full of swamps and drainages and minimal to no spruce in west portion of polygon.

**SIZE, BOUNDARY and PATTERN OF INFESTATION**

Walkthrough found very light old attack with only one Code 5 attacked tree found. No current attack. Wet site,

**INCIDENCE AND SEVERITY OF ATTACK**

No current attack, old attack very lightly scattered.

**RISK OF BEETLE SPREAD**

Minimal spruce and polygon to the north bordered by cutblock. Also many swamps with no spruce and very low risk of spread with only 1 code 5 attacked tree found.

**ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES**

Very swampy, access is munroe mainline at 7.5km

**RECOMMENDATIONS****OPTION 1****NO ACTION**

**With only One OLD Code 5 attacked tree found, no action required. Walked through drainages with little to no evidence of current attack**

**OPTION 2****MONITOR**

**As good access, could reschedule a walkthrough 2016/2017 to track any changes.**

# 2015-GAF-015

SPRUCE BEETLE WALKTHROUGH

## Legend

-  NO CURRENT ATTACK
-  Probes

POC-DAY2 START-GAF-015-2

GAF015-P1

205

TRUCK

Google earth

Image Landsat  
© 2015 Google

N

1 km

| Summary                       |     |        |                 |      |             |                                                   |
|-------------------------------|-----|--------|-----------------|------|-------------|---------------------------------------------------|
| 2015-GAF-015                  | HEC | 139.81 | METERS WALKED   | 2700 | % TRAVERSED | 1.9%                                              |
| PIXELS COVERED BY WALKTHROUGH |     | 27     | INFESTED PIXELS |      | 0           | ESTIMATED % OF BLOCK INFESTED (From Walk through) |
|                               |     |        |                 |      |             | 0.0%                                              |

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 | 0.0  | 0.0 | 19.8               |
| 25.1-30.0      | 5.3                 | 21.2                    | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 26.5               |
| 30.1-35.0      | 7.1                 | 92.3                    | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 14.2               |
| 35.1-40.0      | 9.4                 | 65.8                    | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 9.4                |
| 40.1-45.0      | 11.6                | 34.8                    | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 34.8               |
| 45.1-50.0      | 13.8                | 0                       | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 27.6               |
| 50.1-55.0      | 16.2                | 32.4                    | 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 | 18.7 | 0.0 | 0                  |
| 60.1 +         | 25.3                | 0                       | 0.0                                | 0.0 | 0.0  | 0.0 | 0.0  | 0.0 | 0                  |
| TOTALS         | 288.3               | 269.6                   | 0.0                                | 0   | 0.0  | 0.0 | 18.7 | 0   | 132.3              |

TABLE 4- Spruce Beetle Attack Density and Larval Density Rating

| MEAN NO. OF<br>ENTRANCE HOLES PER<br>225 cm2 PHLOEM<br>SAMPLE | < 1 LOW Attack Density        | MEAN NO. OF<br>LIVING LARVAE<br>PER 225 cm2<br>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   |
| 0.00                                                          | < 3.9 SEVERE Attack Density   | 0.00                                                         | >24.9 EXTREME Mean Larval Density  |

TABLE 2- Spruce Beetle Management Options after Walkthrough

|                 |       |     |                                                |         |                                         |       |
|-----------------|-------|-----|------------------------------------------------|---------|-----------------------------------------|-------|
| % 2015 ATTACK   | 0.0%  | 0.0 | SANITATION AND SALVAGE HARVEST PRIORITY RATING |         |                                         |       |
| % 2014 ATTACK   | 0.0%  | ##  | LIGHT                                          | 0-599   | LEAVE (Monitor, Trap Trees, Baits, etc) | 111.2 |
| % 2013 ATTACK   | 6.5%  | ##  | MODERATE                                       | 600-999 | PROBE (To Obtain Further Info)          |       |
| % HOST IN STAND | 68.5% | ##  | HEAVY                                          | 1000+   | RECOMMEND CRUISING/ LOGGING             |       |

From 1 probe line

SUMMARY OF ALL CARDS  
FS1111

NUMBER OF CARDS

1

ACCESS - Access is off of Munroe Mainline 7.5km, parked further back at pullout, short walkin.

POLYGON FEATURES - Flat with slopes rising to the south. Only large diameter spruce was only southern boundary. Polygon full of swamps and drainages and minimal to no spruce in west portion of polygon.

| 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                 | 7                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 6                  | 0  |
| 25.1-30.0                     | 5.3                 | 4                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 5                  | 0  |
| 30.1-35.0                     | 7.1                 | 13                      | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 2                  | 0  |
| 35.1-40.0                     | 9.4                 | 7                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 1                  | 0  |
| 40.1-45.0                     | 11.6                | 3                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 3                  | 0  |
| 45.1-50.0                     | 13.8                | 0                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 2                  | 0  |
| 50.1-55.0                     | 16.2                | 2                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 0                  | 0  |
| 55.1-60.0                     | 18.7                | 0                       | 0                                  | 0                | 0          | 0                      | 1    | 0                      | 0                  | 0  |
| 60.1 +                        | 25.3                | 0                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 0                  | 0  |
| TOTALS                        |                     | 36                      | 0                                  | 0                | 0          | 0                      | 1    | 0                      | 19                 | 0  |
| BARK SAMPLES<br>15 cm x 15 cm | NO. ENTRANCE HOLES  | NO. PARENT ADULTS       | NO. LARVAE                         | NO. PUPAE ADULTS | NO. CALLOW | FRESH (GREEN) BLOWDOWN |      |                        |                    |    |
|                               |                     |                         |                                    |                  |            | Attacked<br>Yr _____   |      | Unattacked<br>Yr _____ |                    |    |
| 2                             | 0                   | 0                       | 0                                  | 0                | 0          | 0                      | 0    | 0                      | 0                  |    |
|                               |                     |                         |                                    |                  |            |                        |      |                        |                    |    |

SIZE, BOUNDARY AND PATTERN OF THE INFESTATION

Walkthrough found very light old attack with only one Code 5 attacked tree found. No current attack. Wet site,

INCIDENCE AND SEVERITY OF THE INFESTATION

No current attack, old attack very lightly scattered.

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Minimal spruce and polygon to the north bordered by cutblock. Also many swamps with no spruce and very low risk of spread with only 1 code 5 attacked tree found.

ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES

Very swampy, access is munroe mainline at 7.5km



BRITISH  
COLUMBIA



BEETLE PROBE CARD

LOCATION 0442693 ELEVATION 1100 LATITUDE PAGE OF  
GAE 013 6143670

BEARING 280° STRIP LINE NO P1 STRIP WIDTH 10m DISTANCE 100m BEETLE SPECIES ☒ SB ☐ MPB ☐ DFB

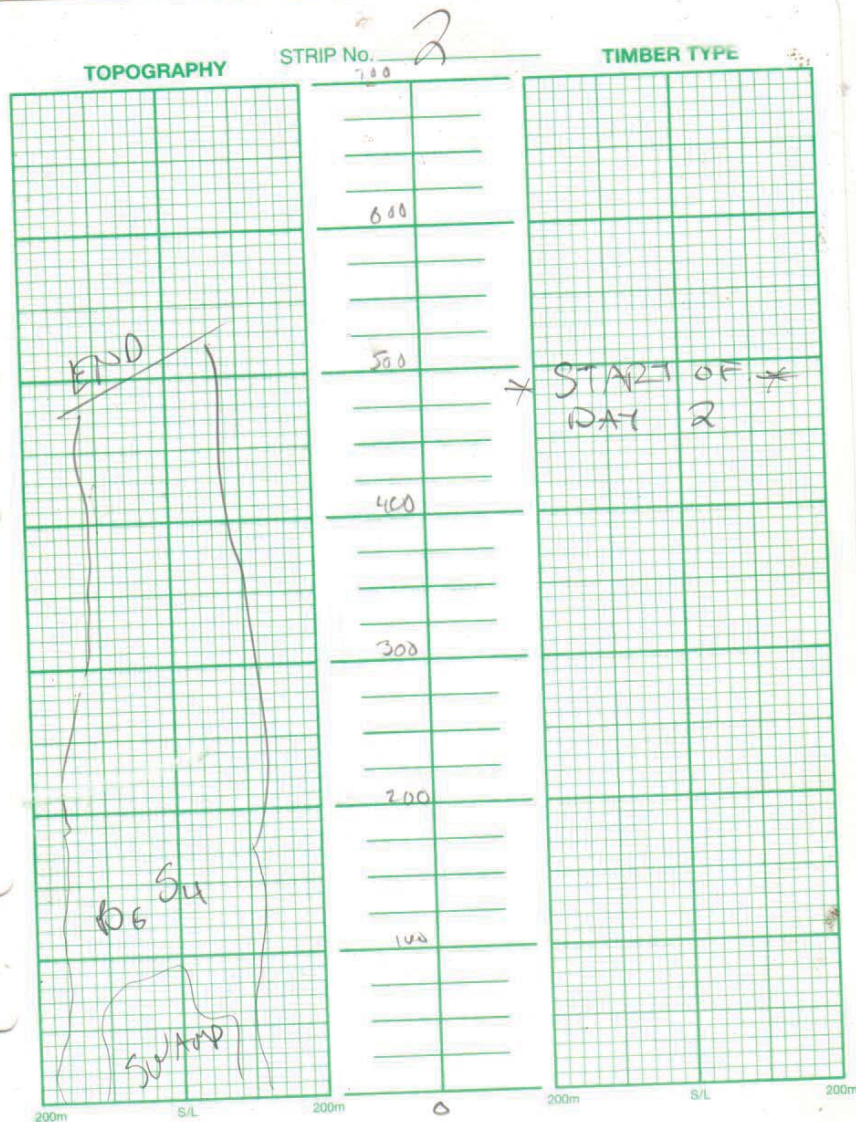
| DIAMETER CLASS | SURFACE AREA FACTOR | NUMBER OF HEALTHY HOSTS | BARK BEETLE CODE BY YEAR OF ATTACK |   |   |   |   |   | OTHER TREE SPECIES |       |
|----------------|---------------------|-------------------------|------------------------------------|---|---|---|---|---|--------------------|-------|
|                |                     |                         | 1                                  | 2 | 3 | 4 | 5 | 6 | MAIN               | OTHER |
| 12.5 - 17.4    | 2.0                 |                         |                                    |   |   |   |   |   |                    | B1    |
| 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         |                     | 36                      |                                    |   |   |   | 1 |   |                    | 19    |

| BARK SAMPLES<br>15cm x 15cm | NO.<br>ENTRANCE<br>HOLES | NO.<br>PARENT<br>ADULTS | NO.<br>LARVAE | NO.<br>PUPAE | NO.<br>CALLOW<br>ADULTS | FRESH (GREEN) BLOWDOWN |            |
|-----------------------------|--------------------------|-------------------------|---------------|--------------|-------------------------|------------------------|------------|
|                             |                          |                         |               |              |                         | Attacked               | Unattacked |
| /                           |                          |                         |               |              |                         |                        |            |
| /                           |                          |                         |               |              |                         |                        |            |

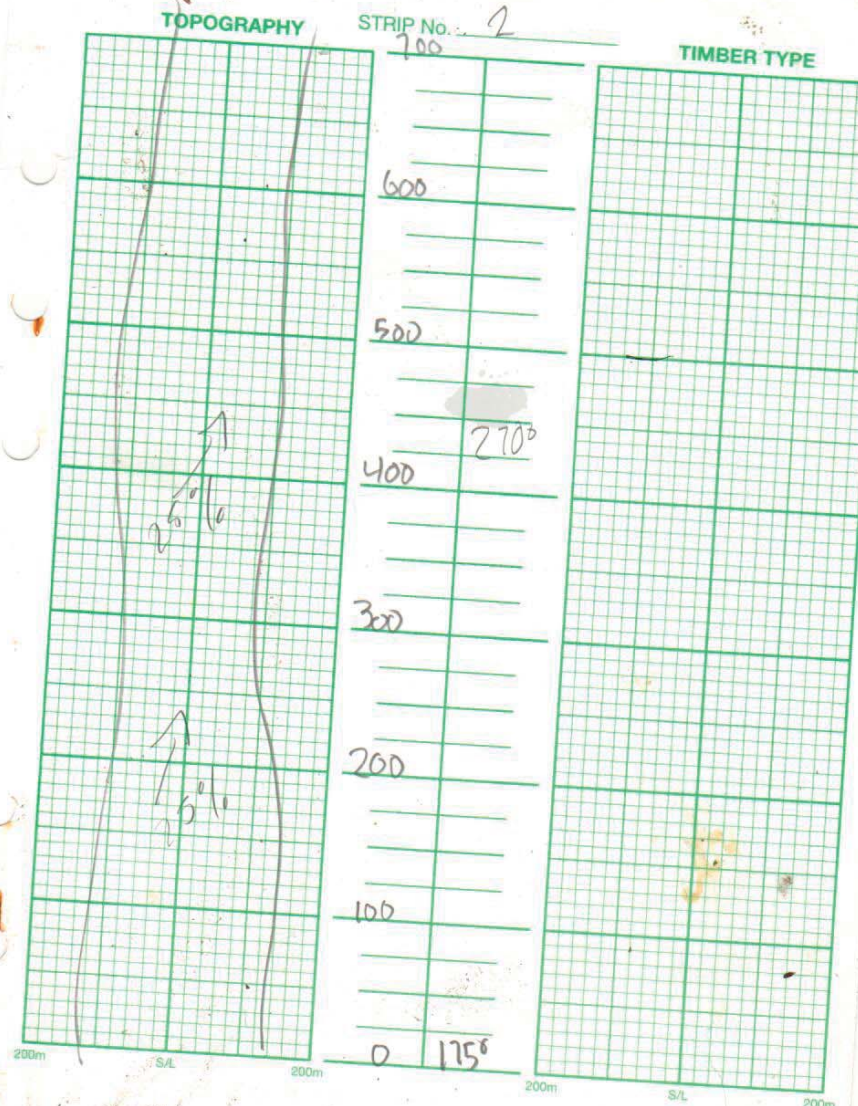
COMMENTS  
- DEEP SNOW. LINE IN PINK PLAYS.

CREW NAMES  
SAMER / PAT

DATE  
Y M D  
15 10 10



STRIP NO.: 2 DIRECTION: 216°  
 START STRIP: 0-700  
 JOB NO.: GAP-015 DATE: DEC 8/2015  
 CREW: JAMES / PAT  
 REMARKS:



STRIP NO.: 2 DIRECTION: 175°, 270°  
 START STRIP: 0-700  
 JOB NO.: GAP-015 DATE: Dec 10, 15  
 CREW: Pat / James  
 REMARKS:

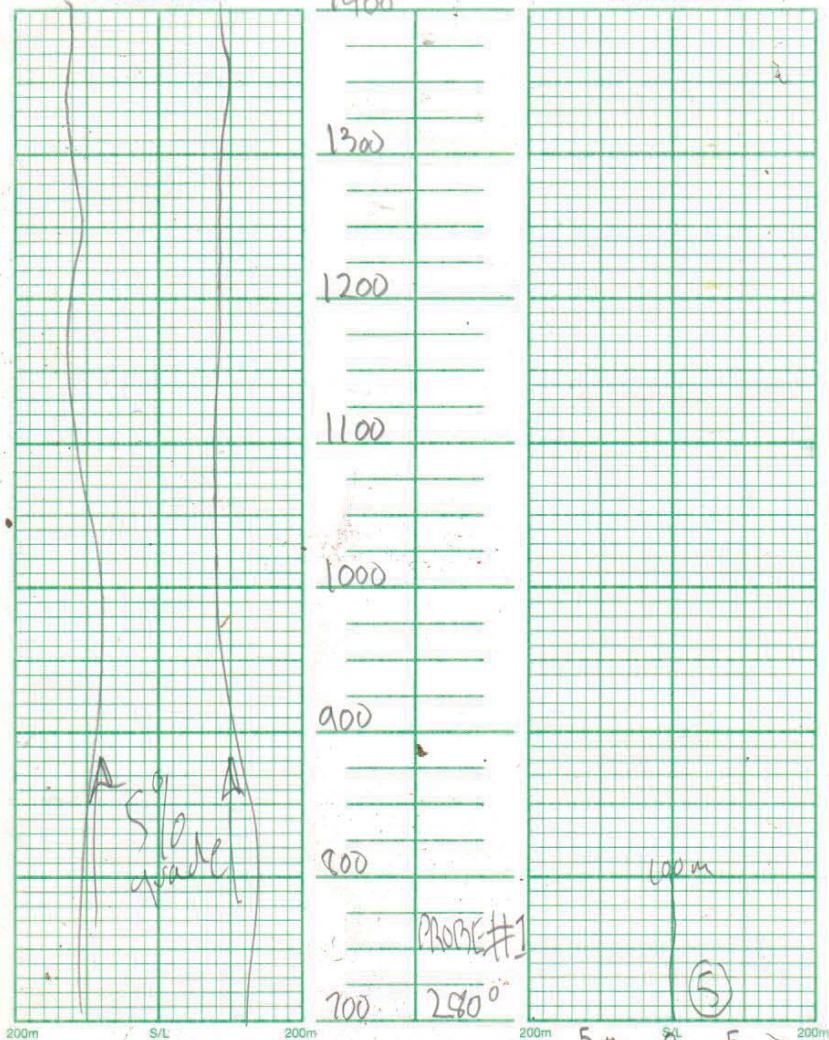


## TOPOGRAPHY

STRIP No.

2

## TIMBER TYPE



STRIP NO.:

2

DIRECTION:

280°

START STRIP:

700 - 1400

JOB NO.:

GAF-015

DATE:

Dec 10, 15

CREW:

REMARKS:



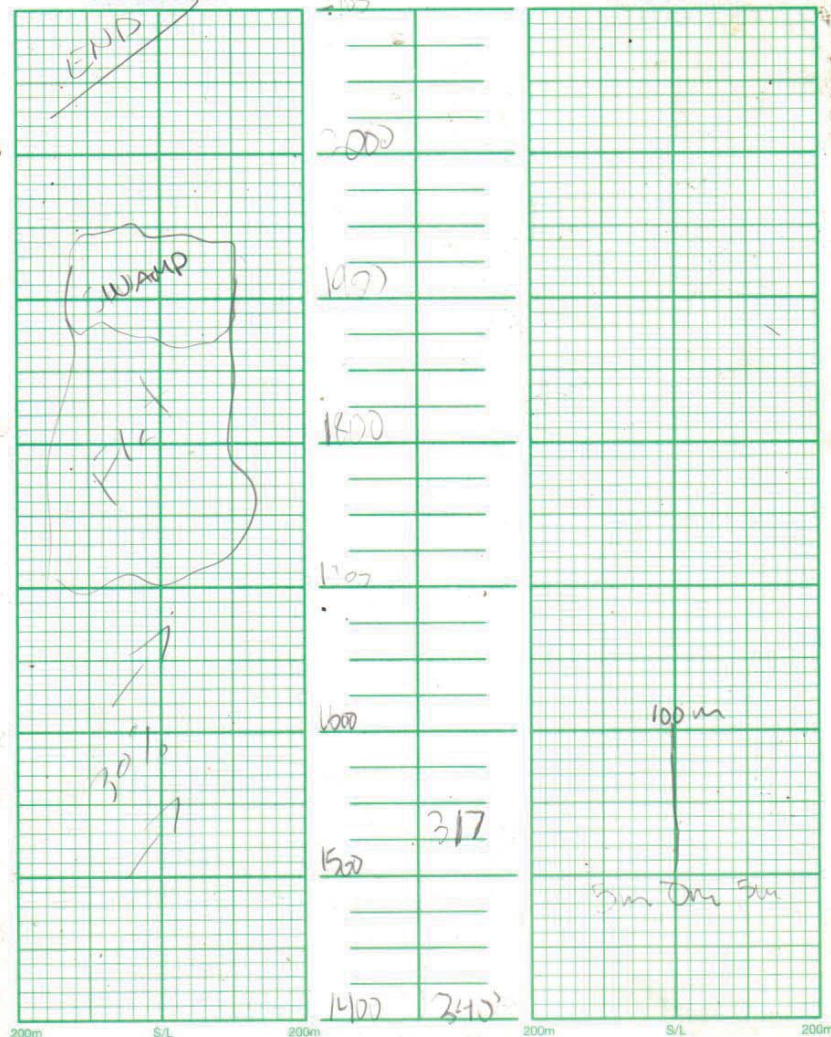
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## TOPOGRAPHY

STRIP No.

2

## TIMBER TYPE



STRIP NO.:

2

DIRECTION:

240°

START STRIP:

JOB NO.:

GAF-015

DATE:

Dec 10

CREW:

REMARKS:



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