

# SILVICULTURE BRANCH

## WORKING PLAN FOR

### SX81303Q BRACKE SEEDING TRIAL

#### Objectives:

1. To evaluate the Bracke scarifier and seeding attachment as an operational reforestation tool.
2. To assess the patches prepared by the Bracke as microsites for the spot seeding of Lodgepole pine.

Location: Kamloops Region  
Kamloops District  
Barriere Field Office  
TSA 08107 Ipsoot creek  
(see F.S. 739 and map attached)

#### Season:

Trial to be established as soon as possible after snow leaves the area in Spring 1981.

#### Species:

Lodgepole pine (*Pinus contorta*, var. *latifolia*)  
Seedlot 2533 (Community Lake, 1974)  
Seed will be sown unstratified  
(See F.S. 723-B attached).

#### Treatment:

Seed deposited by the Bracke seeder onto patches scarified by the Bracke in the same pass. Seed will be left uncovered.

#### Design Layout:

The pattern of Bracke travel will be in approximately parallel strips oriented east-west. Along the strips, scarified patches will be paired (2.0 metres apart laterally) at intervals of 2.2 metres in line. The distance between adjacent patches during return runs will be kept as much as possible to 2.5 metres. This will result in a theoretical density of 2545 patches per hectare (probably closer to 2000 patches per hectare on the basis of experience elsewhere).

#### Preparatory Work:

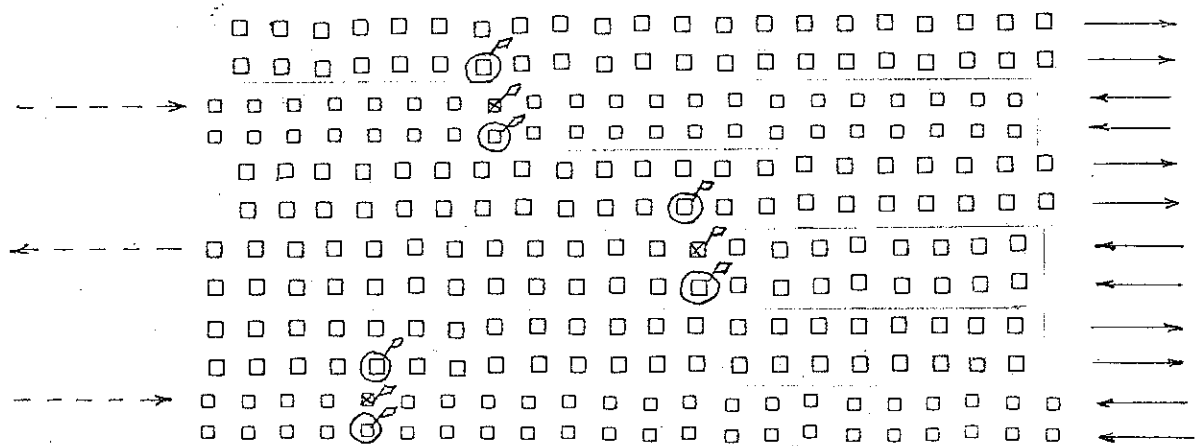
1. Rodent Trapping - a series of 50 snap-traps will be set out for three consecutive nights in advance of seeding in order to assess the population of small rodents.

2. Seeder Calibration - short trial runs with the machine will be necessary to determine and adjust
  - (a) the number of seeds deposited at each spot - these will be kept to a minimum of not less than 10 seeds/spot, and
  - (b) the location of the seed-drop with respect to the patch itself, i.e. at the start, middle, or back-end of the patch. (Because the patch may not be uniform in depth, this could be significant to seed germination and survival).

Sampling System:

This is designed to sample approximately 2 percent of the seeded spots or an estimated 40 spots per hectare.

Sample lines will be run in alternate directions (but parallel to the direction of machine travel) on every 4th patch line. Sample points will be established at every 20th patch along the sample lines. At each sample point (patch) the sample will consist of 2 patches - one on each side of the sample point patch. (The sample point patch itself will not be a part of the sample). Each sample point patch and the two patches in the sample will be marked with a wire flag (see diagram).



—————> Direction of machine travel.

- - - - -> Sample line and direction.

⊗ Sample point patch.

⊙ Sample patch.

P Wire flag.

In this way, each sample point will consist of one sample patch made in each direction of machine travel.

It is estimated there will be 7 sample points in each sample line and 25 sample lines in the trial area. Therefore the total number of patches to be sampled is:  $25 \times 7 \times 2 = 350$

There will be approximately 2000 patches on each of the 8 hectares in the trial area, so the sample intensity will be:

$$\frac{350}{2000 \times 8} \times 100 = 2.187\%$$

Sample points will be established immediately after the area has been seeded. Lines will be marked by labelled stakes.

#### Examinations:

Samples will be examined at two-week intervals following establishment in order to monitor germination. At the end of the first growing season (Fall 1981) the numbers of live germinants per sample spot will be compiled. From this will be calculated the percentage of spots with various numbers of surviving germinants.

During the summer of 1982, a further examination will be undertaken to record delayed germination and to assess mortality of the 1981 germinants. The final examination will be made in the fall of 1982 and the final report prepared during the following winter.

#### Materials and Equipment:

1. Snap traps (50) and bait - on hand.
2. Seed - 10 kg of Seedlot 2533 has been set aside for this trial.
3. Wire flags - (approximately 1100) on hand.
4. Line stakes and labels - ordered.
5. Miscellaneous - flagging tape
  - maps
  - camera and film
  - tally sheets (sample attached).

Unsurveyed boundary: Black  
 Lines traced during current survey: Red  
 Boundary lines of traced: Red  
 Type line boundary: Black  
 Survey post visible: Red  
 Railway under track  
 Railway to be abandoned  
 Logging roads: Black  
 Log landing: Black  
 Arch timber felled, not skidded

**RECEIVED**  
**FEB 27 1981**

**REGIONAL MANAGER**  
**KAMLOOPS, B.C.**

Merchantable timber: Dark green  
 Non-merchantable timber (full stocked): all ages: Light green  
 Logged and restocked: Yellow  
 Logged and burned (not restocked): Orange  
 Restocked (not restocked): Red  
 Non-commercial cover on productive forest sites: deciduous or  
 coniferous: Purple  
 Non-productive sites (scrub forest): Grey  
 Non-productive alpine or lowland rock or other barren areas:  
 Leaves uncoloured but qualify with type symbol  
 Cultivated: Brown  
 Open prairie and pasture land (lowland or alpine): Purple  
 Wild hay meadow (not cultivated): Purple  
 Bumble for cultivation: Hatched brown over forest type.

Note: For abbreviations and other notes see  
 Management Manual and Forest Inventory Manual

Map of TSA-08107

IPSOOT CR. Atlas Ref. 92-P-8-E

Scale: 10 chains = 1 inch  
 10 chains = 1 inch  
 not applicable

Region 57 Compt 3  
 Air photos BC 79106 # 214

8.5 ha ✓

**D** - 15% slash  
 - 0% slope  
 - 30% vegetation (woody)  
 To be seeded with pl by seeder equipped  
 BRAEKE scarifier  
PROPOSED AREA

4.0 ha

**D** - 10-25% slope  
 - mature stand  
 of aspen and birch  
 - to be left untreated

9.3 ha

**D** - Av. 40% slope  
 - heavy outcrops  
 of rock  
 - heavy duff, grass  
 and herbaceous  
 cover  
 - D-6 to create planting  
 trails where possible  
 with brush blade

TSA-07314

9.2 ha

**D** - 10-45% slope  
 - heavy outcrops of rock  
 - heavy brush and woody vegetat  
 - very broken uneven terrain  
 - 10-35% heavy slash  
 - to be scarified with brush  
 blade equipped; D-6 where  
 planting trails can be create

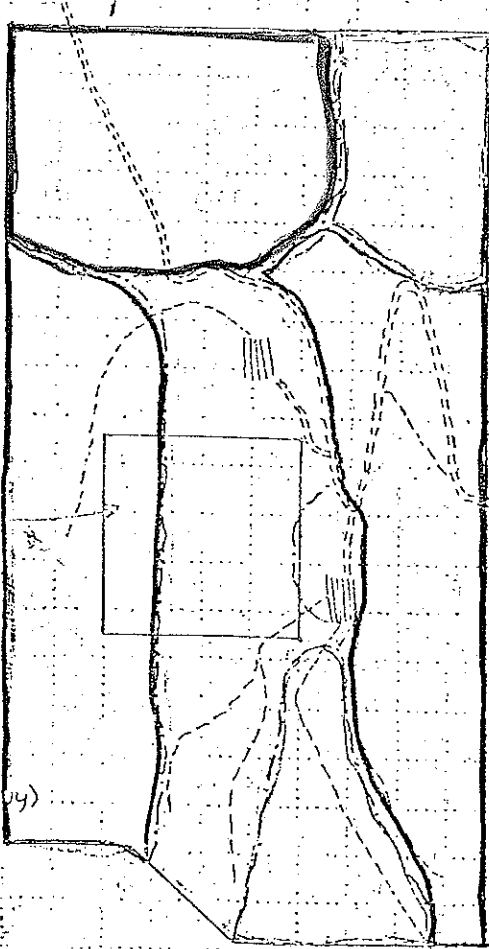
10.0 ha

**D** - 0-20% slopes  
 - 15-30% slash (heavy)  
 - 30% woody  
 vegetation cover  
 - to be bunched  
 and burned with  
 brush blade

**A**

- 25% slope  
 - mature stand of Aspen + Birch  
 - to be left untreated

3.5 ha



Approx. 12 miles  
 to North Thompson  
 Highway - Boulder  
 Mountain Rd. exit



## PLANTING SITE PRESCRIPTION

### A. IDENTIFICATION

1. Forest Region K 2. Dist. No. and name K. BACKICE F10  
 3. Location IPSOOT CRY 4. S.Z. 2040  
 5. PSYU/Other NEHALUSTON 6. UTM grid 92P8  
 7. Tenure TSA 08107  
 8. Project number and name 5XB13030 BACKICE SEEDLING

### B. SITE FACTORS

1. Planting unit.....	<u>1</u>			
2. Former stand: Spp.....	<u>F-PL</u>			
3. Biogeoclimatic subzone.....				
4. Ecosystem.....				
5. General soil texture: Clay, sand, loam, silt, gravel.....	<u>SANDY LOAM</u>			
6. Moisture: Dry, medium, wet.....	<u>Dry</u>			
7. Soil nutrients: Poor, med., rich.....	<u>MED.</u>			
8. Veget. compet.: N.L.M.H.....	<u>L</u>			
9. Grazing use: N.L.M.H.....	<u>NIL</u>			
10. Slash: % cover and height.....	<u>15%</u>			
11. Organic layer(s): cm.....	<u>5</u>			
12. Disturbance symbol/year.....	<u>⊖ 76-7</u>			
13. Site prep.: Method/year.....	<u>—</u>			
14. Aspect and % slope.....	<u>S-SE/0</u>			
15. Elevation: m.....	<u>1200</u>			
16. Planting diffic. class.....	<u>MOD.</u>			
17. Existing regen. per ha.....	<u>100</u>			
18. Spacing: m.....	<u>2.2x2.5</u>			
19. Plantable spots per ha.....	<u>—</u>			
20. Net area to be planted: ha.....	<u>8</u>			

### C. ACCESS AND ACCOMMODATION

1. Access: Distances and means 20 Km From Highway 5  
(BOULDER MT. RD. EXIT)  
 2. Access problems NIL  
 3. 2 W.D. is required. 4. Accommodation N.A.  
 5. Other.....  
 6. Date prescribed..... By.....

TREE SEED REGISTER

1	2533	PL	B2C	003	1311	COMMUNITY	LK	
28	01N	92E	1650	551	2004	010774	FE	5341
64	WT	051174	72	75	78	80		
1	2	KNISK	12	13	17	22		
28			825			0264	312	137334
64	860	640	28032					

OTHER COLLECTION, HANDLING AND SEED PROCESSING DATA.

Collector's Provisional No. \_\_\_\_\_ Number Trees Collected from \_\_\_\_\_ Collector's Name (i.e. Foreman) \_\_\_\_\_  
 Associated Species in Stand \_\_\_\_\_ Aspect of Stand \_\_\_\_\_ Condition of Cones Prior to Shipment to Extractory \_\_\_\_\_  
 Purpose of Collection: General Stock , Research Only , Special Request \_\_\_\_\_ . Collector's Remarks \_\_\_\_\_

Date Cones Received \_\_\_\_\_, 19\_\_\_\_, and No. Hectolitres Received at Extractory \_\_\_\_\_ hl. Condition of Cones when Received \_\_\_\_\_

Extractory's Remarks Bushels extracted = 1468.5 (539.1 hl)  
Kgs of seed extracted = 150.945

Seed Cutting Test \_\_\_\_\_ % Filled. Seed Tester's Remarks \_\_\_\_\_

WITHDRAWALS

Date	Order No.	When for -	Amount	Bal. on Hand	Germin'n %	Date of Test
Feb	76-119	80% - Skinning P/B	1.160	139.274		
-3	76-122	Skinning P/B	2.035	137.129		
Mar 77	77-6	Containers - Neman.	0.555	138.574		
"	77-5	Containers - Skinning.	1.240	137.334		
Apr 77	77-21	Survey Beresnet.	1.285	136.049		
10/77				132.439	77.0	177
						at end of 1980.

5X81303Q

BRÄCKE SEEDING

No. OF LIVE GERMINANTS - WEEKS AFTER SOWING													
LINE No.	LEFT SIDE							RIGHT SIDE					
	PLOT	2	4	6	8	10	F/81	2	4	6	8	10	F/81
	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
FALL 1981	TOTAL GERMINANTS THIS LINE							AVER. GERM'TS/STOCKED SPOT					
	No. OF BLANK SPOTS							% OF PLOTS STOCKED					

	1												
	2												
	3												
	4												
	5												
	6												
	7												
	8												
	9												
	10												
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