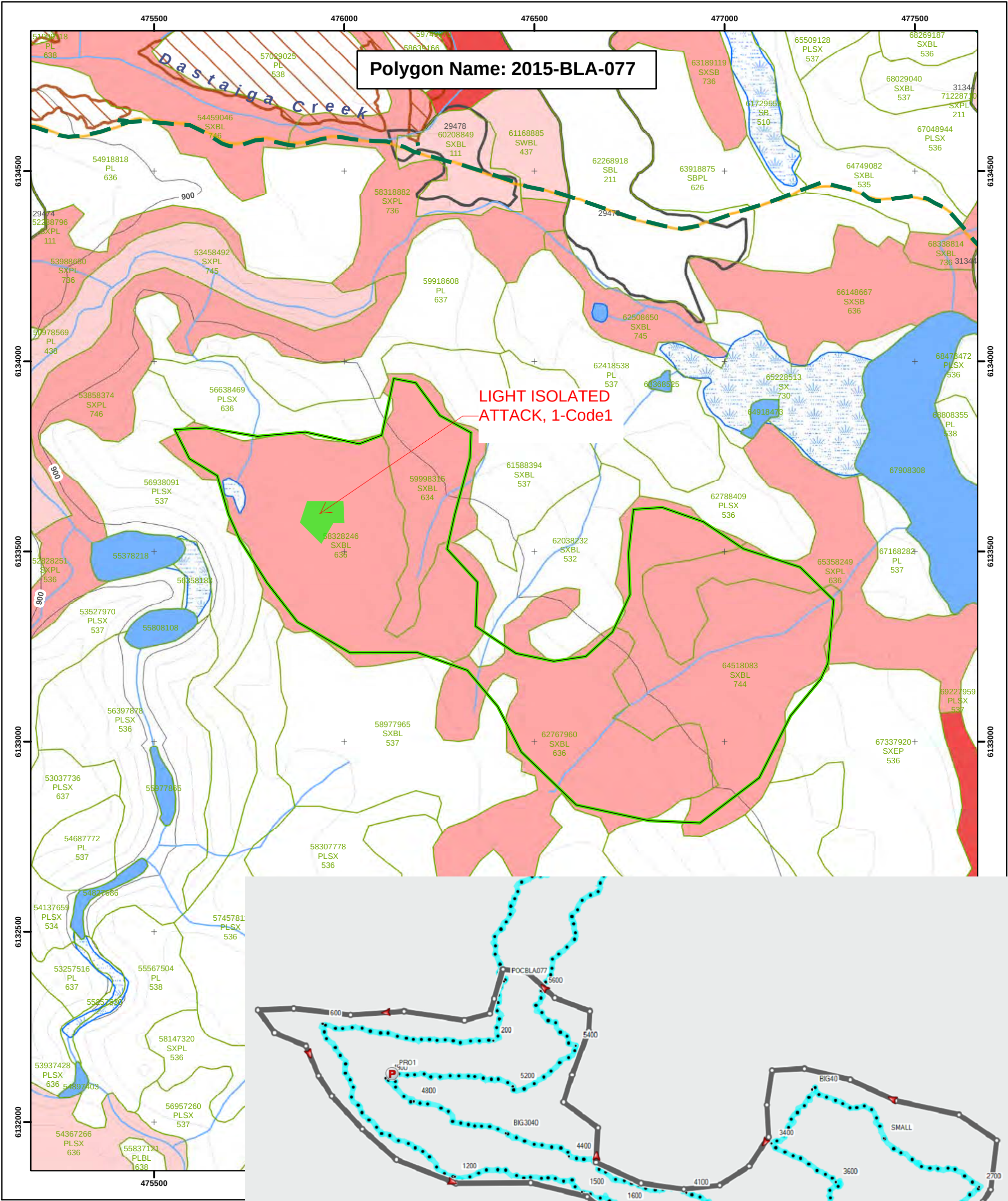
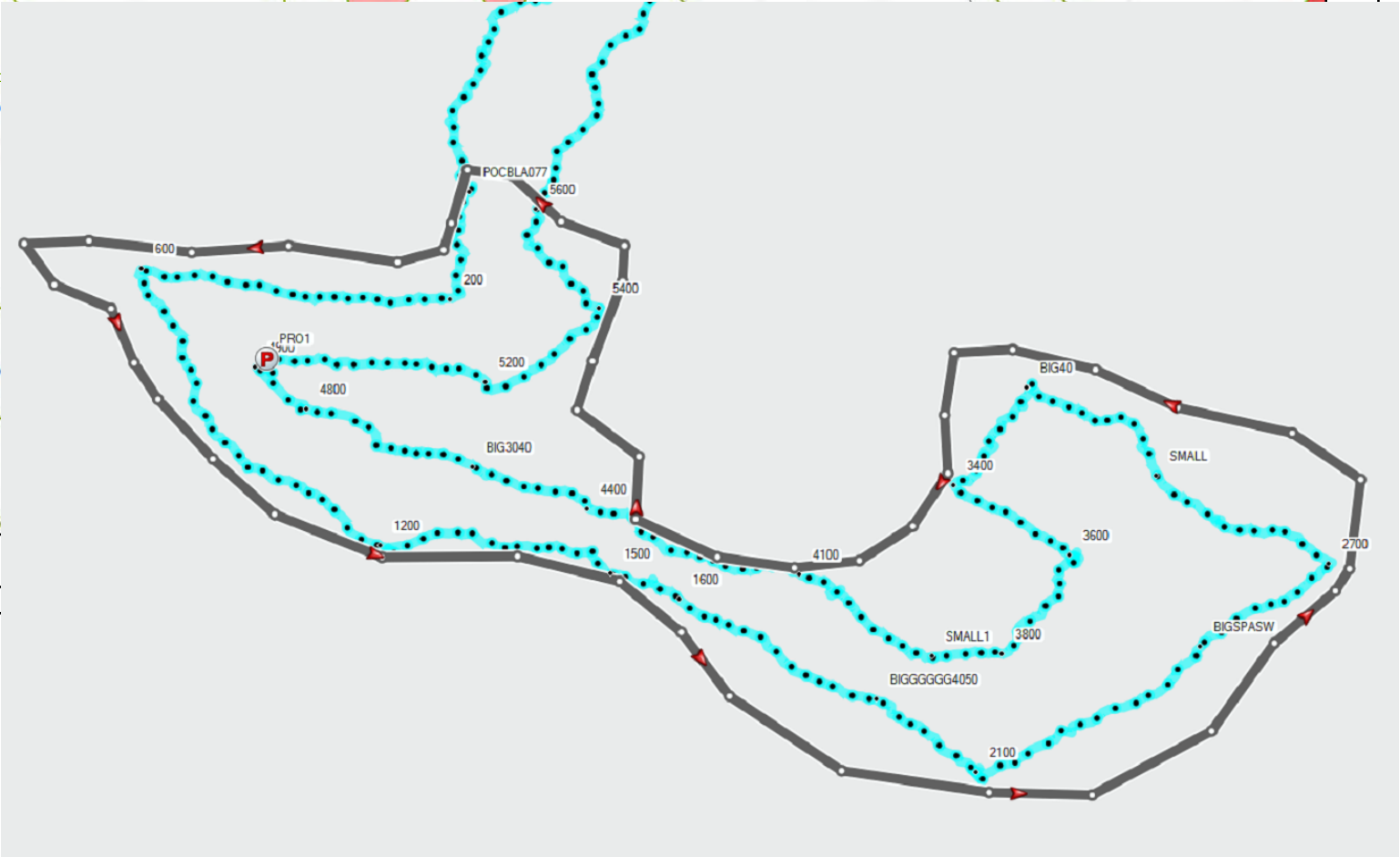




 Ministry of Forests, Lands and Natural Resource Operations

### Spruce Bark Beetle Field Map

**Polygon Name: 2015-BLA-077**

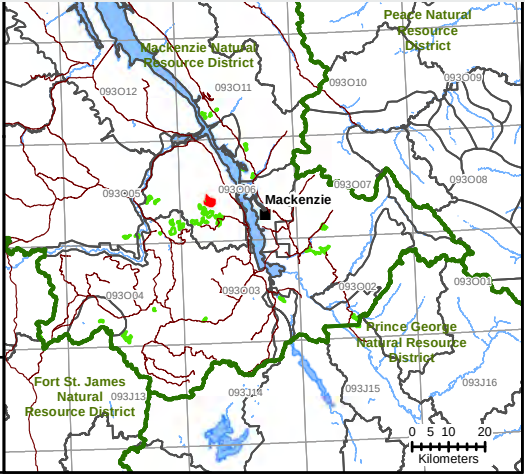
Landscape Unit/BMU: Blackwater  
Region: Omineca  
District: Mackenzie  
Mapsheet: 093O06  
Hectares: 81.17  
Scale: 1:10,000  
When plotted on 11x17  
Coordinate System: NAD 1983 UTM Zone 10N  
Datum: North American 1983  
Date Drawn: 03/12/2015  
Drawn By: msnively

**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.



**SENECA ENTERPRISES LTD.**

PO BOX 1902, PRINCE GEORGE, BC, V2L 5E3

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

WALKTHROUGH DISTANCE: 5700

**SPRUCE BARK BEETLE REPORT  
FH16DMK016,017**

POLYGON: 2015-BLA-077 HECTARES: 81.17

ESTIMATED INFESTED PIXELS FROM  
WALKTHROUGH (Code 1-4) 1 1.8%**SUMMARY OF CURRENT INFESTATION**

Found one infested pixel with 1-C1 attack (2 Year Cycle). Polygon is isolated with mixed stand 50% Spruce 50% Balsam. Areas of both large and small DBH Spruce, no evidence of old attack either, very low risk

LIGHT SCATTERED ATTACK

**ACCESS**

Truck parked at 7km down 2400 road, (located at 40km Finlay FSR) Sled 8km, walk in 600m to polygon

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

Polygon has minimal slopes 0-15%, 50/50 mic Balsam Spruce with average DBH 30-40 (Larger DBH spruce in east of polygon)

**SIZE, BOUNDARY and PATTERN OF INFESTATION**

Walkthrough found 1 code 1 tree and the first year of a two year cycle. No Code 5 attack trees noticed. Attacked Code 1 had minimal larvae when hacked into. Light isolated attack.

**INCIDENCE AND SEVERITY OF ATTACK**

Light isolated attack with one infested pixel having 1 Code 1 with low attack density and low larval density.

**RISK OF BEETLE SPREAD**

Isolated polygon with low spruce stands surrounding polygon. One attacked tree found, low risk of spread.

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

Isolated polygon where sledged along old road 8km and walked 600m to the north of polygon.

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

As only 1 code 1 tree found (on 1st year of 2 year cycle) and isolated polygon within a mixed stand by Balsam, no action required.

**OPTION 2****MONITOR**

As only 1 code 1 tree found and isolated within a mixed stand by Balsam, schedule another walkthrough 2016/2017.

# 2015-BLA-077

SPRUCE BEETLE WALKTHROUGH

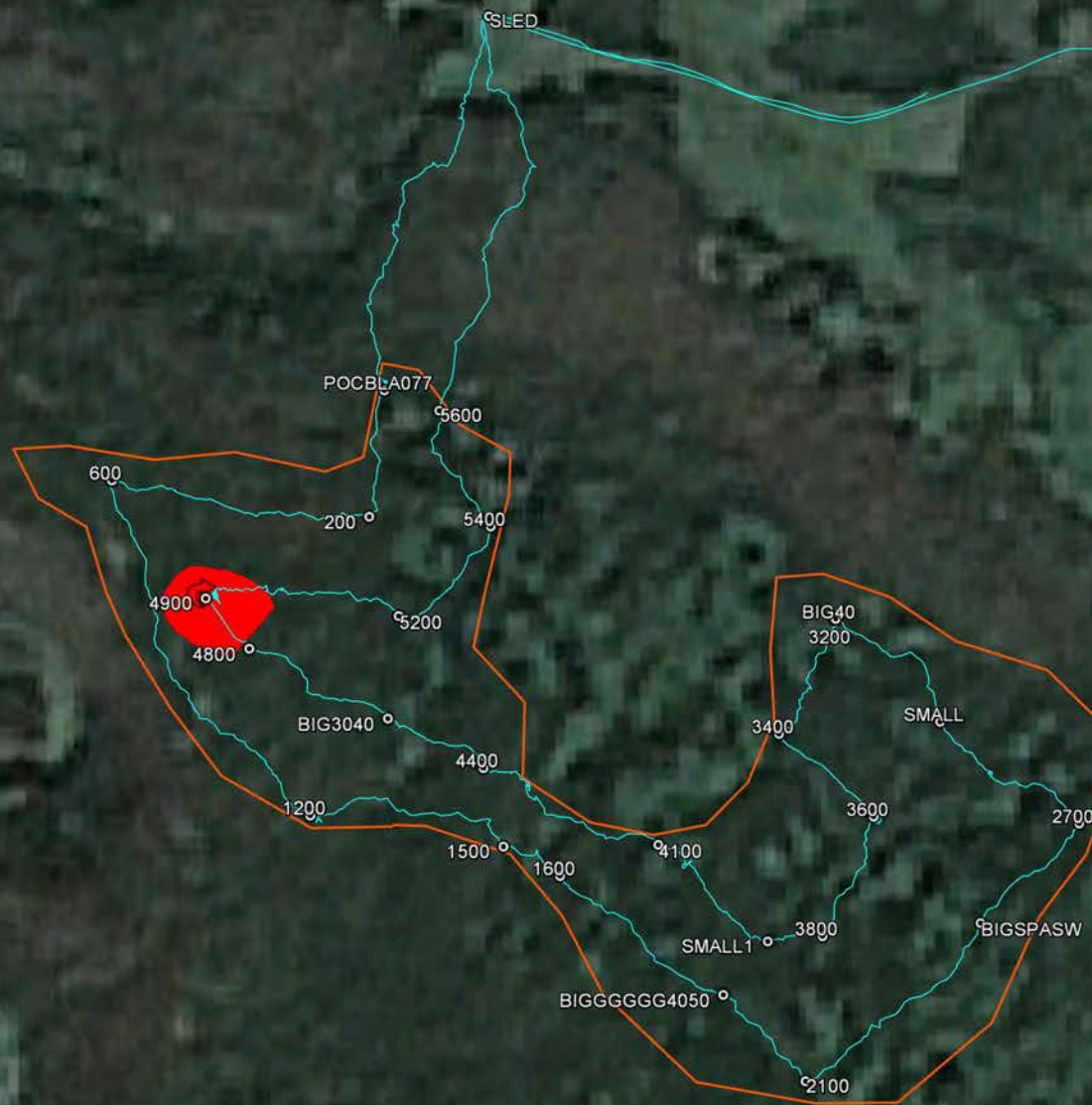
## Legend



LIGHT SCATTERED ATTACK



PROBE LINES



Tsedeitla Lake

Google earth

© 2016 Ones/Spot Image

© 2016 Google

Image Landsat

1 km



| TABLE 5- Spruce Beetle Infestation Summary Sheet |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------|--|--|--|--|--|--|--|--|--|
|--------------------------------------------------|--|--|--|--|--|--|--|--|--|

OF NOTE- Results taken from a 100m Probe Line established at 1 per 50 hectares to represent

| 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   |
| 1.00                                                            | < 3.9 SEVERE Attack Density   | 2.50                                                         | >24.9 EXTREME Mean Larval Density  |

---

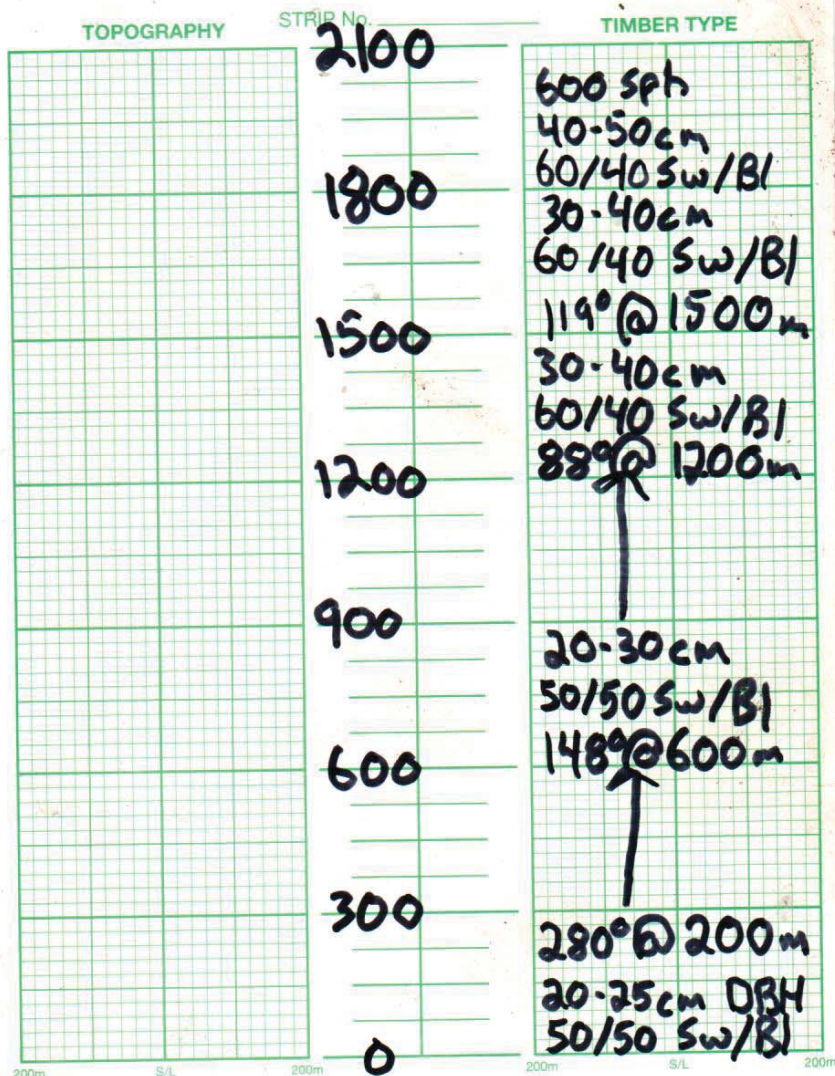
ONE PROBE LINE TAKEN, LOW ATTACK AND LARVAL DENSITY

| SUMMARY OF ALL CARDS<br>FS1111                                                                                                                                                      |                              |                                                                                                                         |                                    |                     |               | NUMBER OF<br>CARDS     |      | 1 |                               |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------|---------------------|---------------|------------------------|------|---|-------------------------------|----|
| ACCESS -                                                                                                                                                                            |                              | Truck parked at 7km down 2400 road, (loacted at 40km Finlay FSR) Sled 8km, walk in 600m to polygon                      |                                    |                     |               |                        |      |   |                               |    |
| POLYGON<br>FEATURES -                                                                                                                                                               |                              | Polygon has minimal slopes 0-15%, 50/50 mic Balsam Spruce with average DBH 30-40 (Larger DBH spruce in east of polygon) |                                    |                     |               |                        |      |   |                               |    |
| DIAMETER CLASS                                                                                                                                                                      | SURFACE<br>AREA FACTOR       | NUMBER OF<br>HEALTHY<br>HOSTS                                                                                           | BARK BEETLE CODE BY YEAR OF ATTACK |                     |               |                        |      |   | O+AW6:B18THER TREE<br>SPECIES |    |
|                                                                                                                                                                                     |                              |                                                                                                                         | 2015                               |                     | 2014          |                        | 2013 |   |                               |    |
|                                                                                                                                                                                     |                              |                                                                                                                         | 1                                  | 2                   | 3             | 4                      | 5    | 6 | BL                            | AT |
| 17.5-25.0                                                                                                                                                                           | 3.3                          | 8                                                                                                                       | 0                                  | 0                   | 0             | 0                      | 0    | 0 | 8                             | 0  |
| 25.1-30.0                                                                                                                                                                           | 5.3                          | 8                                                                                                                       | 0                                  | 0                   | 0             | 0                      | 0    | 0 | 4                             | 0  |
| 30.1-35.0                                                                                                                                                                           | 7.1                          | 4                                                                                                                       | 0                                  | 0                   | 0             | 0                      | 0    | 0 | 9                             | 0  |
| 35.1-40.0                                                                                                                                                                           | 9.4                          | 3                                                                                                                       | 1                                  | 0                   | 0             | 0                      | 0    | 0 | 1                             | 0  |
| 40.1-45.0                                                                                                                                                                           | 11.6                         | 0                                                                                                                       | 0                                  | 0                   | 0             | 0                      | 0    | 0 | 6                             | 0  |
| 45.1-50.0                                                                                                                                                                           | 13.8                         | 1                                                                                                                       | 0                                  | 0                   | 0             | 0                      | 0    | 0 | 1                             | 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                                                                                                                                                                              |                              | 24                                                                                                                      | 1                                  | 0                   | 0             | 0                      | 0    | 0 | 29                            | 0  |
| BARK SAMPLES<br>15 cm x 15 cm                                                                                                                                                       | NO.<br>ENTRAN<br>CE<br>HOLES | NO. PARENT<br>ADULTS                                                                                                    | NO.<br>LARVAE                      | NO. PUPAE<br>ADULTS | NO.<br>CALLOW | FRESH (GREEN) BLOWDOWN |      |   | Unattacked                    |    |
|                                                                                                                                                                                     |                              |                                                                                                                         |                                    |                     |               | Attacked               |      |   |                               |    |
| 2                                                                                                                                                                                   | 2                            | 0                                                                                                                       | 5                                  | 0                   | 0             | 0                      | 0    |   | 0                             | 0  |
|                                                                                                                                                                                     |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| SIZE, BOUNDARY AND PATTERN OF THE INFESTATION                                                                                                                                       |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| Walkthrough found 1 code 1 tree and the first year of a two year cycle. No Code 5 attack trees noticed. Attacked Code 1 had minimal larvae when hacked into. Light sisolatedattack. |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| INCIDENCE AND SEVERITY OF THE INFESTATION                                                                                                                                           |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| Light isolated attack with one infested pixel having 1 Code 1 with low attack density and low larval density.                                                                       |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| RISK OF BEETLE SPREAD                                                                                                                                                               |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| Isolated polygon with low spruce stands surrounding polygon. One attacked tree found, low risk of spread.                                                                           |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| ACCESS, OPERABILITY and INTEGRATED RESOURCE MANAGEMENT ISSUES                                                                                                                       |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |
| Isolated polygon where sledded along old road 8km and walked 600m to the north of polygon.                                                                                          |                              |                                                                                                                         |                                    |                     |               |                        |      |   |                               |    |



# BEETLE PROBE CARD

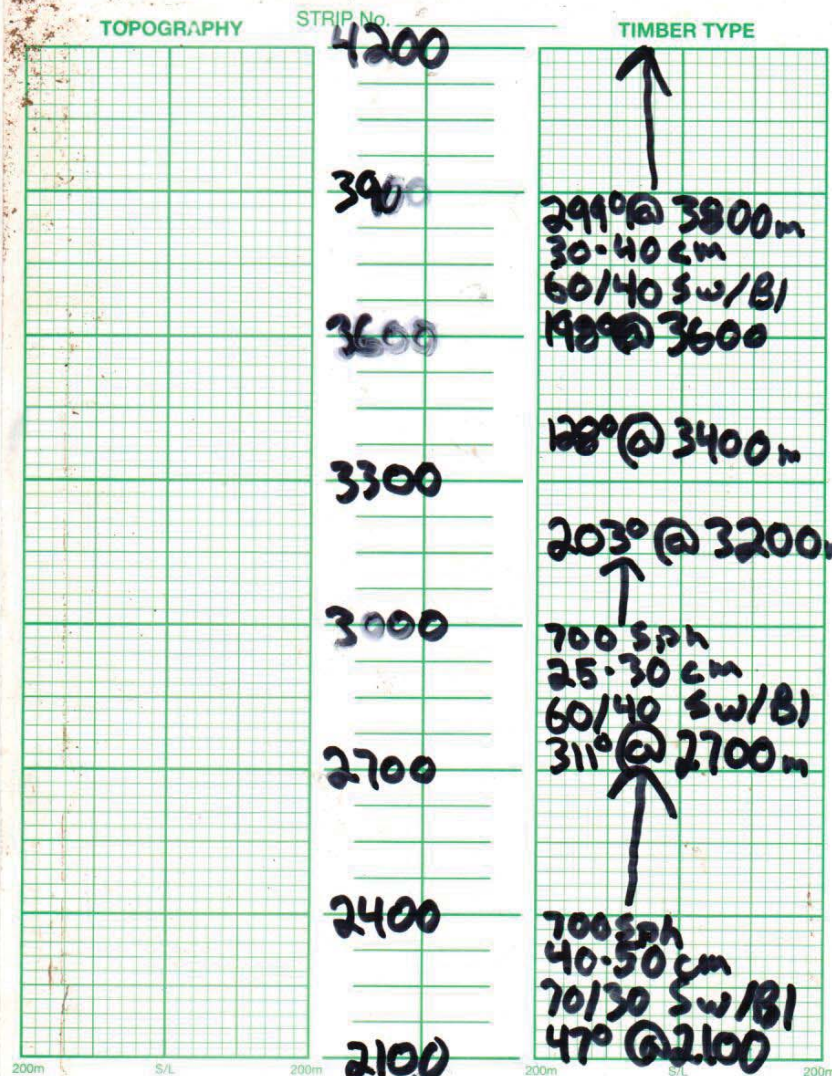
|                                                                 |                                  |                           |                                         |                                                                                                                    |                   |                                  |   |            |                    |       |  |
|-----------------------------------------------------------------|----------------------------------|---------------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------|----------------------------------|---|------------|--------------------|-------|--|
| LOCATION <b>Bla-77</b><br><b>12 U 8475868</b><br><b>6133605</b> |                                  | ELEVATION<br><b>965</b>   | LATITUDE                                | PAGE                                                                                                               | OF                |                                  |   |            |                    |       |  |
| BEARING<br><b>90°</b>                                           | STRIP LINE NO.<br><b>Probe 1</b> | STRIP WIDTH<br><b>10m</b> | DISTANCE<br><b>4020</b><br><b>-5020</b> | BEETLE SPECIES<br>SB <input checked="" type="checkbox"/> MPB <input type="checkbox"/> DFB <input type="checkbox"/> |                   |                                  |   |            |                    |       |  |
| 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                                                          |                                  | <b>20</b>                 | <b>1</b>                                |                                                                                                                    |                   |                                  |   |            | <b>40</b>          |       |  |
| BARK SAMPLES<br>15cm x 15cm                                     | NO. ENTRANCE HOLES               | NO. PARENT ADULTS         | NO. LARVAE                              | NO. PUPAE                                                                                                          | NO. CALLOW ADULTS | FRESH (GREEN) BLOWDOWN           |   |            |                    |       |  |
|                                                                 |                                  |                           |                                         |                                                                                                                    |                   | Attacked                         |   | Unattacked |                    |       |  |
| <b>North</b>                                                    |                                  |                           |                                         |                                                                                                                    |                   |                                  |   |            |                    |       |  |
| <b>South</b>                                                    |                                  |                           |                                         |                                                                                                                    |                   |                                  |   |            |                    |       |  |
| COMMENTS<br><b>○ Bark sample</b>                                |                                  |                           |                                         |                                                                                                                    |                   |                                  |   |            |                    |       |  |
| CREW NAMES<br><b>Aaron C</b>                                    |                                  |                           |                                         |                                                                                                                    |                   | DATE<br>Y M D<br><b>20502 25</b> |   |            |                    |       |  |



STRIP NO.: 10 U 0476133 6133913  
START STRIP: Bla-077  
JOB NO.: 1870  
CREW: Aaron C.  
REMARKS: No attack 0-4900m

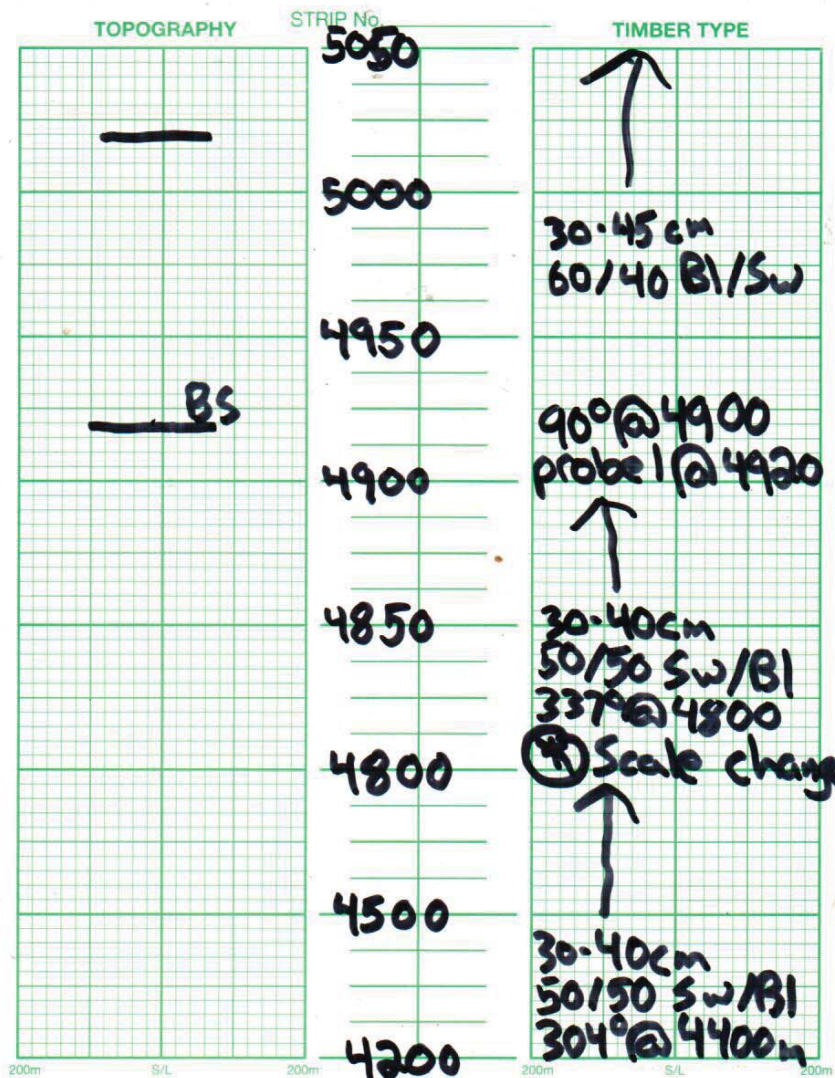
DIRECTION: 1870  
DATE: Feb 25, 2016

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Ph: 1-800-663-6843



STRIP NO.:  
START STRIP:  
JOB NO.:  
CREW:  
REMARKS:

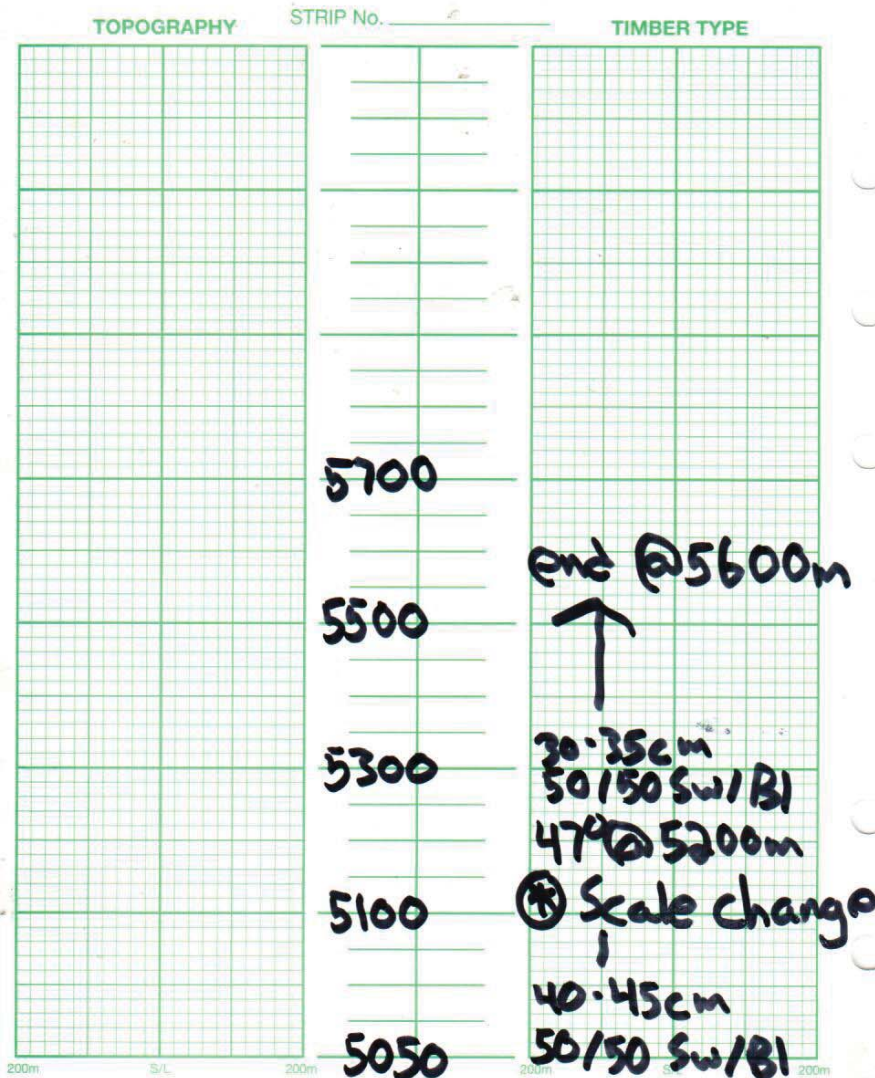
DIRECTION:  
DATE:  
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STRIP NO.: \_\_\_\_\_ DIRECTION: \_\_\_\_\_  
 START STRIP: \_\_\_\_\_  
 JOB NO.: Bl 77 DATE: Feb 25<sup>th</sup>, 2016  
 CREW: Aaron C.  
 REMARKS: Single attack @ 4920



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STRIP NO.: \_\_\_\_\_ DIRECTION: \_\_\_\_\_  
 START STRIP: \_\_\_\_\_  
 JOB NO.: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CREW: \_\_\_\_\_  
 REMARKS: \_\_\_\_\_



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