

RED PINE THINNING STUDY

No. 78 (1973)

Section 12, T49N-R34W

James A. Johnson

February 1973

WORK PLAN  
RED PINE THINNING STUDY  
No. 78 (1973)  
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I. Introduction and Objectives:

Study No. 78 is a continuation of the annual red pine thinning studies begun in 1970. These studies were begun for the purpose of salvaging overmature jack pine and aspen and thinning overstocked red pine stands. Studies No. 69 and 71 contain a more comprehensive work plan and should be referred to for long range management goals. Study No. 78 is the only portion of the Section 12 red pine stand located on a south exposure. A comparison with those stands having a north exposure may be of interest.

Additional sample plots were established and measured during the fall of 1972. The seven plot basal area, averaged 164,788 sq. ft., indicating an overstocked condition.

II. Procedures:

As in the others stands a considerable volume of jack pine and aspen is present in almost pure stands. Removal of those species will in some instances reduce the stocking below the prescribed basal area limit of 90 sq. ft.. This will result in irregular stocking in portions of the stand, but is necessary to insure the salvage of these species. A 90 sq. ft. basal area limit will be maintained whenever possible. In the predominately red pine stands thinning will be done from above and below. All poles which have attained a 50 foot length to a 7 inch top should be harvested as this size pole has attained its highest value. The majority of suppressed trees should be removed as they have practically no chance of attaining pole size before rotation age.

All marked products will be recorded on cumulative tally sheets for product estimations. Value of products and manhours expended will be recorded for the purpose of

calculating financial returns. The resulting figures will only reflect the financial benefits accruing to the Center and will not reflect returns comparable to a private contractor. The stumpage value of products produced, however, will indicate the value that a contractor would normally develop and are the values necessary for calculating economic returns under this management system.

The steeper slopes should be harvested prior to winter due to the difficulty that would be encountered in trying to climb snow covered slopes with a tractor. It will be necessary to obtain easement from Mead Corporation to skid across their property, to the plains road, adjacent to the sand pit.

C. F. I. Plot No. 3029 is predominately aspen and jack pine, therefore, it will be clear cut. The 1969 measurement shows a basal area of 30.50 sq. ft. and a growth of .560 sq. ft. per year. Using this growth would give this plot an estimated 1972 basal area of 32.180 or 160.900 sq. ft. per acre. The six other study plots can be maintained very closely to the 90 sq. ft. per acre limit. As in the other studies, thinnings will be made every 10 years.

Harvesting should commence in October of 1973 at which time the steeper slopes should be harvested. It is not permissible to use inmates during the deer hunting season, therefore, logging will have to be discontinued from November 15th through November 30th.

POST LOGGING INFORMATION

RED PINE THINNING STUDY

No. 78 (1973-1974)

The harvesting of Study No. 78 was begun in October of 1973 and completed in March of 1974. Harvesting was performed under the supervision of Forest Technician John Maki assisted by Chuck Scheffner and students working on a part time basis. Inmates were not used as they were in previous thinnings. This is the first thinning in which actual wages were paid for hours expended.

The stumpage returns provide the values necessary for determining returns on invested capital and the values necessary for evaluating management alternatives. These values are not dependent on the logging efficiency or harvesting methods employed.

Study No. 78 returned a stumpage value of \$798.88 or \$81.52 per acre. The harvesting cost and profit records have been calculated for the purpose of allowing the Center to evaluate the revenues which are generated by conducting our own harvesting as compared with contract harvesting.

The cost and profit record shows a loss of \$.94 per hour for time expended. This is the first thinning in which a loss was incurred, as wages were paid for all hours expended. It is evident that unless free inmate labor is employed the Center cannot afford to conduct its own harvesting.

TABLE 1. Volume and Value of Products Harvested from Study No. 78 (1973 Red Pine Thinning 9.8 Acres)

Products	Quantity		Stumpage		F. O. B. Value of Products
	Piece	Cords	Rate	Value	
				Per Acre	
Pine Poles	130		Variable	\$ 220.15	\$ 947.55
Pine Pulpwood		47.40	\$6/cd.	284.40	1,374.66
Aspen Pulpwood		109.00	\$2.50/cd.	272.50	2,417.90
W. Birch Pulpwood	43.66T		.50/T	21.83	310.35
Totals(9.8A)		156.40		798.88	\$ 5,050.46

## HARVESTING COST & PROFIT RECORD

Study No. 78 Red Pine Thinning (Section 12, T49N-R34W)

I. Receipts

F.O.B. Value of Products \$ 5,050.46

II. Deductions From F.O.B. Value

Stumpage (Per Acre \$81.52) \$ 798.88

Hauling 695.00

\$ 1,556.58

III. Gross Earnings

\$ 3,556.58

IV. Gross Earnings Per Manhour Expended:

	<u>Hours Expended</u>	<u>Gross Earnings Per Manhour</u>
Foreman & Ass't.	722 hours	\$ 4.93
Students	<u>676 hours</u>	5.26
Total	1,398 hours	2.54

V. Actual Wages Paid Out

\$ 4,866

Average Wages expended per hour \$ 3.48/hr.

\$ 3.48/hr. - \$2.54/hr. = ( .94/hr. Loss)

