SX 34708R

ASSESSING THE EFFECTIVENESS OF GIRDLING ALDER

Working Plan
1984

J. Eastwood
I. Introduction:

Manual girdling was performed on stands of red alder in the Kalum Forest District throughout the 1983. This SX trial evaluates the performance of several girdling techniques used at various times of the year.

II. Objectives:

The objectives of the SX trial are:

A. To evaluate the effect of time of year on the success of girdling of red alder, and

B. To evaluate the effect of method of girdling on success

III. Design and Layout:

The project is an ex post facto study because the operational work has already been completed. Randomization and formal experimental layout are not possible. Nonetheless the study will be broken down into two assessments in which objectives A and B are evaluated separately.

A. Timing Study:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of Girdling</td>
<td>9 (Jan/Feb, Mar, Apr, May, June July, Aug, Sept, Oct)</td>
</tr>
</tbody>
</table>

conditions:
- 40 trees per time of girdling will be assessed
- stands will be approximately the same age (sites harvested between 1965-67)
- only one method of girdling is assessed (the most common)

B. Girdling Method Study:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of Girdling</td>
<td>6 (felled, Sandvik, double ring with saw, single ring with saw, slabs with rings, and 6 to 12&quot; of bark removed with saw)</td>
</tr>
</tbody>
</table>

conditions:
- 40 trees per method of girdling will be assessed
- one or two adjacent stands are used, in which all methods are present
- stands are of equal age
IV. Procedures:

A. Identify the appropriate stands for each study.

B. Run a line through each stand and select 40 dominant/codominant red alder stems which meet the timing or method of girdling criteria for each study.

C. Permanently mark the stems so relocation is possible.

D. Assess as noted in Section V.

V. Assessment Procedures:

Each girdled red alder will be assessed for:

1. dbh
2. # of stump suckers
3. average height of suckers (nearest 10 cm)
4. condition of the tree (1 to 5 where 1 = dead w/o leaves and 5 = apparently normal)
5. bark bridging (0 to 10 where 1 = 10% of cambium intact, 2 = 20% of cambium intact, etc.)

Assessments will be conducted in the spring of 1984 when the trees have flushed (1st assessment), and in the fall of 1984 prior to leaf drop (2nd assessment). A fall 1985 assessment may be performed.

VI. Materials:

1. 24 cans red spray paint
2. dbh tapes
3. computer tally forms (to be supplied by Regional Research)

VII. Responsibilities and Costs:

The project is the responsibility of the Kalum Forest District.

VIII. Special Conditions:

The Forest Research Officer will supply computerized field tally forms if requested, and perform the data analyses if required.
Map Of __________________________ Area 23 hectares

Map Of "Conifer Release"

Outlined __________________________ Area 23 hectares

Forest Region ____________ Prince Rupert 02

District ____________ Kalum 05

Land District ____________ CR 5

<table>
<thead>
<tr>
<th>MANAGEMENT UNIT</th>
<th>TIMBER SUPPLY AREA</th>
<th>Pulpwood Agreement</th>
<th>Cascades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Number</td>
<td>Block</td>
<td>East</td>
</tr>
<tr>
<td>Number</td>
<td>Block</td>
<td>Sub-B</td>
<td>West</td>
</tr>
</tbody>
</table>

Map of "Kitimat Forest (Proposed)"

A01 421-460

Jan/Feb

Drawn by L.S.
**CONIFER RELEASE**

**Map Of:**
- **Area:** 44.2 hectares
- **Forest Region:** Prince Rupert 92
- **District:** Kalum 05
- **Land District:** G.R. 5

**U.T.M. Grid:** 9530000, 6005000611008

**Management Unit:**
- **Type:** OK
- **Number:** Block
- **Sub:** Sub-B

**Timber Supply Area:** Kalum II

**Pulpwood Agreement:**
- **Cascade:**
  - East
  - West

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**Diagram: KITIMAT FOREST (Proposed)**

- **Date:** February 21, 1983
- **Scale:** 1:20,000
- **Drawn by:** [Signature]

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**Notes:**
- **A02 331.420**
- **January/February**
- **March**
CONIFER RELEASE

Map Of: Conifer Release

Outlined Area: 13.4 hectares ±

Forest Region: Prince Rupert 02

U.T.M. Zone 095
North 2850060
Reg. Compl. L 035 0061008

District: Kalum 05
Land District: C.R. 5

MANAGEMENT UNIT TIMBER SUPPLY AREA Pulpwood Agreement Cascades

Type Number Block Sub-B

OK Number Block

KITIMAT FOREST (Proposed)

STL 8463

STL 8462

STL 8460

AO3 341-330

WATER LINE FROM OFFICIAL"
Map Of 

Conifer Release

Outlined 

Area: 13.2 hectares

Forest Region: Prince Rupert 02

District: Kalum 05

Land District: C.R.5

U.T.M. Zone 09 E North 5291006 Reg. Compl. L 5061008

Map: 0 9 5 2 9 2 0 0 6 0 0 5 4 0 0 6 1 0 0 8

Management Unit: Kalum 11

Timber Supply Area: Kalum 11

Pulpwood Agreement: East

Cascades: West

Type: Number Block Sub-B

Drawn by: L.S.