SX 84108R

COTTONWOOD WHIP PLANTING TRIAL

Working Plan
1984

D. Monchak
WORKING PLAN

SX 84108R

I. Introduction:

Recent changes in perception among local industry and government foresters have resulted in serious consideration of black cottonwood as a viable species choice on alluvial ecosystems in the Coastal Western Hemlock biogeoclimatic subzone. This SX trial evaluates one of the first large scale attempts to plant black cottonwood whips in the region. The Ministry will use the techniques developed by Scott Paper Co. Ltd.

II. Objectives:

The objectives of the SX trial are:

1. To evaluate the success of Scott Papers' techniques, in terms of survival and growth of black cottonwood whips over three years, and
2. To determine if whip age, initial height and initial diameter are related to subsequent survival and growth.

III. Design and Layout:

The project will be an ex post facto study on an operational planting project. Randomization and formal experimental design will not be used. Rather, extensive monitoring of the operational project will be used to determine the overall success of program.

IV. Procedures:

A. At the planting site, 100 whips will be permanently staked and tagged.

B. Each whip will be classified as one, two or three year old material, and its initial height and diameter 5 cm above the ground will be measured.

C. The project will be assessed immediately after planting, and one, two and three growing seasons after establishment.

D. The project supervisor should accurately document all collection, storage, treatment and planting procedures for the project.
V. Assessment Procedures:
   As outlined in Section IV.

VI. Materials:
   1. 200 cedar stakes
   2. tags
   3. computer tally forms (to be supplied by Regional Research if requested by B.C. Timber).

VII. Responsibilities and Costs:
   The project is the joint responsibility of the Kalum Forest District and B.C. Timber Co. Ltd.

VIII. Special Conditions:
   The Forest Research Officer will supply computerized field tally forms and analyze the data if requested.
### B. PLANTING-SITE DESCRIPTION

<table>
<thead>
<tr>
<th>Report No.</th>
<th>10356C-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit (Identify on map)</td>
<td>A</td>
</tr>
<tr>
<td>Region</td>
<td>64</td>
</tr>
<tr>
<td>Compartment</td>
<td>027</td>
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<tr>
<td>History Record Key No.</td>
<td>1021620</td>
</tr>
<tr>
<td>Tenure</td>
<td>UCL</td>
</tr>
<tr>
<td>Licence Number</td>
<td></td>
</tr>
<tr>
<td>Cut Permit Number</td>
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<tr>
<td>Cut Block</td>
<td></td>
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<tr>
<td>Licensee Name Owner</td>
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<tr>
<td>Crown Crown Granted (C)</td>
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### C. AREA DESCRIPTION

<table>
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<tr>
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<tbody>
<tr>
<td>Site Prepared (ha)</td>
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<tr>
<td>Total Area Planned (ha)</td>
<td>16.0</td>
</tr>
<tr>
<td>Replanting (ha)</td>
<td>16.0</td>
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</table>

### D. BASC (B) OR INTENSIVE (I)

| BASC (B) OR INTENSIVE (I) | B |

### FROM PLOT ACTS—ITEMS 4, 5, 6

| Total Trees Planted | 16,800 |

### PLANTING QUALITY (%) | 97.4 |

### PRICE PER TREE (Contract) | $3.38 |

### OREGON PINE (Yr) | NA |

### TYPE OF PLANTING CREW | CONTRACT |

### CONTRACTOR

<table>
<thead>
<tr>
<th>Name</th>
<th>Shirley Hanson</th>
</tr>
</thead>
</table>

### PLANTING DATES

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>24/04/74</td>
<td>30/07/74</td>
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### PLANTING SUPERVISOR

<table>
<thead>
<tr>
<th>Name</th>
<th>R. A. FFAIH</th>
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### LICENSEE

<table>
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<tr>
<th>Name</th>
<th>R. A. FFAIH</th>
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### PLANTING CODE BY

<table>
<thead>
<tr>
<th>Code</th>
<th>R. A. FFAIH</th>
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### PLANTING REPORT

<table>
<thead>
<tr>
<th>Report File No.</th>
<th>10356C-07</th>
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### ATTACH MAP AND PRESCRIPTION (PS 735)

| District | 0 |

### PROVINCE OF BRITISH COLUMBIA

| Ministry of Forests | |

| TO BE USED FOR ALL PLANTING ON CROWN LAND ON ALL TENURES AND FOR CROWN GRANTED LAND WITHIN FLRA. PRINT CLEARLY SEE INSTRUCTIONS ON REVERSE. USE ONLY WHERE |

<table>
<thead>
<tr>
<th>2 Location</th>
<th>EXCHANGERS R.0.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Forest Region</td>
<td>R</td>
</tr>
<tr>
<td>4 TSA On FPL</td>
<td>735</td>
</tr>
<tr>
<td>5 Supply Block</td>
<td>620</td>
</tr>
<tr>
<td>6 Special Reafforestation Area</td>
<td></td>
</tr>
<tr>
<td>7 Provincial Forest</td>
<td>5620</td>
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<table>
<thead>
<tr>
<th>Report File No.</th>
<th>10356C-07</th>
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</table>

| 11 Gazette | |
| 12 Local | |
| 13 Planting Dates From | 24/04/74 |
| 14 To | 30/07/74 |

| 15 Planting Date | 1974 |

| 16 N/A |

| 17 N/A |

| 18 N/A |

| 19 N/A |

| 20 N/A |
### D. DESCRIPTION OF PLANTING STOCK

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Unit</th>
<th>No. Trees</th>
<th>Unit</th>
<th>No. Trees</th>
<th>Unit</th>
<th>No. Trees</th>
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<th>No. Trees</th>
<th>Unit</th>
<th>No. Trees</th>
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<tbody>
<tr>
<td>1</td>
<td>1. Sowing Request Key No.</td>
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<tr>
<td>2</td>
<td>2. Species Symbol</td>
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<tr>
<td>3</td>
<td>3. Stock Age [0-1, 1-2, etc.]</td>
<td>1-3 years</td>
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<tr>
<td>4</td>
<td>4. Stock Type [PFB 211, DR, FSL 210, etc.]</td>
<td>PFB 211</td>
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<tr>
<td>5</td>
<td>5. Stock Dimensions [H, W, D]</td>
<td>2.5 x 3.0 x 4.0</td>
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<td>6</td>
<td>6. Special Treatment</td>
<td>Not Applied</td>
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<tr>
<td>7</td>
<td>7. Producing Nursery</td>
<td>YES</td>
<td></td>
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<td></td>
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<tr>
<td>8</td>
<td>8. Date Lifted [day, month]</td>
<td>24/10/23</td>
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<tr>
<td>9</td>
<td>9. Local Storage [type, days]</td>
<td>280</td>
<td></td>
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<tr>
<td>10</td>
<td>10. Number of Trees Received [Note: D10 = D11 + D12]</td>
<td>20</td>
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</table>

### E. CONDITION OF STOCK

- **Shoots**
  - 1a. Good
  - 1b. Dry
  - 1c. Flawed
  - 1d. Holes, kinks or breaks
  - 1e. Splits
  - 1f. Displaced
  - 1g. Shrinkage
  - 1h. Damaged
  - 1i. Other

- **Roots**
  - 2a. Good
  - 2b. Poor
  - 2c. Length [inches (in), cm, ft, etc.]
  - 2d. % Long (L)
  - 2e. % Shrinkage
  - 2f. % Displaced
  - 2g. % Holes
  - 2h. % Damage
  - 2i. Other

- **Comments**:
  - Include expected survival by unit and or seedlot; consider stock condition, planting quality, weather during and after planting.
  - Survival should be good as stock was well maintained and properly planted in 30 days.

### F. PLANTING COSTS

1. **On Site**
   - Hourly wages or total contract (if applicable) $200.00
   - Direct F.S. or Licensee Supervision $200.00
   - Inspection plots $200.00
   - Supplies $200.00
   - Transportation (clinical and personnel) $200.00
   - Minor Access $200.00
   - Other (provide description) $200.00

2. **Overhead**
   - Office $200.00
   - Reconnaissance and planning $200.00
   - General Supervision $200.00
   - Other (provide description) $200.00

3. **Planting Cost Per Hectare**
   - Total planting cost/hectare $415.62

4. **Planting Cost Per Tree**
   - Total planting cost/1000 trees $166.5

5. **Provincial Funding Source**: Vote ▶️ Other ▶️

6. **Site Preparation Cost**: $16,100

7. **MainHours**
   - Contractor/Supervisor: 19 hrs.
   - Planters: 20 hrs.

8. **Potential Shareable Under Federal Provincial Agreement**: Yes ▶️ No ▶️

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**Licensee’s Signature**

**Position**

**Date**

**Province of Resource**

**Observer Signature**

**Date Stamped**: 05/23/23

**Victoria: Project Accepted for Federal Provincial Agreement**: Yes ▶️ No ▶️
COTTONWOOD WHIP PLANTING TRIAL

Technician i/c: Bob Wilson

Location: Exchamsiks River (103 I 6C - 009)

Region/District: R/Kalum
or nursery

OBJECTIVE

1. To evaluate the success of Scott Papers' techniques in terms of survival and growth of black cottonwhips over 3 years.

2. To determine if initial diameter and height are related to subsequent survival and growth.

PROGRESS


2. 100 trees staked and measured May 4, 1984.

STATUS

Trial established May 4, 1984

REPORT & DISTRIBUTION

Working plan/April 1984
Silviculture Br library, Victory
Regional Office - Smithers
District - Kalum

INCOMPLETE

:RJW/prd
:pg 1 0039F
To: G.D. LLOYD
Silviculture Officer
Prince Rupert Forest Region

From: Silviculture Section
File:

Date: February 21, 1984

Attached is my recollection of Scott Paper's Management Regime for the cottonwood on the Fraser River Islands.

Note (1) Their brush problems are a little different from ours in the Skeena. We have more salmonberry, thimbleberry and alder.

(2) Their soils may be a little coarser. We may have more compaction problems.

(3) Our over mature Ct stands must employ a "YUM" system (Yarding Unmerch. Material) to allow for the appropriate site preparation.

(4) Sites selected for Ct management should be limited to high risk flood plains and persistent brush problems.

M. Geisler
Stand Tending Coordinator

cc: District Manager
Kalum Forest District
Attn: B. Wilson

cc: District Manager
Cassiar Forest District
Attn: C. Simmons

cc: G. Pinkerton

Ken Stevenson, Scott Price
Beam Review

Harvesting (Dominantly Ct Stands, preferably young)
- Promote naturals by on-site delimming and topping, skidding when ground is soft and skidding all large pieces. (The objective is to push "cuttings" into the ground.) If slash is not distributed evenly, it is pushed around and ground in as required.
- Minimize loss of productive area (landings, ballasted roads) by utilizing appropriate gravel bars and dry channels for sorting and loading. Clean up channels (raking) in advance of freshets.

Rehabilitation (Brush fields and Ct slums)
- "Eliminate" brush by piling in N.P. depressions or windrowing in narrow rows (<4m)
- Plant immediately with large whips (>2.0m)
  (herbicides usually not required)

Planting
Site factors
- dry sites (sands or gravels, low water table) require rooted cuttings,
- otherwise, unrooted cuttings suffice.

Collection of wildlings
- selected from overstocked, 1 year old stands (previous year's logging or flooding).
- use one year old material only; don't need big, healthy buds,
- should be approximately 2.0 meters in length (big enough to eliminate brushing and weeding requirements).

Storage of whips
- dig a hole in moist soils and store in bundles standing up (store on site if you like). Ct retains "viability" for several months

Planting
- schedule when ground is soft; use dibble (45 cm)
- plant whip deep enough to ensure continual moisture (not stagnant water) and tight enough to ensure good contact for bottom of whip as well as good resistance to dislodging winds.
Planting (cont'd.)

- soak whips for two days prior to planting; hormones may help.
- "hot" planting is best
- growth expectations
  - 1st year - 5 - 10 cm
  - 2nd year - 2 m
  - if spring is dry or soils dry out, survival will be low

Juvenile Spacing
- usually not required since natural thinning works so well

Rotation lengths
- Fraser River 25 yrs.
- Homathko 30 yrs.
-(Skeena 35 yrs. my guess)
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