

Mike -
FYI - I had Dan
Beveridge do some scouting
@ the state 40 on H+M+P.
He wrote a little report.
I was hoping there would be
some work they could
do there.
Colorado State University B

Boyd,

Here is a simple write up for that
scout I did. I also will send
you a copy through e-mail (with color pics!)
Let me know if you were after
something else. Daniel

Daniel Beveridge
Colorado State Forest Service
Fort Collins District, Fire Program
E-622, Technician 1

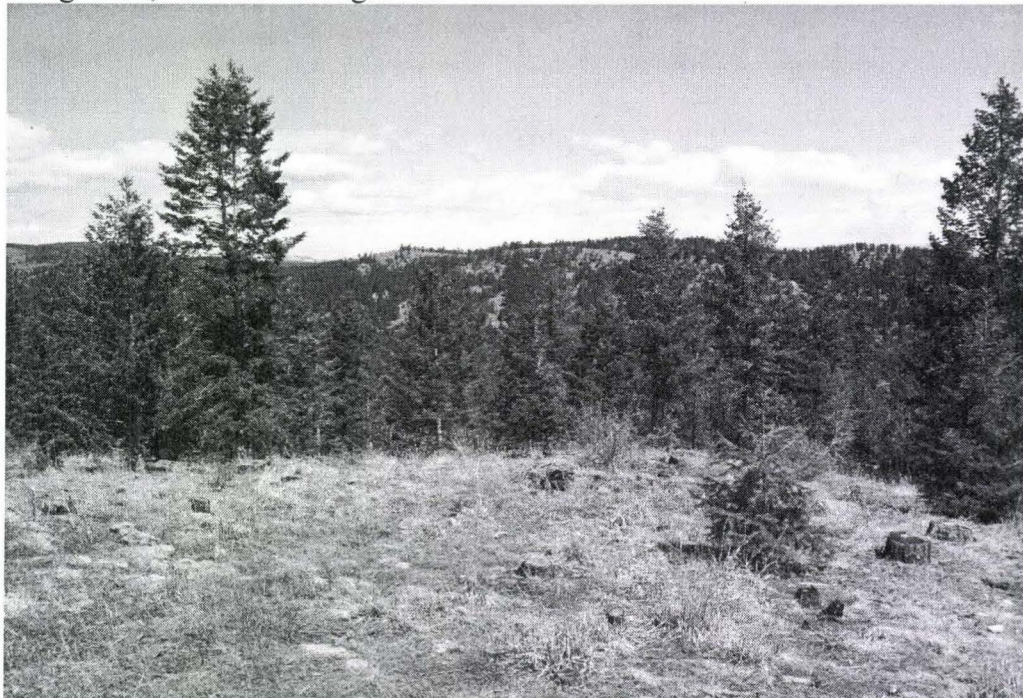
Scouting Summary (State School Section)

Introduction

This report offers brief coverage of my findings while scouting a small section of state land just west of Horsetooth Reservoir. The unit's legal location is Township 7N, R70W, Section 23, NE ¼ of the SE ¼. The unit is bounded to the north by Lory State Park, to the east and south by Horsetooth Mountain Park, and to the west by private land.

Access was gained by traveling west out of Fort Collins on CR 38E (Harmony Road) into the town of Stout. Turn right onto Shoreline Drive, past the marina on Inlet Bay, following the road north as its name changes to Minuteman Drive. Shortly after passing the marina and approaching a residential area on the east side of the road is a locked gate allowing access to Horsetooth Mountain Park. Traveling through the gate allows one access to Tower Trail which is followed up into the foothills a number of miles to it's junction with Mill Creek Trail, near the top of a ridge. Tower trail is essentially a jeep trail. It is clear and well maintained, easily accessible with a four wheel drive vehicle.

This junction provides the best parking area and foot access to the unit. Below is a photograph looking NW from the trail junction. The unit is down the ridge in the foreground, into the drainage.



Methods

This project assignment was given with instruction to locate the unit and make an assessment of topography, vegetation, and fire danger, as well as to assess the treatment value for the unit.

While scouting this unit I was equipped with a topographic map of Horsetooth Mountain Park which included the section being investigated. This map turned out to be the most useful. I also had a map from the Larimer County Parcel Locator of the unit and its vicinity. I carried a GPS unit with which I marked the Mill Creek and Tower trail junctions, my route in, and the corners of the unit. A camera was also brought in order to take pictures for future reference, some of which are included in this report.

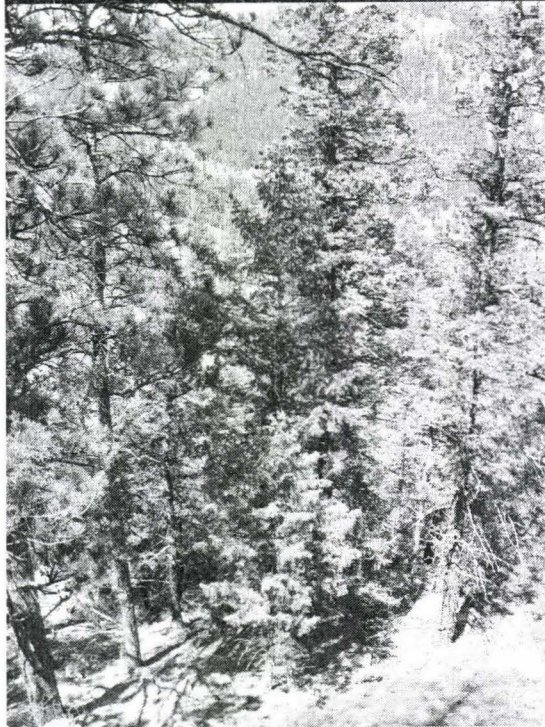
From the Tower Trail and Mill Creek Trail junction I followed the Mill Creek Trail to the north and east down into the Mill Creek drainage. No more than a quarter mile from the junction, the trail makes a sharp hairpin turn from a NW orientation to an abrupt ESE orientation. At the turn there is a relatively open area on a ridgeline to the north and this is the point that the trail meets the unit, just east of the unit's southwest corner. Below is a photograph of this location from a boundary tree, facing north.



For the purpose of this report, I will not give an extremely detailed explanation of my track through the unit. Relevant information for the report is that the unit is bounded on the west and north by a barbed wire fence and is marked respectively with private land and Lory State Park land signs. The unit is not bound or marked on the east or south by anything substantial except for a few signs noticeable from the interior of the state school unit. The signs notify the user that they are entering Horsetooth Mountain Park land. I did not travel the true eastern boundary of the unit south from the NE corner but veered toward the center of the south boundary in order to observe more of the vegetation and fuel and due to terrain difficulty.

Findings

This unit poses very high terrain difficulty. It is comprised of a series of smaller ridges and drainages that feed into the main Mill Creek drainage, generally from the SW to the NE. There are scattered rock outcroppings within the unit that support little or no vegetation. Shown below are photographs offering an indication of the steepness of the unit.

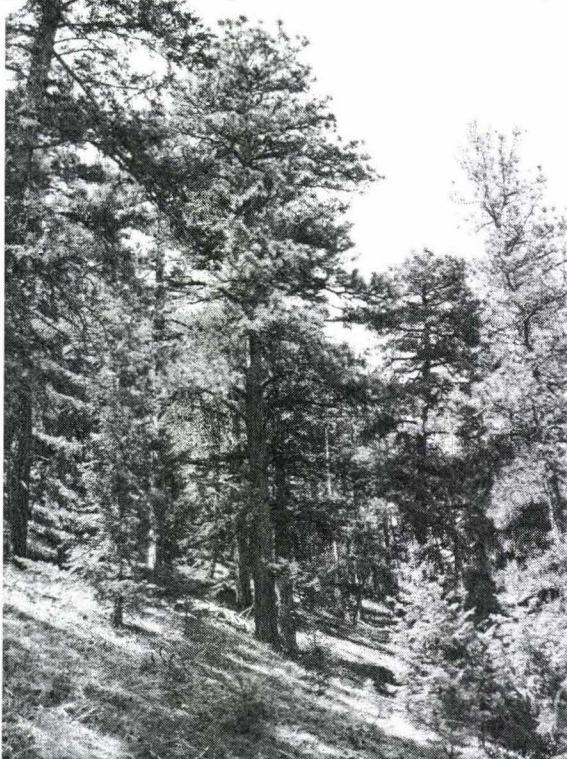


The canopy vegetation is composed primarily of Douglas Fir and Ponderosa Pine. In the unit there are many areas of dense fir regeneration and "dog-hair" pine thickets.



I found no indication of substantial mountain pine beetle infestation. Boring holes were noticed but pitch tubes were as well and minimal boring dust was found. However, there was a fair amount of mistletoe present in the pines within the unit. Most trees were found to have a mistletoe infestation rating of 2 or 3 out of 6.

There are a number of fine, mature specimens of both Douglas fir and Ponderosa pine. Below is a picture of some of these pines.

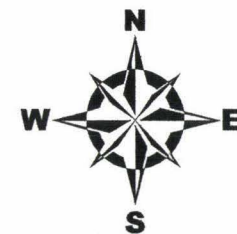
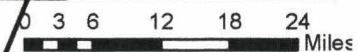
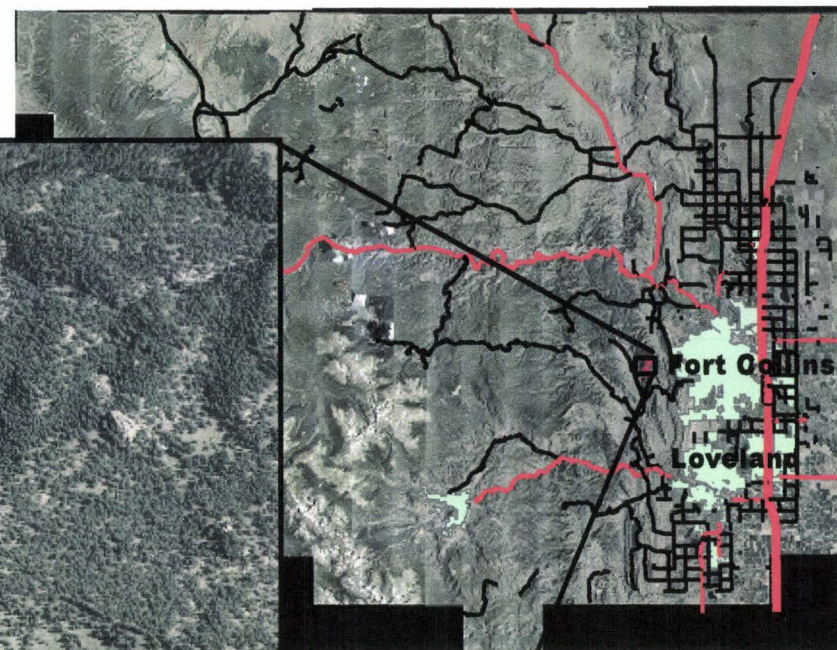
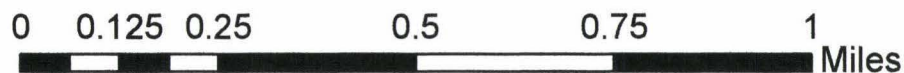
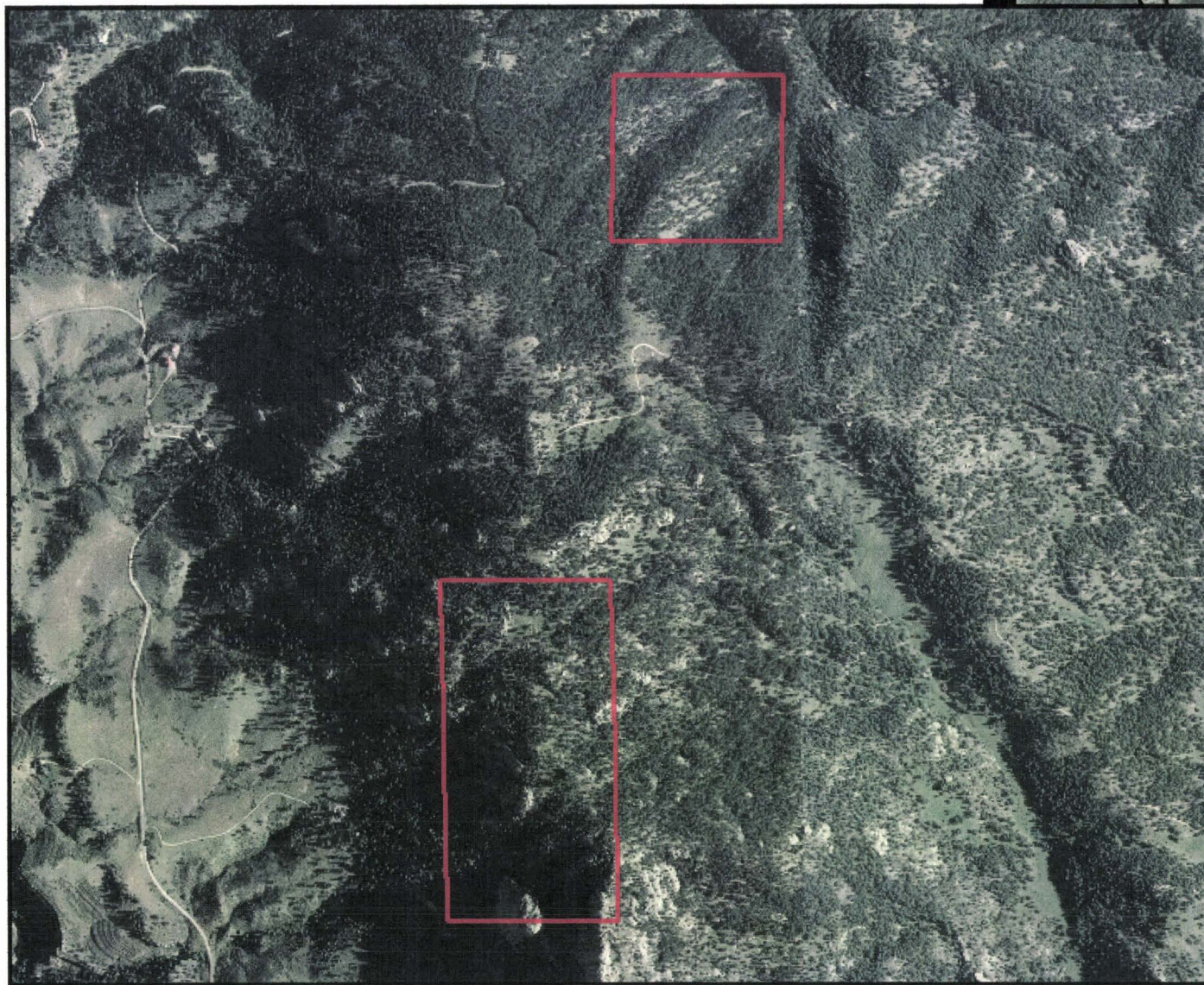


Conclusion

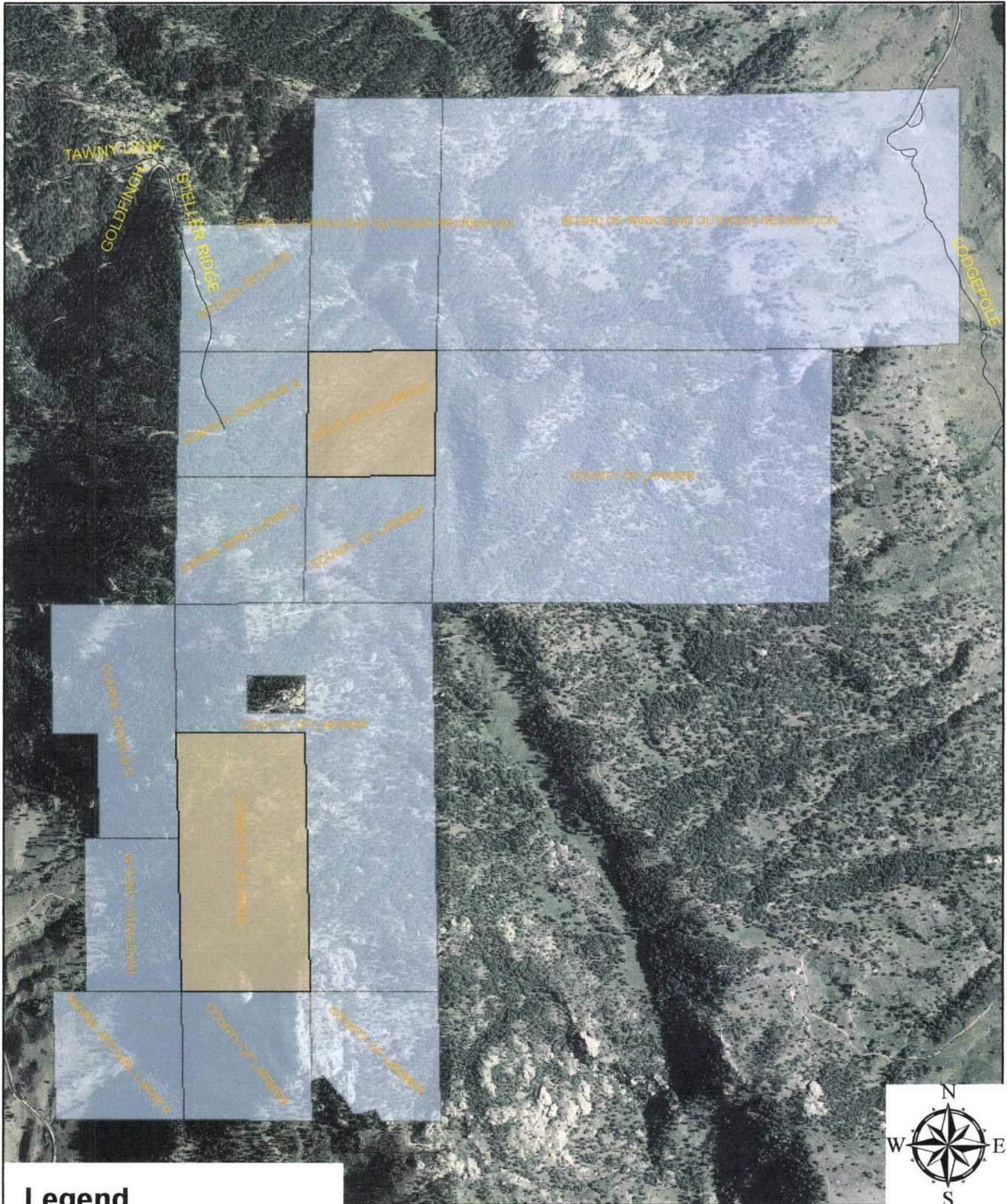
The State School Section unit of land scouted for this report is a remote unit with primary values in watershed and wildlife resources. Any fire mitigation efforts would be very difficult to complete due to terrain and access. Also, the unit would apparently be disjunct unless the cutting boundaries on adjacent units were expanded. There is also the concern of how to treat any slash produced. There is no reasonable way to chip any material cut from the unit. Piles could be built but because of the accessibility and aspect of the unit, entry and snow cover excesses could pose major problems. The lop and scatter method for slash disposal might be the only method appropriate for this unit, but would need to be looked into more thoroughly.

There is also the option of thinning the unit for restoration purposes, taking into regard the health of the mature forest stand that has not seen fire in a number of years. I recommend a return trip with Boyd Lebeda, Fort Collins district forester, in order to make a final determination for possible treatment.

Horsetooth State Lands
NE ¼ of the SE ¼ of Section 23;
SW ¼ NE ¼ & NW ¼ SE ¼ of Section 26 of
Township 7N, Range 70W
Parcel Numbers: 07230-00-934, 07260-00-905



Horsetooth State Lands

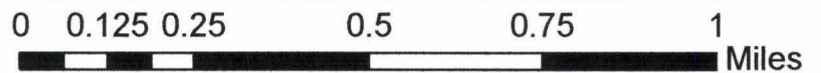


Legend

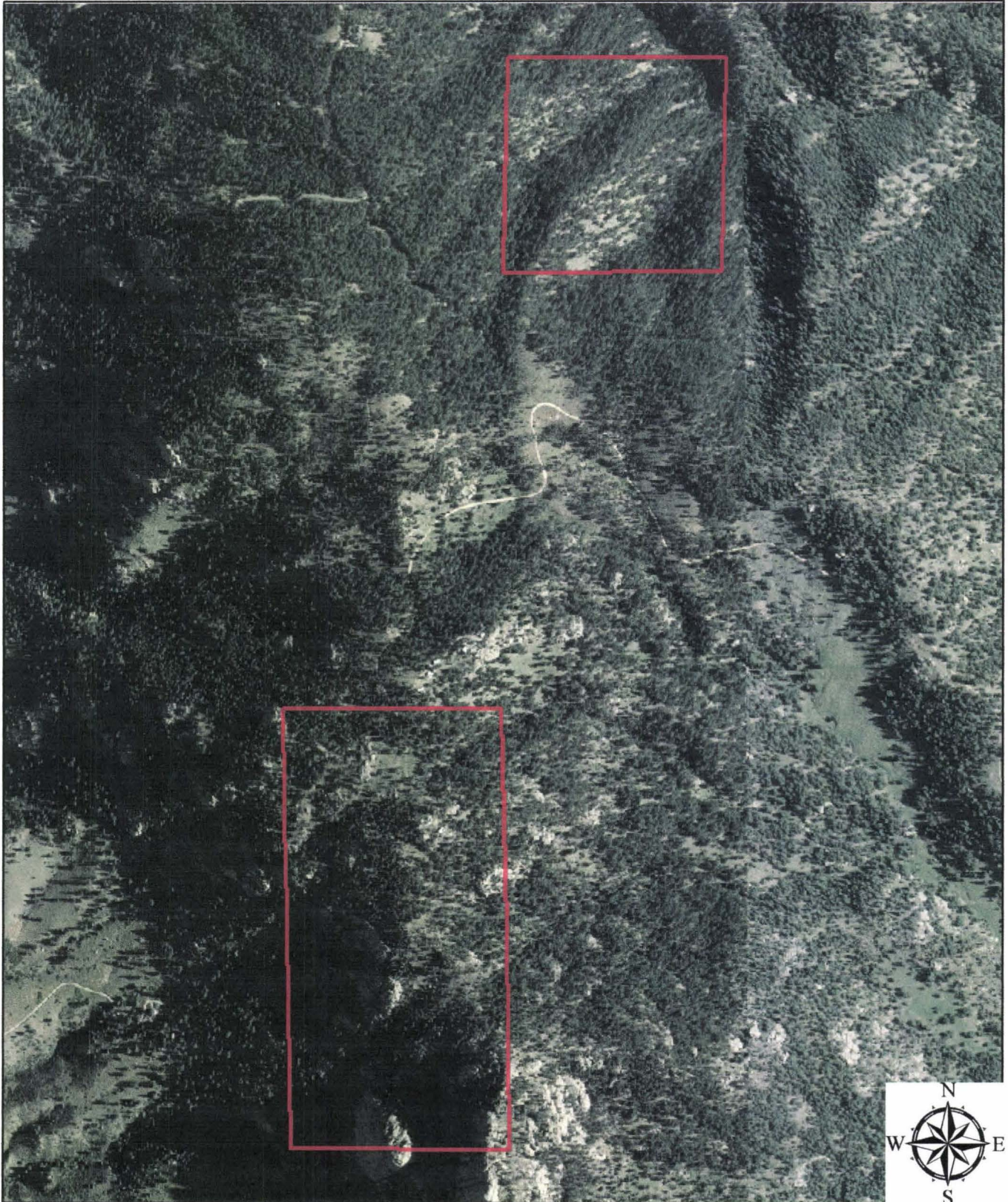
— Roads

Horsetooth State Lands

Neighbors



Horsetooth State Lands



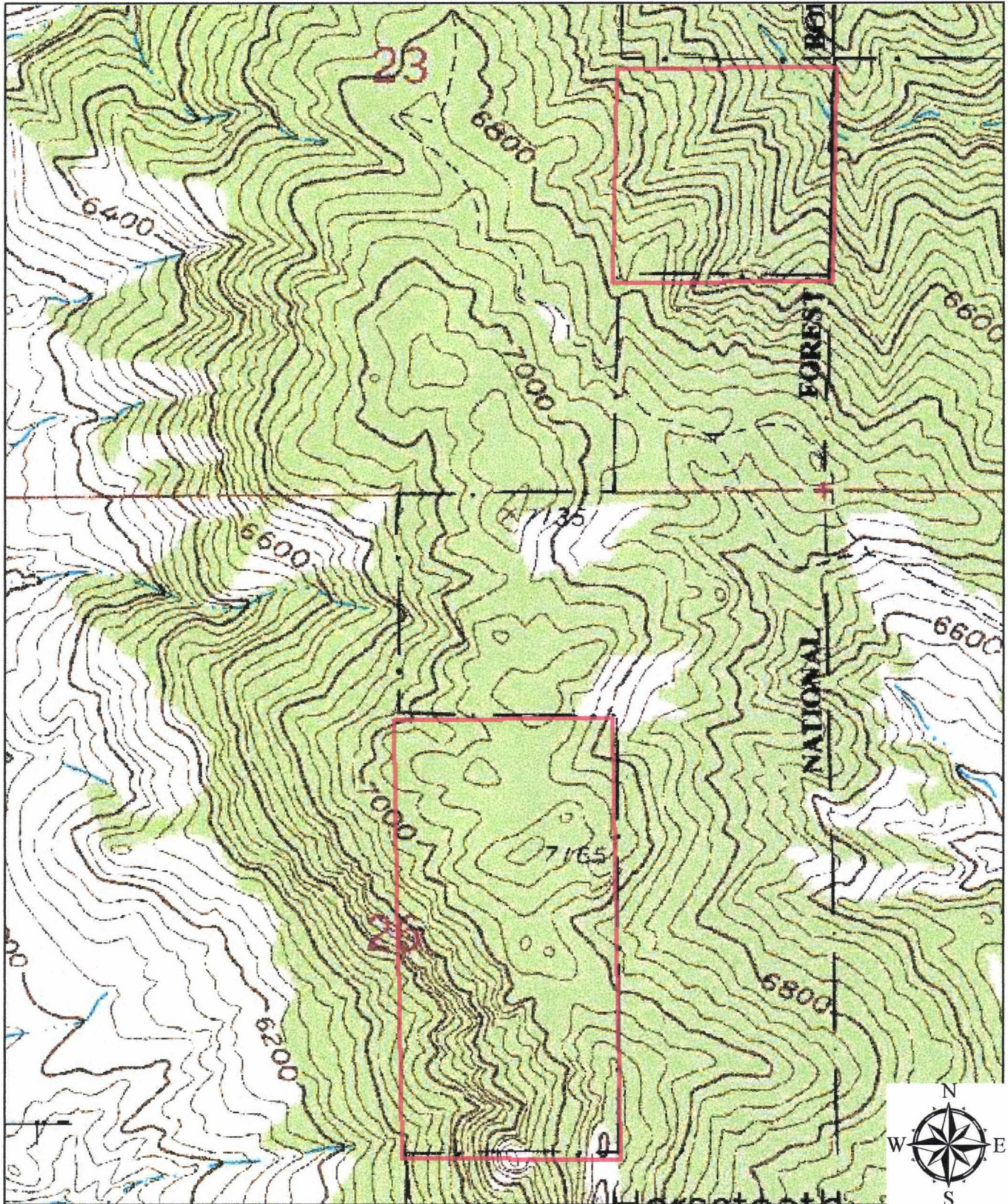
Legend

 Horsetooth State Lands

0 0.050.1 0.2 0.3 0.4 Miles



Topography for Horsetooth State Lands



Legend

 Horsetooth State Lands

0 0.05 0.1 0.2 0.3 0.4 Miles

Fire Hazard for Horsetooth State Lands



Legend

 Horsetooth State Lands

Fire Hazard

 HIGH

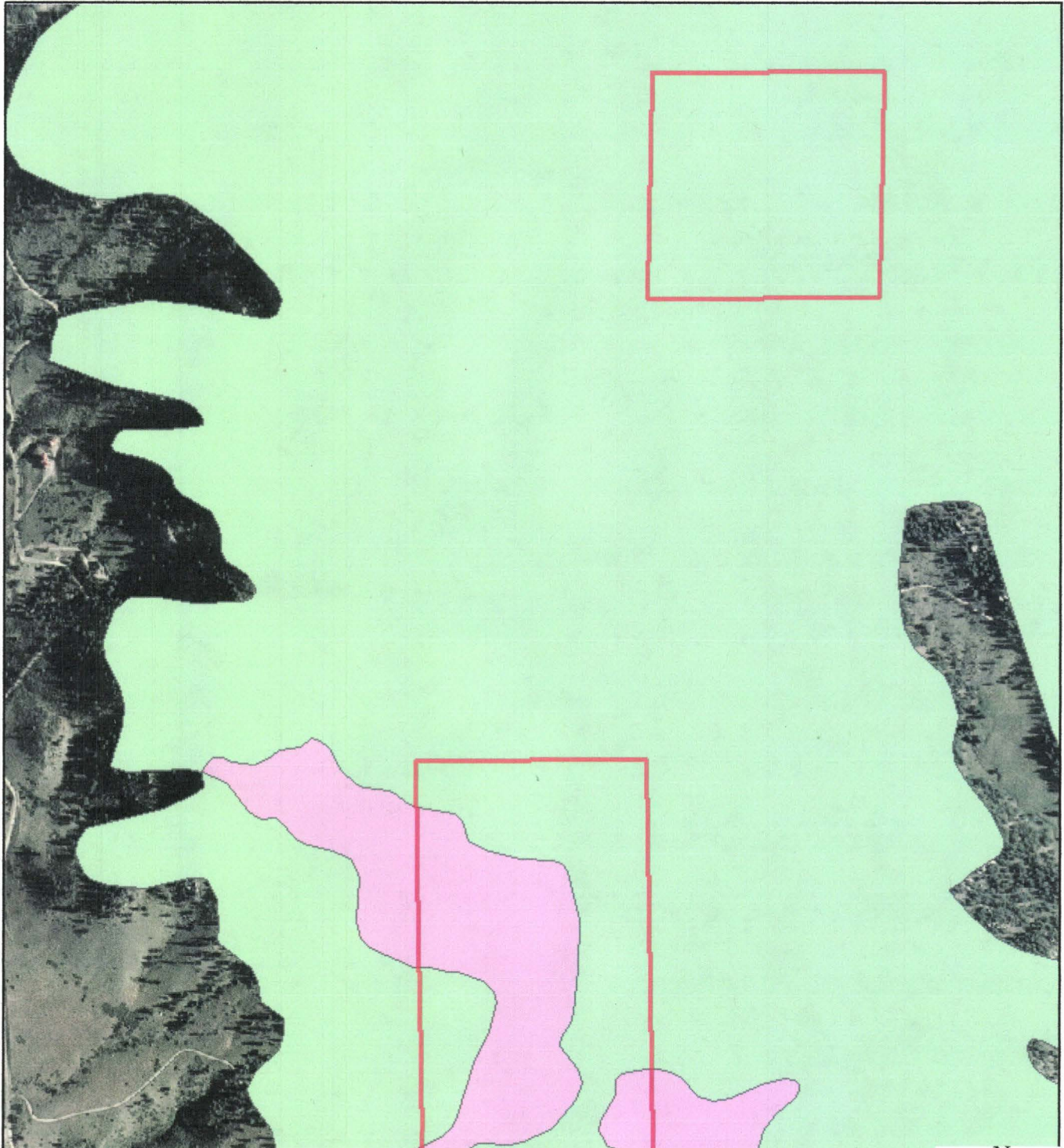
 MODERATE

 LOW

0 0.05 0.1 0.2 0.3 0.4
Miles



Soils for Horsetooth State Lands



Legend

 Horsetooth State Lands


Soils

MINOR1

 93 – Rock Outcrop

 117 – Wetmore-Boyle-Rock



0 0.05 0.1 0.2 0.3 0.4
 Miles

CSFS STATE TRUST LAND MANAGEMENT STANDARDS:

1. A management plan MUST be prepared, and approved by the Land Board prior to any sales or management activity on Trust lands.
2. Input will be solicited from surface lessee, SLB District Manager, adjacent landowners, Soil Conservation Service, Division of Wildlife, and county commissioners to determine their concerns pertaining to resources and management activities on the subject Trust land.
3. Management plans will follow STATE LAND MANAGEMENT PLAN OUTLINE, DATED 6-7-91. Management plans MUST specify silvicultural practices that are needed to achieve the objectives.
4. Forest stands will be inventoried to a +/- 20 % limit of error. Existing inventory data from natural resource agencies may be used for other natural resources.
5. All practices included in the "Forest Work Plan" (FWP) MUST be based on prescribed silvicultural practices in an approved state land management plan.
6. Surface lessee MUST be notified thirty (30) day in advance of initiating any sale on trust land. They should also be notified of non-sale activities such as SLI projects. Notification will be in writing with a copy kept in the case file. Notification may be for the entire year by listing all projects approved in the FWP.
7. Application fees MUST be collected for every sale over \$250. The fee is in addition to the negotiated or bid price. The fee is \$15 for sales with values between \$250 and \$999 and \$25 for sales with values of \$1,000 and over. It should not be charged on sales with values less than \$250. The application fee is collected at the time of signing the sales agreement. In case of sale default it IS NOT refundable. It should be accounted for as a separate line on the sale invoice.
8. If there is interest from more than one purchaser for trust land forest products, even though the value is less than \$5,000, the sale WILL be sold on a bid basis. All sales with a estimated value of \$5,000 or more MUST be advertised and sold on a bid basis.
9. Bidders may be qualified on the basis the firm or individual being "able to fulfill the terms and conditions contained in the bid advertisement." The terms and conditions MUST to be included in the sale prospectus.

10. Bid sales SHALL be advertised "...in a newspaper of general circulation in each county in which the forest product is located. The advertisement shall state the time, place and description of the forest product, and terms of the sale. The advertisement shall be published a minimum of three times over a 30-day period prior to the auction day or final bidding date."

Advertizing costs are to be paid by the purchaser in addition to the bid price and application fee and should be accounted for as a separate line on the sale invoice.

11. Bid guarantee is REQUIRED on all bid sales where the sales agreement is signed at a later time. The bid guarantee shall be 10 percent of the estimated value of the product and the amount should be included in the advertisement. The Bid Fee is non-refundable in case the successful bidder does not sign a sale agreement, but will be applied to the purchase value of the sale.
12. Performance bonds are REQUIRED on all sales over \$250. The minimum bond is 10 percent of anticipated total sales value. In determining actual bond value the amount established should be enough to pay another contractor to complete required jobs. Sales can be worked in blocks so the bond can be kept at a reasonable amount, but in no case less than 10 percent of the total value. If work is done in blocks you must insure that each block meets final specification prior to entry into additional blocks.

Bonds MUST be refunded within 30 days of completion and release from the sales agreement. Due to the time required to process refunds it is imperative to act promptly on refund requests for performance bonds.

13. Slash deposits are REQUIRED on sales where "heavy slash accumulations are anticipated". The deposit should be enough to pay the expense of doing the slash disposal, or hiring it done. Give careful consideration of the slash accumulation from your prescription and the your required slash treatment.
14. All bonds, fees, and payments MUST be paid by certified funds.
15. Note that in section 1.1.14, for sales \$249 and less, the application fee (1.1.5), notification of the surface lessee (1.1.6), performance bond (1.1.10), and sales agreement (1.1.12) requirement is waived. This allows for individual use firewood, christmas tree, transplant permits etc.

STATE LAND
FOREST MANAGEMENT PLAN

COMPILED BY
COLORADO STATE FOREST SERVICE
FOR
STATE BOARD OF LAND COMMISSIONERS

S16 T10N R76W
NORTH MIDDLE MOUNTAIN

Prepared by:
Richard P. Jansky

STATE LANDS
FOREST MANAGEMENT PLAN

S16 T10N R76W

North Middle Mountain

Larimer County

General Land Description

This section lies one half mile east of the Laramie River just west of McIntyre Creek, about three miles south of Four Corners at North Middle Mountain. The main access to the section is via Roosevelt National Forest Road number 190. One unimproved road crosses the section diagonally while another runs along Pass Creek.

The area is quite flat with most slopes running under 15%. The northern three quarters of the section is inclined to the south toward the intermittant Pass Creek. The southern portion of the section has a northern aspect, and the average elevation is 8400 feet.

The adjoining land to the north, east and west is owned by the Diamond Tail Ranch while the southern boundary adjoins national forest land.

The section is entirely fenced except for a portion of the eastern edge (see map). The fences for the most part are true to the survey corners although some discrepancy was noted along the western end of the southern boundary fence.

The only current use is moderate, seasonal grazing.

Vegetation

Forest Types

The predominante coniferous forest area on the section is a 75 acre strip of lodgepole pine which lies along the southern boundary. Roughly 50% of the stand was burned over approximately 95 years ago. Small

patches or groups of residual trees may be found throughout the stand. These trees range from 110 to 160 years old and are often fire scarred and infected with dwarf mistletoe. It also appears that the western portion of this stand was not burned over at the same time.

The average density of the burned area is approximately 225 BA/A with some areas running as high as 350 to 450 BA/A with as many as 11,000 stems per acre. The unburned portion is much less dense and averages slightly over 100 BA/A.

The stand has been stratified into high and medium density areas (see the map section). However for inventory purposes the stand was cruised as a single unit, with one cruise line running through the center of the stand in an east-west direction. The primary causes for defect in these trees are forked tops and fire scars. More complete information on this stand may be found in the timber resources section of this report.

Dwarf mistletoe is the predominant disease problem. As stated earlier, many of the older, residual trees are infected and have spread the parasite throughout the stand. The dwarf mistletoe rating within these groups is often as high as five or six but the intensity of infestation gradually diminishes away from the older trees. By ocular estimate, 80% of the stand is infected, giving the stand a \overline{DMR} of 2.5 (RM-121).

There are approximately 65 acres of quaking aspen present. Most of this lies in the northwest quarter in a relatively pure stand. The aspen averages three to five inches DBH and 40 to 50 feet tall (by ocular estimate). Although along some of the drainage bottoms and southern aspects the aspen may be somewhat larger, overall, the aspen resource here is non-commercial.

Non-Forest Area

Five hundred acres are non-forested land. Big sagebrush is found along the draws and on some southern aspects. Otherwise the land is brush free and appears to be only lightly grazed at present.

Management Recommendations

The principal objectives of management are:

- to produce a commercial timber product from healthy, vigorous timber stands
- to reduce the wildfire hazard,
- to improve the quality and yield of the watershed,
- to improve the wildlife habitat,
- to maintain the forest in an aesthetically pleasing condition.

Normally, overstocked lodgepole pine stands should be thinned from below to a growing stock level of 100 to maximize volume increment for timber production. However the presence of dwarf mistletoe alters and complicates this general recommendation. Also the advanced age of the stand makes thinning of questionable value, as 70 years of age is generally considered the maximum age for this type (PSW-31). Another factor influencing management is the presence of dwarf mistletoe in the adjacent national forest stand to the south.

The windfall risk for this stand is LOW (2) - All lower and gentle middle north and east-facing slopes (RM-121).

Therefore, considering these factors:

1. the high stocking level
2. the high incidence of dwarf mistletoe
3. the low windfall risk
4. the advanced age of the trees and,
5. the remote location and the fact that the stand is obscured from the view of the general public.

It is recommended that this stand be patch cut with individual openings of up to 30 acres each (RM-121, pg. 46). Thus removing essentially all heavily infected trees, and especially the centers of the infestation around the older residual trees. Any areas that are free of dwarf mistletoe may be thinned to a growing stock level of 100 and be used to provide a seed source for reforestation.

Some areas of light infestation ($\overline{\text{DMR}}$ 2 or 3) may be thinned, if as many infected trees as possible are removed. Usually trees with a DMR of four or higher should not be retained (PSW-31). Also it is recommended that a buffer strip sixty feet wide be cut clear along the national forest boundary where the adjoining stand is infected with dwarf mistletoe.

THE TIMBER RESOURCE

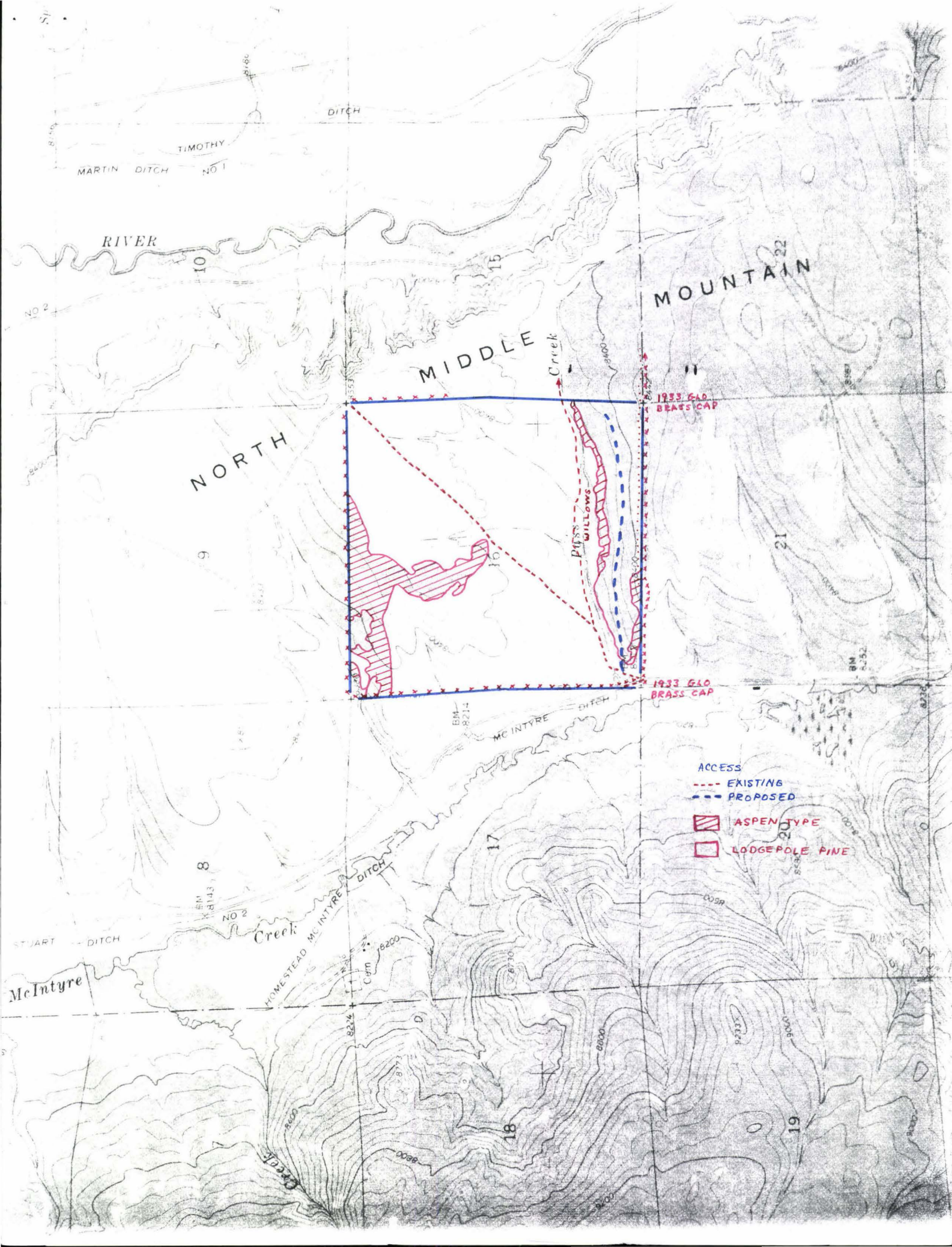
S16 T10N R76W

	<u>STAND A</u>
Species Composition by % of BA	100%LP
Acreage	75
Aspect	North
Average Elevation	8440
Average Percent Slope	17%
Site Index	55
CCF (Lodgepole Pine)	148
Average Age of Dominants	96
Number of Rings/Last Inch	34
Percent Growth	1.78%
Average Percent Defect	2.37%

STAND A

BAF 20 12 Sample Points - 16.7% Sampling Error

	<u>Total Stand</u>	<u>4-9" DBH</u>	<u>10"DBH & Greater</u>
Trees/Acre	619	601	18
Average DBH	5.92"	5.66"	11.77"
Average Height	44.6'	43.2'	56.3'
BA/Acre	118	105	13
Merchantable Cu. Ft./ Acre	2113	1757	356
Board Feet/Acre	8180	6634	1547
Post & Poles Linear Ft./Acre	-	3239	-
Total Stand Volumes			
Merchantable Cu. Ft.	158,475	131,775	26,700
Board Feet	613,500	497,550	116,025
Linear Feet	-	242,944	-



NORTH

MIDDLE

MOUNTAIN

ACCESS
--- EXISTING
--- PROPOSED

ASPEN TYPE

LODGEPOLE PINE

RIVER

Creek

PINES
WILLOWS

MCINTYRE DITCH

HOMESTEAD MCINTYRE DITCH

Creek

ST JART DITCH

McIntyre

Cem

MARTIN DITCH NO 1

TIMOTHY

1933 GAO BRASS CAP

1933 GAO BRASS CAP

10

15

22

9

10

21

8

17

18

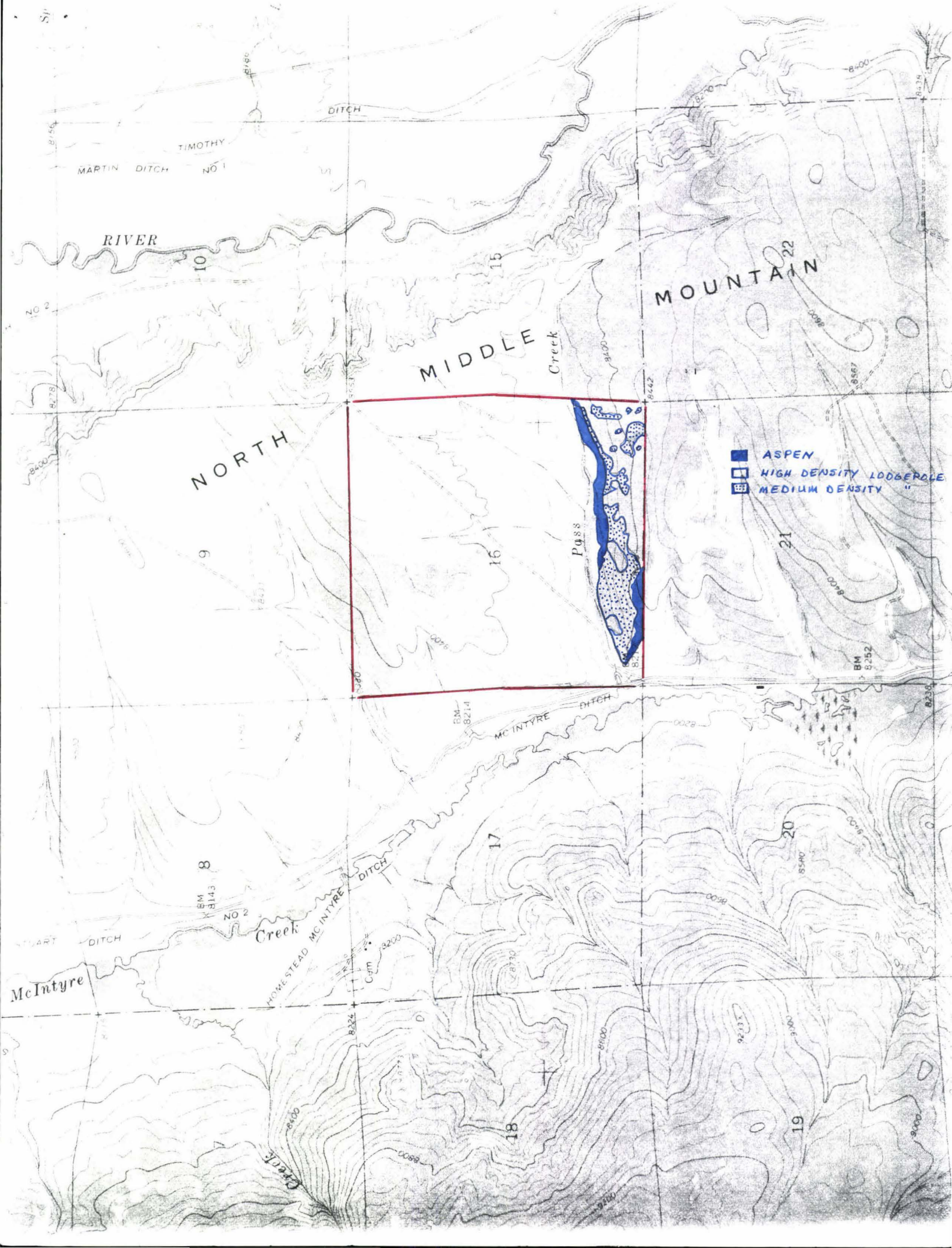
19

NO 2

NO 2

NO 2

1872



- ASPEN
- ▣ HIGH DENSITY LODGEPOLE
- ▨ MEDIUM DENSITY

LOGEPOLE THINNING GUIDE BASED ON WINDFALL RISK AND BASAL AREA

	<u>High Windfall Risk Situations</u>	<u>Moderate Windfall Risk Situations</u>	<u>Low Windfall Risk Situations</u>
Basal Area of Existing Stand	<ol style="list-style-type: none"> 1. Ridge tops. 2. Moderate to steep middle south and west-facing slopes not protected to the windward and all upper south and west-facing slopes. 3. Saddles in ridge tops. 	<ol style="list-style-type: none"> 1. Valley bottoms parallel to the direction of prevailing winds. 2. All lower and gentle middle south and west-facing slopes not protected to the windward. 3. Moderate to steep middle and all upper north and east-facing slopes. 4. Moderate to steep middle south and west-facing slopes protected by considerably higher ground not far to windward. 	<ol style="list-style-type: none"> 1. Valley bottoms except where parallel to the prevailing winds, and all flat areas. 2. All lower and gentle middle north and east-facing slopes. 3. All lower and gentle middle south and west-facing slopes that are protected by considerably higher ground not far to windward.
Less Than 120	Two stages required. Cut 1: Cut 50% of total trees which need to be removed to achieve desired stocking level. Cut 2: Five years later. Cut to desired stocking, but no lower than 80 GSL.	Thin to desired level in one cut.	Thin to desired level in one cut.
More Than 120	Three stages required. Cut 1: Cut 30% of total trees which need to be removed to achieve desired stocking. Cut 2: Five years later. Cut 50% of the remaining trees which need to be cut to achieve desired stocking. Cut 3: 10 years after second cut. Thin to desired stocking, but not lower than 80 GSL.	Two steps required. Cut 1: Cut 50% of trees which need to be removed to achieve desired stocking level. Cut 2: Five years later, cut to desired stocking level.	Thin to 100 GSL in first cut. If lower stocking level is desired, wait five years and cut to desired level.

VOLUME SPECIFICATIONS

All volume figures were derived from the publications listed below.

PONDEROSA PINE

Board Foot Volumes

Publication - RM-2

Table - 5a

Specifications - Scribner rule

Top diameter variable

Stump height 1.0 foot

Total height in feet

Minimum DBH - 12"

Cubic Foot Volumes

Publication - RM-2

Table - 2a

Specifications - Top diameter 4.0 inches inside bark

Stump height 1.0 foot

Total height in feet

Merchantable stem excluding stump and top

Minimum DBH - 5"

LOGGPOLE PINE

Board Foot Volumes

Publication - RM-157

Table - 1

Specifications - Scribner rule

Top diameter 6.0 inches inside bark

Stump height 0.7 foot

Total height in feet

Minimum DBH - 6"

Cubic Foot Volumes

Publication - RM-157

Table - 3

Specifications - Top diameter 6.0 inches inside bark

Stump height 0.7 foot

Number of 16.5 foot logs

Minimum DBH - 6"

Merchantable stem excluding stump and top

LINEAR FEET

All linear feet calculations are based on an assumed merchantable height of 75% of total height, unless otherwise noted.

LITERATURE SITED

RM-199

Edminister, C. B.
1978, RMYLD: Computation of yield tables for even-aged and two-storied stands.

RM-121

Alexander, R. R.
1974, Silviculture of subalpine forests in the central and southern Rocky Mountains: The Status of Our Knowledge

Dept. of Agriculture Bulletin #234

Mason, D. T.
1915, Utilization and management of lodgepole pine in the Rocky Mountains.

RM-92

Alexander, R. R.
1972, Partial cutting practices in old-growth lodgepole pine.

PSW-31

Symposium on Dwarf Mistletoe Control through Forest Management

Hawksworth

1978, Intermediate cuttings in mistletoe-infested lodgepole pine and southwestern ponderosa pine stands.

Additional Notes For
S36 T4N R73W

This section was re-examined on 11/6/78 to determine management needs as related to the forthcoming Front Range Vegetation Management Program in this area.

Most of the timber is post and pole size with occasional small sawlog size trees. Volumes are generally under 5 MBF/A except in a few local stands of well stocked lodgepole pine. A timber cruise was not performed for the following reasons:

1. Nearly all the forested slopes exceed 30% and the flatter slopes are often only poorly stocked or aspen stands.
2. The commercial potential of the existing stands is marginal.
3. The accessibility is limited both physically and legally. There are no roads or trails on the section itself and the adjacent property ownership is private on both the western and southern boundaries.

The exact boundary locations are also uncertain. The only section corner located was the southwest corner and it is located nearly 300 feet north of the USGS quadrangle location. None of the boundaries appear to be fenced.

No specific management plan will be developed for this section unless future area management objectives and opportunities change considerably.

Sept 16 Mankuth

① Skill across dam @ low

② High road - ground good

③ low road - " " " " " "

all way to end

Overstory removed

PP = Number Trees

to go ie D-1 D-2

LP Scouting - Clean

in small patch - DM

LP thin - much less

tree w/ point spot

PP thin - ok in market

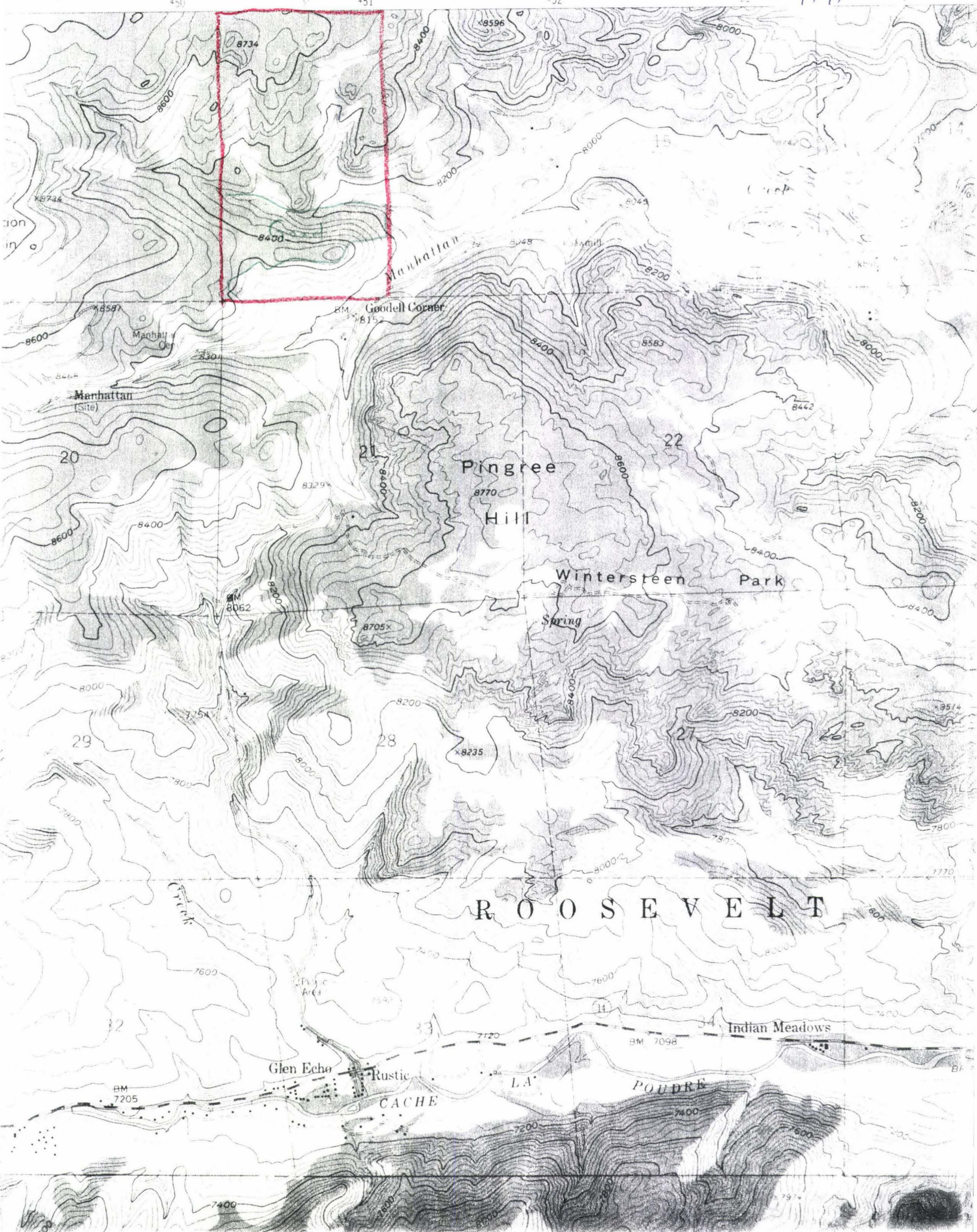
D-F esgs on a lot

battled 1 tree

LP poles cut @ 1 tree

⑦ Road to from top of house (only)

- ⑫ No skidding across stream
- ⑬ No logging during
6/1 - 9/15 except
for road building &
road ROW
- ⑭ Relatively steep slopes
(Not much skidder work)
- ⑮ Log & scatter slash
- ⑯ ~~AT~~ Pile ^{skid} along road into
road & burn
- ⑰ Spot betterment on main
road only



Manhattan
Goodell Corner
BM 815

Pingree Hill
8770

Wintersteen Park
Spring

R O O S E V E L T

Glen Echo
Rustic
CACHE

Indian Meadows

POUDRE

BM 7205

BM 7098

LA

7200

7400

7400

7900

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date June 28, 1978
2. Legal Description: Sec. 36 Twp. 12N R. 76W
3. Geographic Location: County Larimer Other North of Bull
Mountain fire between East Shell Creek and Dry Creek
4. Acreage: Forest 260 acres Other (describe) 380 acres -- grass
meadows and sagebrush.
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.) No boundaries, section corners or water
developments were located. The only fence found did not run true to
the southern section line (see map). The roads leading to and
on the section are remnants of very old logging trails (see map).
6. Water for Fire Control None - only two intermittant creeks in the
NE 1/4
7. Major Forest Type(s) Lodgepole pine, aspen
8. Estimated Volumes See additional notes.
9. Growth Data -
10. General Stand or Range Condition See additional notes
11. Insects & Disease Dwarf mistletoe is light in stand A and moderate
to severe in stand B.

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Corral poles and a limited number of posts and small saw logs.
13. Potential Markets Laramie or Fort Collins area.
14. Cutting Recommendations Thin the overstocked stands to a basal area of 80 and clear cut the Dwarf Mistletoe infestations.
15. Subdivision Potential Limited access and available water. High fire hazard in all forested areas.
16. Recreation Potential Limited to low impact outdoor recreation such as hiking and hunting.
17. Priority for Management Work: High _____ Medium _____ Low X
18. Management & Protection Goals Thin the stands to improve the average annual increment and to reduce the fire hazard.
19. Lessee's Name Bull Mtn. Cattle Co. c/o Corthell and King ^{Box 654 Laramie, WY 82070} Route 1
20. Watershed Condition or Erosion No particular problems noted.
21. Should State Retain or Dispose (give reasons) Grazing lease plus some timber production potential.

(Attach copys of topog or sketch map)

Forester in Charge Jansky Date 9/6/78

Quad - Sand Creek Pass
Photos - ECB-2-111
- black & white

Additional Notes for S36 T12N R76W

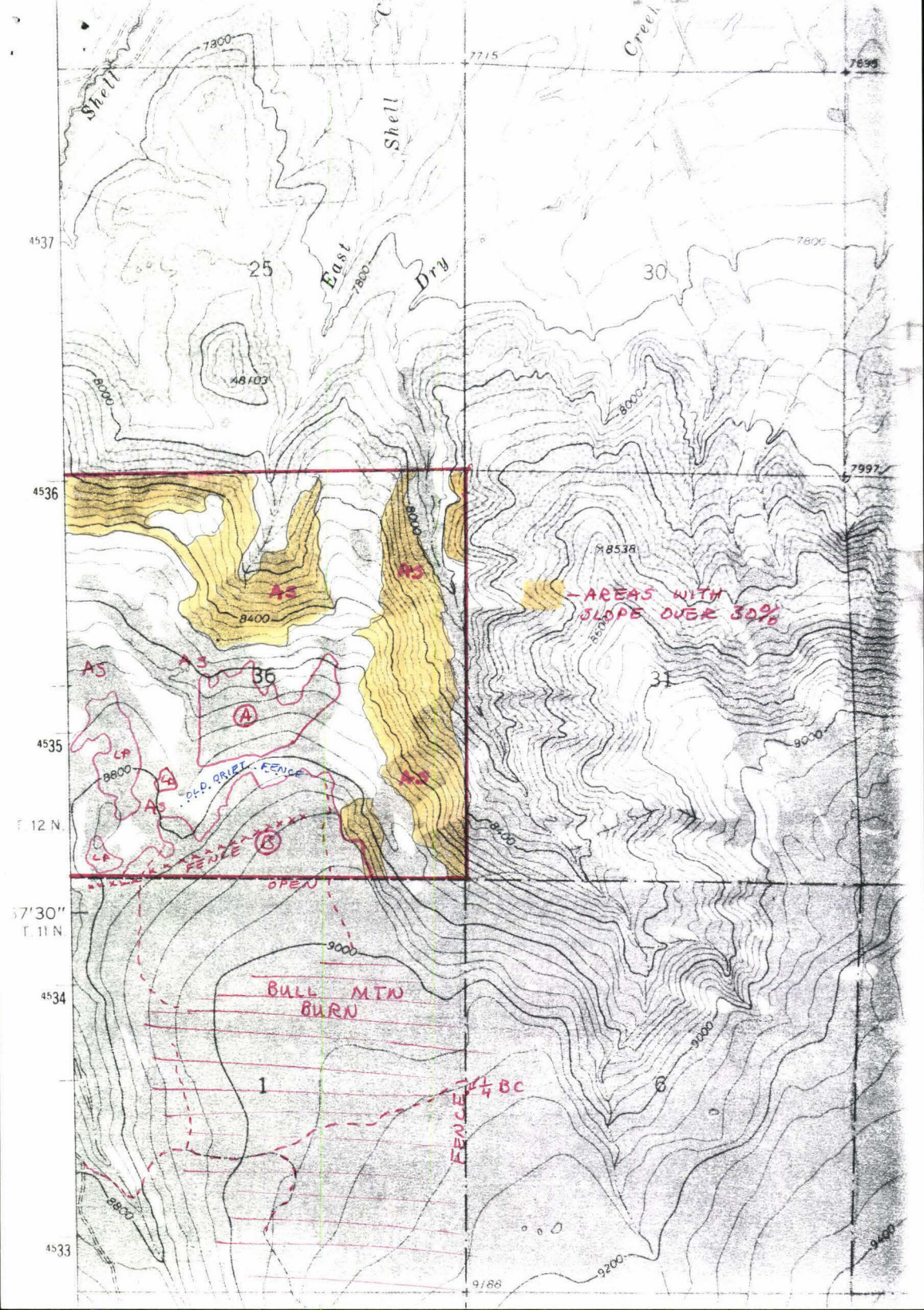
Stand A

The southern $\frac{1}{4}$ of this stand is mostly small sawlog size material ranging from 6 to 10" DBH. Northward, the stand becomes denser and develops into a good post and pole stand with DBH's running in the 3 to 6" range. The basal area per acre was around 190 with heights in the low 40's.

Stand B

Isolated groups of old red bark lodgepole may be found here surrounded by dense dog-hair stands heavily infested with Dwarf Mistletoe. Many of the trees are quite stunted and deformed. The southern edge of this stand, along the section line, is somewhat more open with trees ranging from sapling size to 8" DBH. Mistletoe is light to moderate in this area.

RPJkrp







STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date June 27, 1978
2. Legal Description: Sec. 16 Twp. 11N R. 75W
3. Geographic Location: County Larimer Other Two miles northeast of Sandcreek Pass
4. Acreage: Forest 300 Other (describe) 340 sagebrush and grassland
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.)
See the attached map for locations of the intermittent streams and roads. Four-wheel drive is required in a few spots. (ie, on the steep slopes) No water developments were found and the southern and western boundries are fenced.
6. Water for Fire Control Sand Creek near the SE corner
7. Major Forest Type(s) Lodgepole pine (135 a) aspen, and subalpine fir (often mixed with the aspen.
8. Estimated Volumes See attached page
9. Growth Data "
10. General Stand or Range Condition Stagnant and overstocked
11. Insects & Disease Dwarf Mistletoe is only of minor incidence in the stand.

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Post and poles, Xmas trees (subalpine fir along the aspen groves - need culturing)
13. Potential Markets Local area cutters and Xmas tree dealers
14. Cutting Recommendations Thin the overstocked lodgepole and clear cut any patches with mistletoe infestation.
15. Subdivision Potential Suitable sites available on the open, flatter slopes. Good access to the area although the winters are severe.
16. Recreation Potential Hiking, hunting - no specific attraction here.
17. Priority for Management Work: High _____ Medium ^(cruise) X Low _____
18. Management & Protection Goals Reduce the stocking level to improve the health and vigor of the stand and to increase the annual increment.
19. Lessee's Name Frank Lilex, Route 1, Box 658, Laramie, WY 82070
20. Watershed Condition or Erosion No problems
21. Should State Retain or Dispose (give reasons) Grazing and timber resource values.

(Attach copys of topog or sketch map)

Forester in Charge Janney Date June 30, 1978

Quad - Sand Creed Pass
Photos - EcB - 5 - 46, 47
1956 B & W
Fort Collins District

Additional Notes for S16 T11N R75W

Stand A

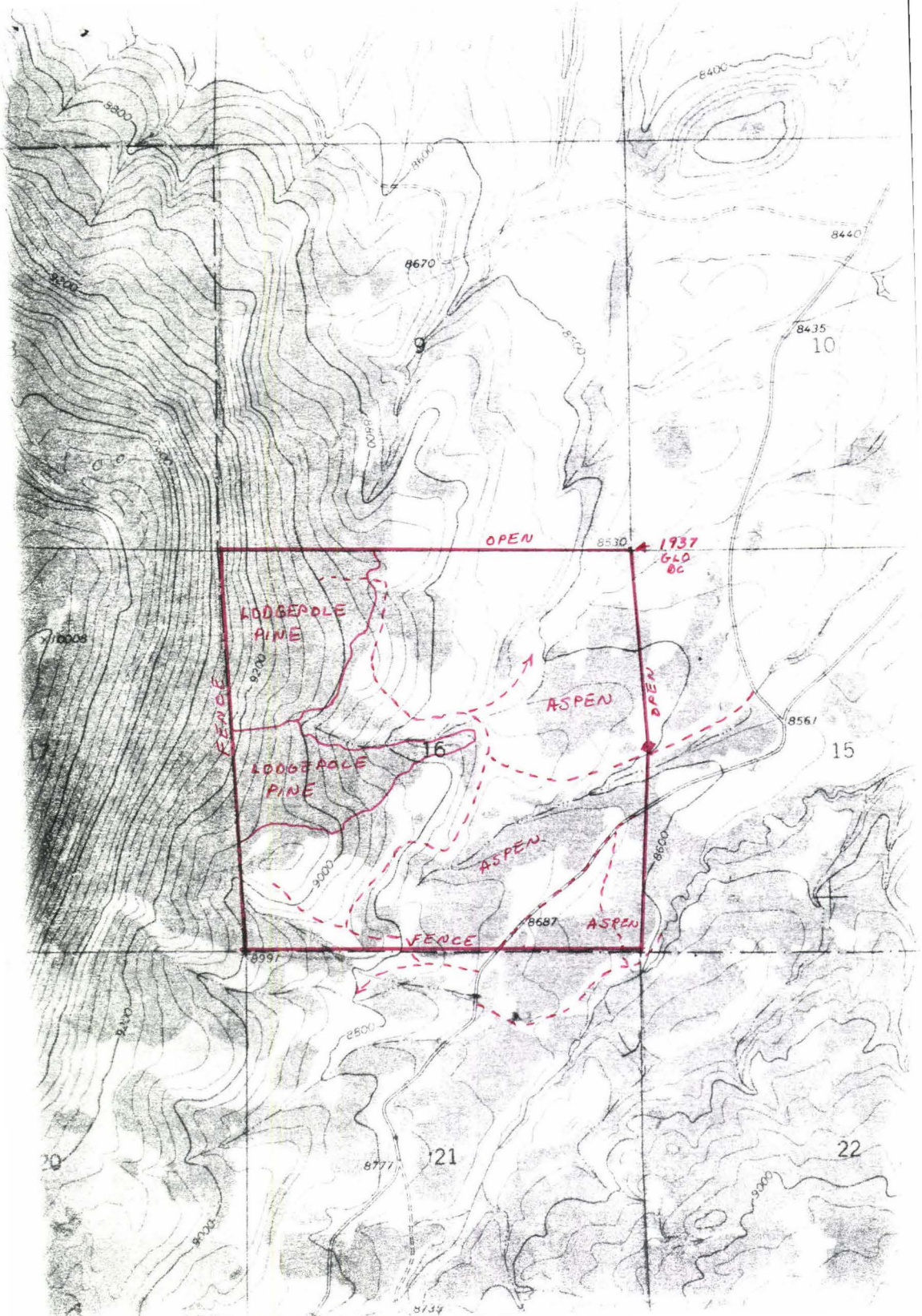
Basal Area/ Acre 182 (8 Plots)
Average Total Height 48'
Average DBH 6.7"
CCF 195
Site Index 60

Approximately 25% of the trees in this stand are true fir (23%) and aspen (2%). The remainder is lodgepole pine.

Stand B

The Basal Area per Acre is 195 (based on 17 plots) and the average DBH is 7.1"

The crown competition factor is 190 and site index is 60.



STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date June 22, 1978
2. Legal Description: Sec. 36 Twp. 12N R. 74W
3. Geographic Location: County Larimer Other Green Mountain
4. Acreage: Forest 600 Other (describe) 35 grassy meadows
and bottom lands.
5. Physical Features (boundaries, fences, section corners, roads, streams,
water developments, etc.) _____
No fences were found around this section and no water developments
were located. See the attached map for additional details.
6. Water for Fire Control Trail Creek
7. Major Forest Type(s) Lodgepole pine, Douglas fir with limited
areas of aspen and limber pine.
-see attached page for additional information-
8. Estimated Volumes Average BA/A 120 (based on 51 plots)
9. Growth Data Total age approximately 90
10. General Stand or Range Condition Poor in most areas except near
streams.
11. Insects & Disease Dwarf Mistletoe heavy in localized areas- moderate
to light throughout the section.

* Upon completing report, send copy to state lands staff forester,
Land Board forester, and Land Board. Report due within seven days
following reconnaissance.

12. Available Forest Products Posts and poles and a very limited
number of small sawlogs.
13. Potential Markets Fort Collins and Laramie area.
14. Cutting Recommendations Clear cut the areas heavily infested
with Dwarf Mistletoe and thin the remaining well stocked stands.
15. Subdivision Potential Limited - remote area, and high fire
hazard.
16. Recreation Potential Hiking, hunting, horseback riding, and
camping
17. Priority for Management Work: High _____ Medium X Low _____
18. Management & Protection Goals Reduce the incidence of Dwarf
Mistletoe and thin the stand to increase the annual increment.
19. Lessee's Name Broken Arrow Ranch Assoc. 5412 Lone Tree Dr.
Summer Brodx Loveland, CO 80537
20. Watershed Condition or Erosion No particular problems-soil is a
coarse decomposed granite.
21. Should State Retain or Dispose (give reasons) Wildlife, watershed
and timber values.

(Attach copies of topog or sketch map)

Forester in Charge *James R. ...* Date 6/26/78

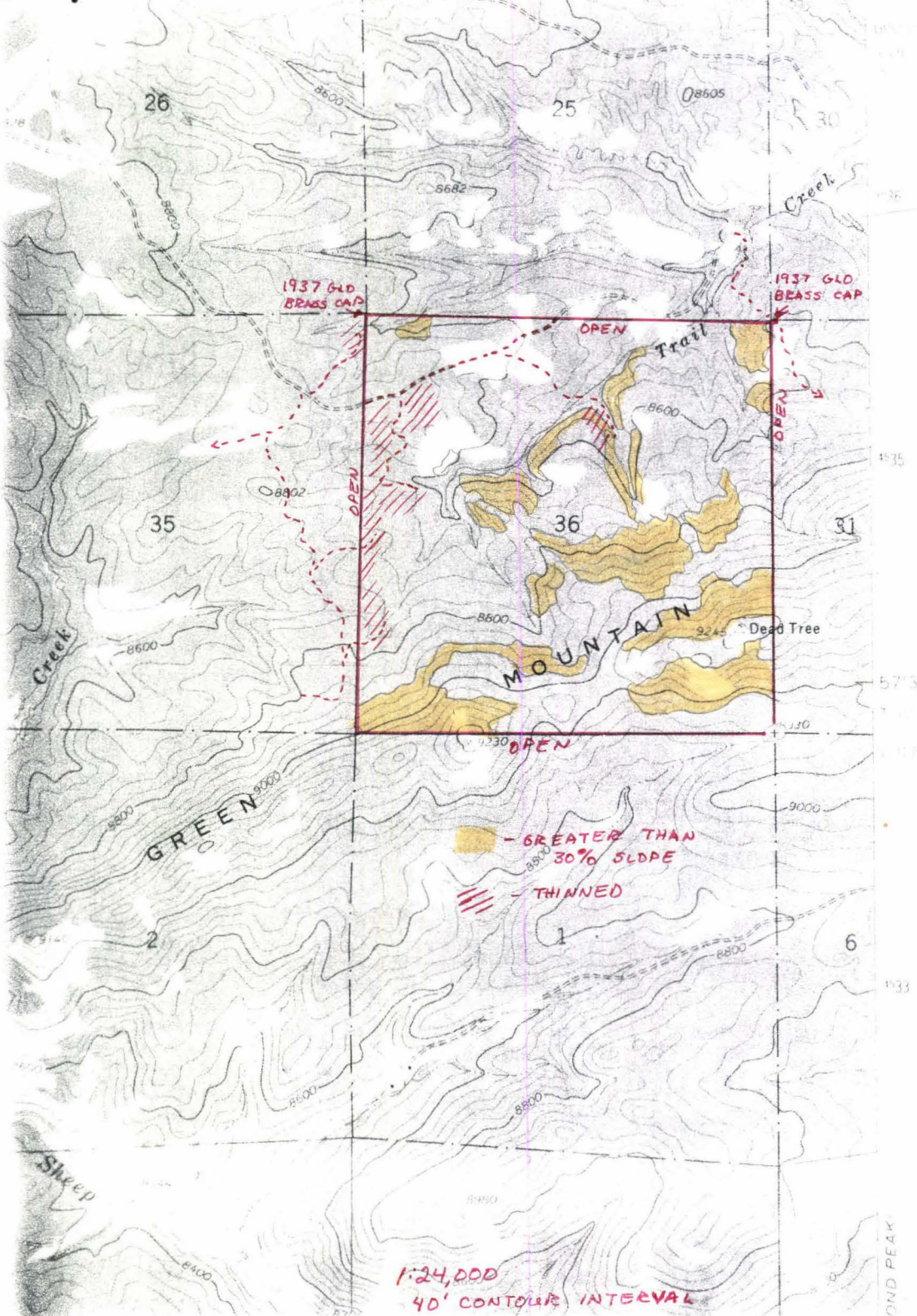
Additional Notes for S36 T12N R74W

These lodgepole pine stands have scattered patches of old "redbarks" generally along ridges. These older trees run from 6 to 10" DBH and are usually full of Dwarf Mistletoe. Most of the lodgepole here is well to overstocked and averages 2 to 6" DBH, with heights in the 20 to 30 foot range.

Some Douglas fir and limber pine can be found on the north aspects. However, these trees tend to be rather small and stunted with relatively high defect.

RPJkrp

T12N T4W S36



1:24,000
40' CONTOUR INTERVAL

6" ROUND PEAK

STATE LAND
FOREST MANAGEMENT PLAN

COMPILED BY
COLORADO STATE FOREST SERVICE
FOR
STATE BOARD OF LAND COMMISSIONERS

S36 T12N R74W
GREEN MOUNTAIN

Prepared by:
Richard P. Jansky

STATE LAND
FOREST MANAGEMENT PLAN
November 1978

S36 T12N R74W - Green Mountain - Larimer County

General Land Description

This section is located two miles south of the Wyoming state line along Roosevelt National Forest road number 182 at Green Mountain. Major access routes to the area are the Upper Cherokee Park road from the south and the Boulder Ridge road from the north. Access is available in the northwest quarter and near the southeast corner on the section itself. Also an old logging trail roughly parallels the western section line. See the access map for exact locations of roadways. The nearest market areas are Fort Collins, Colorado and Laramie, Wyoming. Both of which are nearly 55 miles distant.

All land ownerships immediately to the north, south, east, and west, are private (Union Pacific Railroad Company). Each section corner is also on the national forest boundary due to the checker board ownership pattern in this area.

The general aspect of the section is northern and the average elevation is 8800 feet. Trail Creek originates within the section and flows in a northeasterly direction through the northern half of the section.

The current land use is limited to light seasonal grazing. Some thinning was done along the western section line in near the center of the section. See the map section for approximate locations. It is estimated that this cutting was done 12 years ago.

Vegetation

Forest Area

This section is covered by 510 acres of coniferous forest. The majority of this area is lodgepole pine with minor amounts of limber pine, Englemann spruce,

Douglas-fir and ponderosa pine. See the timber resource section for the species composition of individual stands. Only a few acres of quaking aspen are present along the major drainages.

Four stands were delineated for inventory purposes as shown in the map section. Complete stand data is listed in the timber resource section of this report. The basal area figures shown reflect the average condition for each stand, however specific locations may have basal areas in excess of 200 square feet per acre. These are often patches of densely growing trees of small diameter (dog hair stands) which have been delineated from aerial photographs.

Most of the defect in the lodgepole is due to forked tops with minor defect resulting from dead tops, crook and scars.

The dwarf mistletoe infestation is heavy in local areas especially near any residual groups of older "red barked" trees. Most other areas may have dwarf mistletoe ratings of three or less. Stand D however, is completely clear of dwarf mistletoe except for one small patch with a rating of two.

Reproduction was very limited as expected in the densely stocked stands of lodgepole pine. Near small clearings or along the drainages some aspen or Douglas-fir reproduction may be found.

Non-Forest Area

Approximately 128 acres on this section are open sagebrush meadows. Big sagebrush is the dominant vegetation with lesser amounts of mountain muley and various species of POA and CAREX present. Grazing pressure appears to be light in the accessible areas and nonexistent in the more remote openings.

MANAGEMENT RECOMMENDATIONS

The principal objectives of management are;

- produce a commercial timber product from healthy, vigorous timber stands,
- reduce the wildfire hazard,
- improve the quality and yield of the watershed,
- improve the wildlife habitat,
- maintain the forest in an aesthetically pleasing condition.

The lodgepole pine stands on this section are well to over stocked and are partially infested with dwarf mistletoe. The present growing stock levels are approximately;

Stand A - GSL 170

Stand B - GSL 120

Stand C - GSL 110

Stand D - GSL 170: from RM-199

A Growing Stocking Level of 100 has been determined as nearly optimum for timber production objectives. But the presence of dwarf mistletoe has been proven to reduce growth, increase mortality and drastically reduce seed production. (RM 121)

Therefore the general recommendations for these stands are:

1. Thin from below to a growing stock level of 100
2. patch cut small areas (3-5 acres) where the \overline{DMR} is greater than 3.
3. selectively thin the area surrounding the patch cuts, removing as many infected trees as possible without creating large openings. Usually, trees with a \overline{DMR} of 4 or higher should not be retained. It is better to sacrifice some spacing to remove such heavily infected trees, since they will usually show little growth response after thinning. (PSW - 31).

Thinning has been shown to be definitely beneficial at low levels of dwarf mistletoe infestation (\overline{DMR} less than 3). The increase in the productive capacity is always significant and in some cases, (young stagnated stands for example) thinning makes the difference between no merchantable timber production (board feet) at all and as much as 10,000 board feet per acre at 60 year intervals. This is due to the fact that without thinning the trees may never reach 6" DBH. (RM - 199)

Hawksworth has stated that "We also know that the effects of dwarf mistletoe are less pronounced in more vigorous trees, so the beneficial effects of thinning will be evident in increased growth rates, despite the fact that mistletoe might also increase." (PSW - 31)

Also note that the average total stand age is 73 years for this whole section. Hawksworth indicates that age 70 years is generally considered to be the upper limit of thinning feasibility; However a marked improvement can be seen even at this age (PSW - 31). Therefore thinning of these stands should be accomplished as soon as is economically feasible before any further growth response is lost.

It has been shown that lodgepole pine is generally considered susceptible to windthrow after cutting and especially after partial cutting (RM 121). Mason and Alexander have identified windfall risk situations based on exposure (see table). According to this scheme, Stands B and C have a low rating and stands A and D are rated as moderate, although certain areas, such as ridge tops, steep slopes, and saddles, would be rated as high windfall risk situations.

It is recommended that the thinning in stands A and D be accomplished in two separate operations with removal of 50% of the total cut five years after the initial 50% cut (see table). This would allow the trees to become stabilized and more wind firm.

Only a few local areas need to be thinned in stand C. The stand as a whole is only slightly above the optimum stocking level for timber production. These heavily stocked areas are readily identified from aerial photographs (photo number 2274-121).

It is recommended that the RMYLD (RM-199) computer program be used to analyze each prospective cutting area to determine the projected yields at periodic cutting intervals while taking into account the effects of dwarf mistletoe.

The cruise results compiled in this report were not analyzed with this program because;

1. Each unit covered a relatively large area of varying stand structure.
2. the \overline{DMR} varied throughout the individual stands
3. stands B and C contain a species mixture greater than the program tolerances. (no more than 10% of the trees should be of different species.)

Even though some of the slopes exceed 30% (see map) they are not extensive in area. It is suggested that these areas be harvested via a road system running along the contour of the land from east to west.

THE TIMBER RESOURCE

S36 T12N R76W

STANDS

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Species Composition by % of BA	100%LP	76.1%LP 10.9% Limber pine 6.5% Spruce 4.3%DF 2.2%PP	72.7%LP 15.1%DF 12.1% Limber pine	100%LP
Acreage	230	80	150	49
Aspect	North	East	North	South
Average Elevation	8800	8640	8500	9000
Average Percent Slope	27%	10%	18%(varies)	25%
Site Index	62	55	47	70
CCF (Lodgepole pine)	165	147	118	147
Average Age of Dominants	66	86	77	64
Number of Rings/Last Inch	25	28	25	25
Percent Growth	2.24%	1.60%	1.68%	1.58%
Average Percent Defect	4.41%	7.38%	14.3%	3.0%

THE TIMBER RESOURCE
STAND DATA

Stand A

BAF 20-25 Sample Points - 8.4% Sampling Error

	<u>Total Stand</u>	<u>4-9" DBH</u>	<u>10"DBH & Greater</u>
Trees/Acre	590	571	19
Average DBH	6.1	5.9	11.1
Average Height	35.1'	32.9'	53.7'
BA/Acre	120	107	113
Merchantable Cu. Ft./Acre	1531	1204	362
Board Feet/Acre	5870	4467	1403
Posts & Poles Linear Ft./Acre	-	16,242	-
Total Stand Volumes			
Merchantable Cu. Ft.	352,130	276,920	83,260
Board Feet	1,348,000	1,027,410	322,690
Linear Feet	-	3,735,798	-

Stand B

BAF-20, 8 Sample Plots, 6% Sampling Error

	<u>Total Stand</u>	<u>4-9" DBH</u>	<u>10"DBH & Greater</u>
Trees/Acre	370	327	43
Average DBH	8.13	5.8	12.7
Average Height	36.7'	33.7'	46.7'
BA/Acre	115 (includes	60	37.5
Merchantable Cu. Ft./Acre	1568 Limberpine)	710	858
Board Ft./Acre	6399	2580	3820
Posts & Poles Linear Ft./ Acre	-	11,418	-
Total Stand Volumes			
Merchantable Cu. Ft.	125,440	56,800	68,640
Board Feet	511,920	206,400	305,600
Posts & Poles Linear Feet	-	913,440	-

Stand Data Continued

Stand C

BAF-20, 8 Sample Plots, - 17.7% Sampling Error

	<u>Total Stand</u>	<u>4-9" DBH</u>	<u>LP only</u>	<u>DF only</u>
Trees/Acre	298 (includes limber pine)	248	236	38
Average DBH	7.12	6.23	6.83	7.70
Average Height	34.4'	33.9'	34.6'	37.1'
BA/Acre	82.5	52.5	60.0	12.5
Merchantable Cu. Ft./Acre	-	701	904	164
Board Feet/Acre	-	2670	3569	470
Post & Pole Linear Feet/Acre	-	6518	-	-
Total Stand Volumes				
Merchantable Cu. Ft.	-*	105,150	135,600	24,600
Board Feet	-*	400,500	535,350	70,500
Linear Feet	-	977,700	-	-

*Total Stand Volumes not valid due to the presence of a non-commercial species - Limber pine.

Merchantable linear feet figured as 75% of total height.

Stand D

BAF-20, 19 Sample Points, - 9% Sampling Error

	<u>Total Stand</u>	<u>4-9" DBH</u>	<u>10" DBH & Greater</u>
Trees/Acre	481	449	32
Average DBH	6.9"	6.6"	10.9"
Average Height	37.8'	35.9'	47.0'
BA/Acre	127	106	21
Merchantable Cu. Ft./Acre	1963	1490	472
Board Feet/Acre	7773	5787	1986
Posts & Poles Linear Feet/Acre	-	11,969	-
Total Stand Volumes			
Merchantable Cu. Ft.	96,187	73,010	23,128
Board Feet	380,877	283,563	97,314
Linear Feet	-	586,481	-



ROOSEVELT
NATIONAL FOREST

BOULDER

$\frac{25}{36}$

GRASS CAP

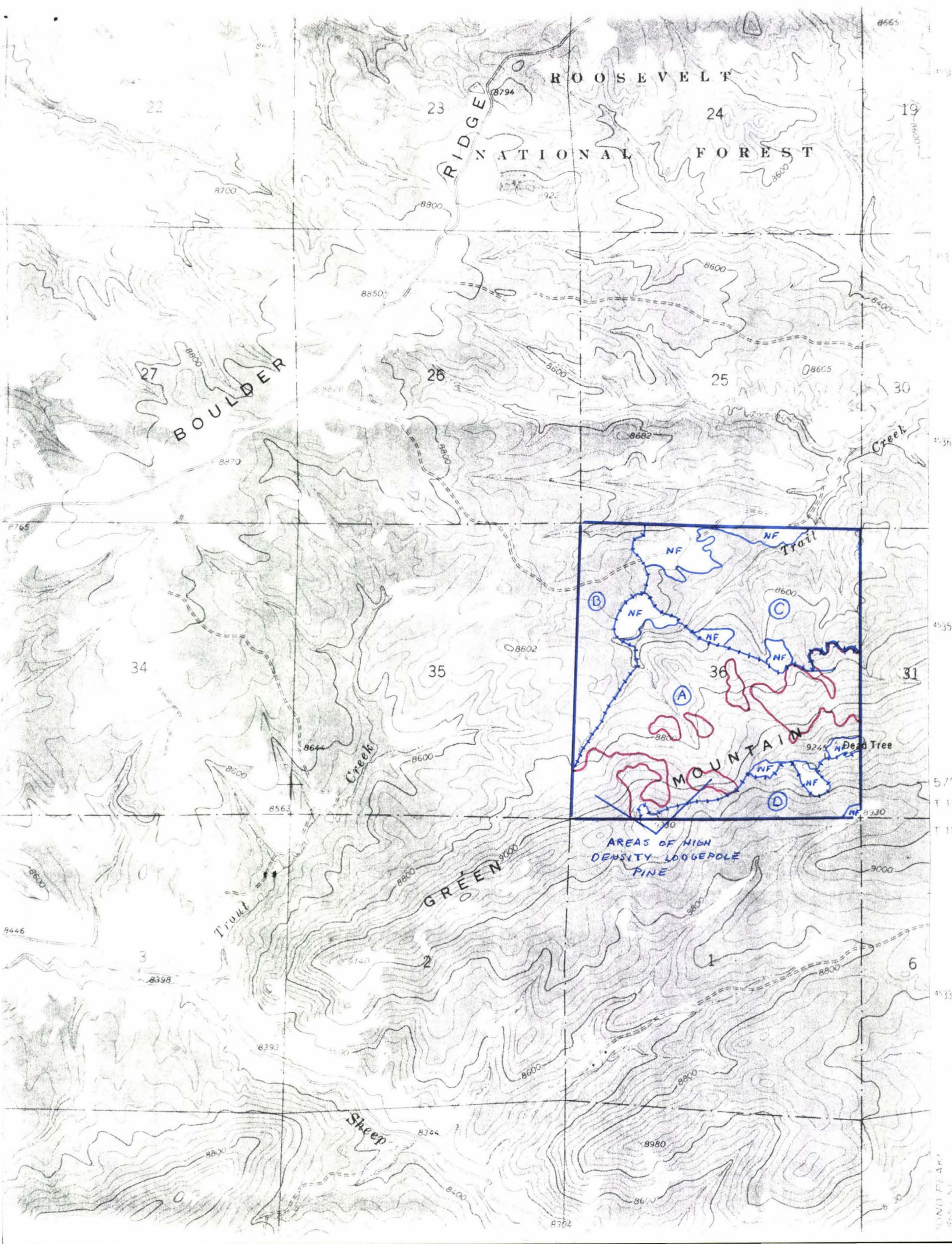
GRASS CAP

KERF PILE X

MOUNTAIN

SLOPES GREATER THAN 30%

GRASS CAP



LOGEPOLE THINNING GUIDE BASED ON WINDFALL RISK AND BASAL AREA

	High Windfall Risk Situations	Moderate Windfall Risk Situations	Low Windfall Risk Situations
Basal Area of Existing Stand	<ol style="list-style-type: none"> 1. Ridge tops. 2. Moderate to steep middle south and west-facing slopes not protected to the windward and all upper south and west-facing slopes. 3. Saddles in ridge tops. 	<ol style="list-style-type: none"> 1. Valley bottoms parallel to the direction of prevailing winds. 2. All lower and gentle middle south and west-facing slopes not protected to the windward. 3. Moderate to steep middle and all upper north and east-facing slopes. 4. Moderate to steep middle south and west-facing slopes protected by considerably higher ground not far to windward. 	<ol style="list-style-type: none"> 1. Valley bottoms except where parallel to the prevailing winds, and all flat areas. 2. All lower and gentle middle north and east-facing slopes. 3. All lower and gentle middle south and west-facing slopes that are protected by considerably higher ground not far to windward.
Less Than 120	Two stages required. Cut 1: Cut 50% of total trees which need to be removed to achieve desired stocking level. Cut 2: Five years later. Cut to desired stocking, but no lower than 80 GSL.	Thin to desired level in one cut.	Thin to desired level in one cut.
More Than 120	Three stages required. Cut 1: Cut 30% of total trees which need to be removed to achieve desired stocking. Cut 2: Five years later. Cut 50% of the remaining trees which need to be cut to achieve desired stocking. Cut 3: 10 years after second cut. Thin to desired stocking, but not lower than 80 GSL.	Two steps required. Cut 1: Cut 50% of trees which need to be removed to achieve desired stocking level. Cut 2: Five years later, cut to desired stocking level.	Thin to 100 GSL in first cut. If lower stocking level is desired, wait five years and cut to desired level.

VOLUME SPECIFICATIONS

All volume figures were derived from the publications listed below.

PONDEROSA PINE

Board Foot Volumes

Publication - RM-2

Table - 5a

Specifications - Scribner rule

Top diameter variable

Stump height 1.0 foot

Total height in feet

Minimum DBH - 12"

Cubic Foot Volumes

Publication - RM-2

Table - 2a

Specifications - Top diameter 4.0 inches inside bark

Stump height 1.0 foot

Total height in feet

Merchantable stem excluding stump and top

Minimum DBH - 5"

LOGEPOLE PINE

Board Foot Volumes

Publication - RM-157

Table - 1

Specifications - Scribner rule

Top diameter 6.0 inches inside bark

Stump height 0.7 foot

Total height in feet

Minimum DBH - 6"

Cubic Foot Volumes

Publication - RM-157

Table - 3

Specifications - Top diameter 6.0 inches inside bark

Stump height 0.7 foot

Number of 16.5 foot logs

Minimum DBH - 6"

Merchantable stem excluding stump and top

LINEAR FEET

All linear feet calculations are based on an assumed merchantable height of 75% of total height, unless otherwise noted.

LITERATURE SITED

RM-199

Edminister, C. B.
1978, RMYLD: Computation of yield tables for even-aged and two-storied stands.

RM-121

Alexander, R. R.
1974, Silviculture of subalpine forests in the central and southern Rocky Mountains: The Status of Our Knowledge

Dept. of Agriculture Bulletin #234

Mason, D. T.
1915, Utilization and management of lodgepole pine in the Rocky Mountains.

RM-92

Alexander, R. R.
1972, Partial cutting practices in old-growth lodgepole pine.

PSW-31

Symposium on Dwarf Mistletoe Control through Forest Management

Hawksworth

1978, Intermediate cuttings in mistletoe-infested lodgepole pine and southwestern ponderosa pine stands.

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date December 8, 1977
2. Legal Description: Sec. 36 Twp. 7N R. 71W
3. Geographic Location: County Larimer Other 25 miles west of Fort Collins up Buckhorn Creek (turn left just after the pavement ends).
4. Acreage: Forest 370A Other (describe) 270A - rangeland and grass meadows.
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.) The section boundaries are marked by brass caps and are fenced for the most part, although in some places, there is little more than a few posts left. A small stock pond has been constructed in the NE $\frac{1}{4}$ - it always has water according to the lessee. See map for road and stream locations.
6. Water for Fire Control Small stock pond in the NE $\frac{1}{4}$
7. Major Forest Type(s) Ponderosa pine (a few Douglas-fir and aspen may be found in the draws).
8. Estimated Volumes See attached page
9. Growth Data See attached page
10. General Stand or Range Condition Fair to good condition. 80 to 100 head per year on this and adjoining property.
11. Insects & Disease The Dwarf Mistletoe infestation is moderate to light in this area. See attached page for details on the MPB infestation.

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Posts, poles, small sawlogs
and firewood
13. Potential Markets Local cutters and the Fort Collins area
markets.
14. Cutting Recommendations Salvage log the MPB kills for lumber or
firewood, thin the dense stands of Ponderosa pine.
15. Subdivision Potential The central and eastern portion of the
section would provide suitable sites for mountain homes.
16. Recreation Potential Good hunting area
17. Priority for Management Work: High _____ Medium X Low _____
18. Management & Protection Goals 1) Protect from wildfire, 2) Reduce
the fire hazard through salvage logging of dead trees, 3) Release
the remaining stands through thinning.
19. Lessee's Name Sotaburg - house at end of pavement on Buckhorn Road.
20. Watershed Condition or Erosion Some erosion occurring along the
roadbed in the meadows.
21. Should State Retain or Dispose (give reasons) Grazing lease and
timber value.

(Attach copys of topog or sketch map)

Forester in Charge Jansky Date 12-8-77

Quad - Buckhorn Mtn.

Photos - 2073-182 (Flight line 59)
1973 Color
Fort Collins District

STAND DESCRIPTION FOR S36 T7N R71W

There is a severe infestation of MPB to the west and south of this section. Nearly 80% of the trees have been killed in these areas. However, the problem is less severe on the school section. MPB may be found throughout the stands, but only in pockets. The largest infestation occurs in the stand along the northern edge of the State boundary. Salvage logging and firewood cutting would be available in the accessible areas.

ADVISABLE

The Ponderosa in this section was cut over between 1949 and 1953 by the present lessee (Sotaburg). He is presently doing salvage logging on the adjacent National forest land.

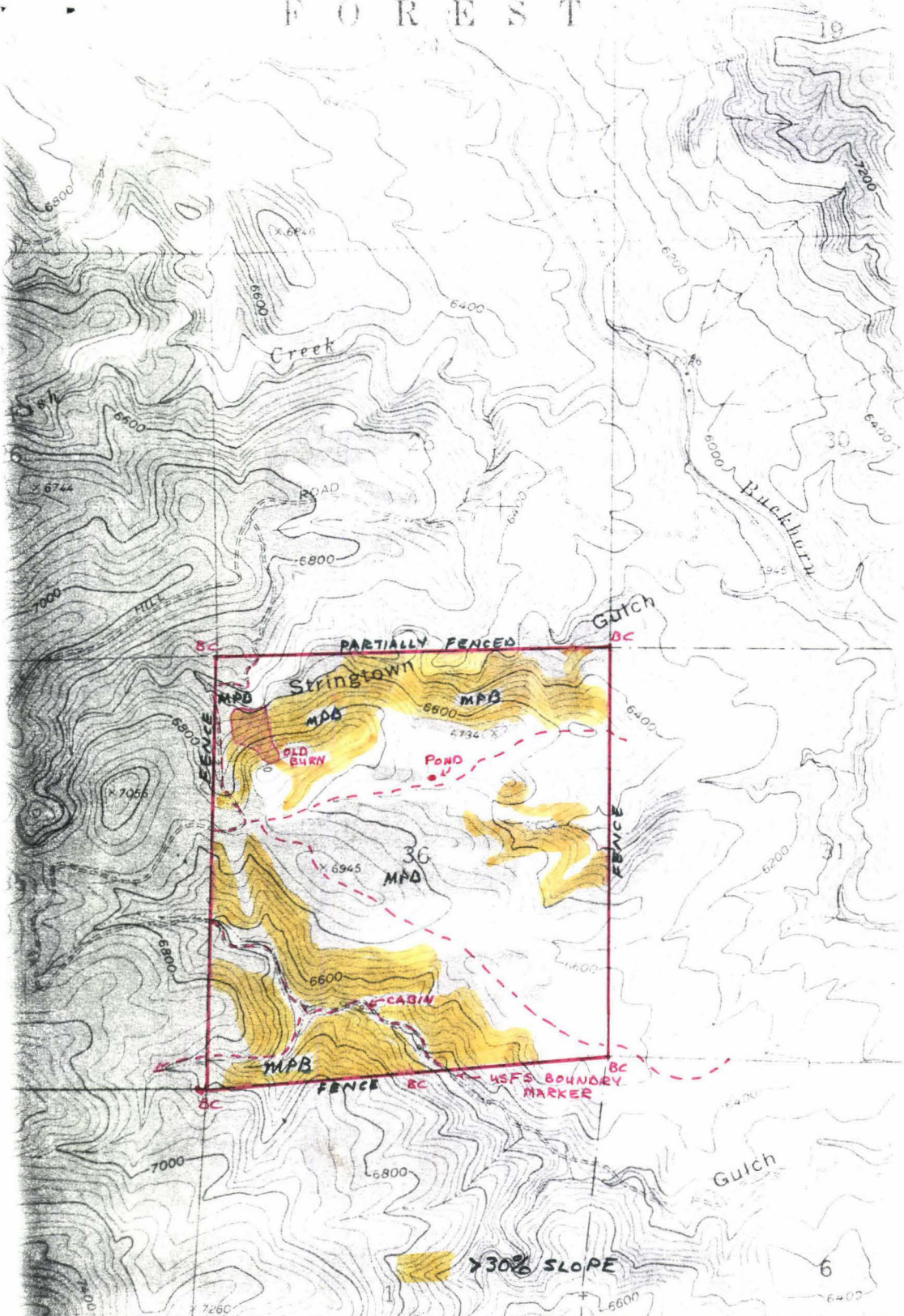
The map indicates the location of a six acre fire which occurred in approximately 1967.

The present stand is primarily comprised of trees ranging from doghair to 10" DBH and from 20 to 40 feet tall. There are a number of patches of older trees which were not cut in '49 which average 10-15" DBH and 50 to 60 feet tall. The dense, almost doghair stands, occur in the central portion of the section on moderate slopes. There is abundant reproduction along the perimeters of this stand.

Overall, there is some merchantable timber on this section, but due to the excessive slopes in many areas, the accessible volume is low. Some TSI work and salvaging of MPB kills is recommended.

F O R E S T

19



STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date July 11, 1978
2. Legal Description: Sec. 16 Twp. 10N R. 76W
3. Geographic Location: County Larimer Other North Middle Mountain
near four corners area on the Laramie River
4. Acreage: Forest 140 acres Other (describe) 500 acres sagebrush-
grassland
5. Physical Features (boundaries, fences, section corners, roads, streams,
water developments, etc.) No water developments were located. See
the attached map for the remaining details.
6. Water for Fire Control McIntyre Creek and Laramie River
7. Major Forest Type(s) Lodgepole pine, aspen
8. Estimated Volumes BA/A 120, Ave DBH 6.5", ave. ht. 39'
9. Growth Data 34 rings/last inch average - slow growth rate
10. General Stand or Range Condition Stagnated and disease infested
11. Insects & Disease Over half the stand is severely infested with
Dwarf Mistletoe.

* Upon completing report, send copy to state lands staff forester,
Land Board forester, and Land Board. Report due within seven days
following reconnaissance.

12. Available Forest Products Posts and poles
13. Potential Markets Laramie and Fort Collins areas.
14. Cutting Recommendations Thin to BA/A80 where the mistletoe infestation is light or nonexistent.
15. Subdivision Potential Fire hazard is high within the lodgepole stand and in other areas where the sagebrush is 72" tall or taller
16. Recreation Potential No specific attraction -, some hunting possible
17. Priority for Management Work: High _____ Medium X Low _____
18. Management & Protection Goals Eliminate the high incidence of Dwarf Mistletoe and reduce the stocking level to increase the average annual increment.
19. Lessee's Name Diamond Trail Ranch
20. Watershed Condition or Erosion No problems noted
21. Should State Retain or Dispose (give reasons) Grazing lease and moderate potential timber value.

(Attach copies of topog or sketch map)

Forester in Charge Jansky Date 9/5/78

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date July 1978
2. Legal Description: Sec. 16 Twp. 8N R. 70W
3. Geographic Location: County Larimer Other Two miles west of Ted's Place, just southwest of the Poudre River.
4. Acreage: Forest 570 acres Other (describe) 70 acres
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.) Note: No field recon was performed on this section for the following reasons:
 1. The lessee is very reluctant to grant admission to the land.
 2. Most of the slopes exceed 30%
 3. Most of the accessible merchantable material has already been harvested.
6. Water for Fire Control Poudre River
7. Major Forest Type(s) Ponderosa Pine, Douglas-Fir
8. Estimated Volumes _____
9. Growth Data _____
10. General Stand or Range Condition _____
11. Insects & Disease _____

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products _____

13. Potential Markets Fort Collins area

14. Cutting Recommendations None at present

15. Subdivision Potential Limited due to the excessive slopes.

16. Recreation Potential Hunting, hiking, horseback riding

17. Priority for Management Work: High _____ Medium _____ Low X
18. Management & Protection Goals _____

19. Lessee's Name Walter O. Lee Bellvue, CO 80521 (Graves Dairy)
20. Watershed Condition or Erosion _____

21. Should State Retain or Dispose (give reasons) Grazing lease

(Attach copys of topog or sketch map)

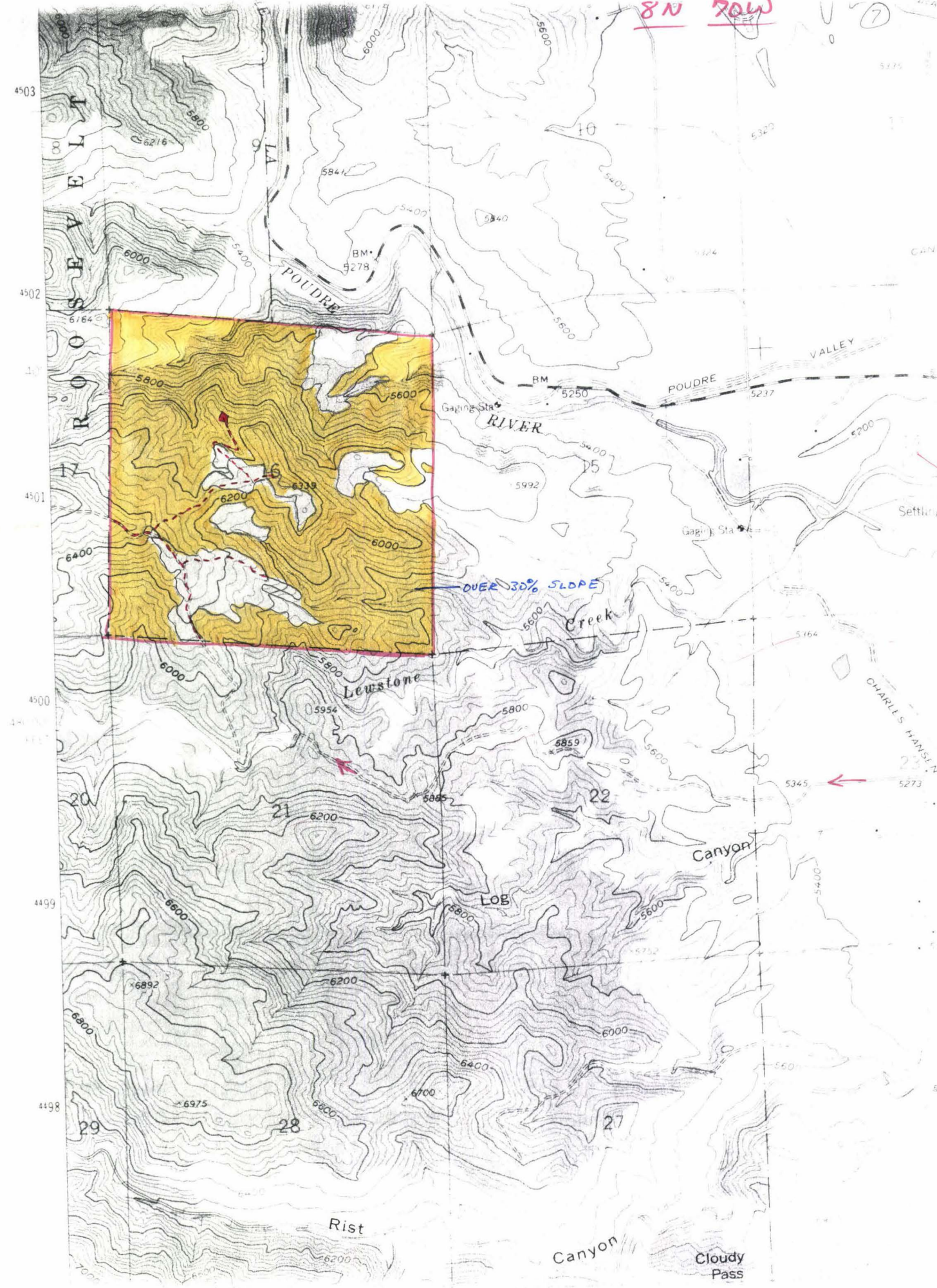
Forester in Charge *Donahy* Date 9/5/78

Quad - LaPorte
Photos - 574-190 (FL 61)
1975 color
Fort Collins District

8N 70W

⑦

Water Jan 484-1787
Crested 482-5789



STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date July 12, 1978
2. Legal Description: Sec. 36 Twp. 11N R. 77W
3. Geographic Location: County Larimer Other La Garde Creek
4. Acreage: Forest 575 acres Other (describe) 170 acres sagebrush
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.)
No water developments or section corners were located. See map for additional details on streams, fences and roads.
6. Water for Fire Control La Garde Creek and Jenkins Creek
7. Major Forest Type(s) Lodgepole pine with minor amounts of aspen and ponderosa pine
8. Estimated Volumes Basal area per acre in excess of 200
9. Growth Data Stagnant
10. General Stand or Range Condition Overstocked
11. Insects & Disease Dwarf Mistletoe found in occassional pockets but not widespread

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Posts and poles with a few small sawlogs
13. Potential Markets Laramie or Fort Collins area
14. Cutting Recommendations Thin to a BA/A of 80 and clear cut the patches of Dwarf Mistheteo infested trees.
15. Subdivision Potential Low - due to the high fire hazard and steep slopes.
16. Recreation Potential Hiking, hunting, horseback riding
17. Priority for Management Work: High _____ Medium ^(cruise) X Low _____
18. Management & Protection Goals Reduce the stocking level to increase the annual increment and remove the disease infested trees
19. Lessee's Name _____
20. Watershed Condition or Erosion No problems noted
21. Should State Retain or Dispose (give reasons) Potential area for a post and pole timber sale.

(Attach copys of topog or sketch map)

Forester in Charge *Shirley* Date 9/5/78

Quad - Glendevy and Crazy Mountain
Photos - EcB - 2 - 43 (6)

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date July 10, 1978
2. Legal Description: Sec. 36 Twp. 12N R. 72W
3. Geographic Location: County Larimer Other 2 miles south of
the Wyoming State Line west of highway 287.
4. Acreage: Forest 385 Other (describe) 100 acre rock
outcroppings, brush and rangeland.
5. Physical Features (boundaries, fences, section corners, roads, streams,
water developments, etc.) _____
The section itself is unfenced and only the NW section corner
was located. The road is passable by 2WD pick-up. No water
developments were located. See map for additional details.
6. Water for Fire Control Fish Creek and Georges Gulch (both flowing
at the time of inspection)
7. Major Forest Type(s) Ponderosa pine, Douglas-fir
8. Estimated Volumes 3-5 MBF/A
9. Growth Data low to medium vigor
10. General Stand or Range Condition Fair condition - stable range
trend.
11. Insects & Disease Mountain Pine Beetle is prevalent throughout
the area. Groups of 10 to 50 hit trees may be found in scattered
locations.

* Upon completing report, send copy to state lands staff forester,
Land Board forester, and Land Board. Report due within seven days
following reconnaissance.

12. Available Forest Products Firewood, small sawlogs, a few posts
and poles, and some Douglas-fir Xmas Trees.
13. Potential Markets Laramie or Fort Collins area
14. Cutting Recommendations See additional notes
15. Subdivision Potential Some suitable sites available in the open
meadows, however, any brushy areas or steep areas must be avoided.
16. Recreation Potential No specific attraction here some hunting
or hiking possible
17. Priority for Management Work: High _____ Medium _____ Low X
18. Management & Protection Goals Cut the mature and overmature
Ponderosa and the beetle kills to increase the vigor of the
stand and reduce fire hazard.
19. Lessee's Name John Clark Moen Virginia Dale, CO 80548
20. Watershed Condition or Erosion Some erosion occurring along the
road bed at teh east section line.
21. Should State Retain or Dispose (give reasons) Grazing lease and
moderate timber value.

(Attach copys of topog or sketch map)

Forester in Charge Jansky Date September 5, 1978

Quad - Cherokee Park
Photos - 774-54 (F.L. 56)
Color 1975
Fort Collins CSFS District

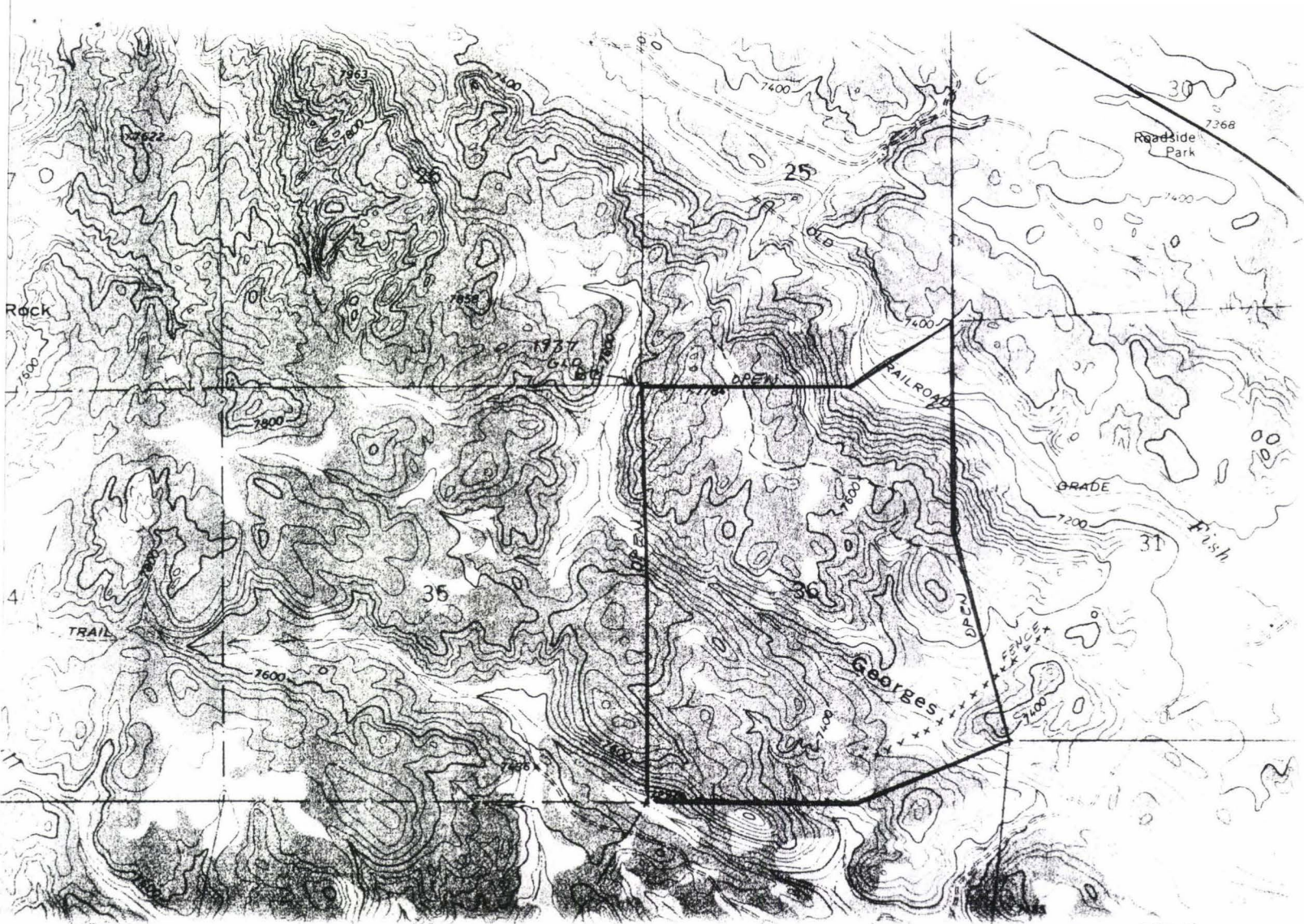
Additional Notes for S36 T12N R72W

General Stand Description

Most of this section is covered with fairly open grown Ponderosa pine, with volumes running from 3 to 5 MBF/A and heights in the 30 foot class, and DBH's under 12". Many of the sites appear poor with shallow rocky soils. Some Douglas-fir does occur on the northern aspects but usually on slopes exceeding 30%.

Some thinning should be done in the dense patches of Ponderosa pine and Douglas-fir where slopes permit. Also the mature and over-mature pine as well as the beetle killed trees should be harvested. These may be as much as 250 MBF of small sawlog material scattered along the bottoms and along the edges of the stands. There are several hundred beetle killed trees in the SW $\frac{1}{4}$ which could be harvested for firewood with perhaps a few house logs.

RPJkrp



S36 T12N R72W

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date December 8, 1977
2. Legal Description: Sec. 36 Twp. 7N R. 71W
3. Geographic Location: County Larimer Other 25 miles west of
Fort Collins up Buckhorn Creek (turn left just after the pavement
ends).
4. Acreage: Forest 370A Other (describe) 270A - rangeland
and grass meadows.
5. Physical Features (boundaries, fences, section corners, roads, streams,
water developments, etc.) The section boundaries are marked by brass
caps and are fenced for the most part, although in some places, there
is little more than a few posts left. A small stock pond has been
constructed in the NE $\frac{1}{4}$ - it always has water according to the lessee.
See map for road and stream locations.
6. Water for Fire Control Small stock pond in the NE $\frac{1}{4}$
7. Major Forest Type(s) Ponderosa pine (a few Douglas-fir and aspen
may be found in the draws).
8. Estimated Volumes See attached page
9. Growth Data See attached page
10. General Stand or Range Condition Fair to good condition.
80 to 100 head per year on this and adjoining property.
11. Insects & Disease The Dwarf Mistletoe infestation is moderate to
light in this area. See attached page for details on the MPB
infestation.

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Posts, poles, small sawlogs
and firewood
13. Potential Markets Local cutters and the Fort Collins area
markets.
14. Cutting Recommendations Salvage log the MPB kills for lumber or
firewood, thin the dense stands of Ponderosa pine.
15. Subdivision Potential The central and eastern portion of the
section would provide suitable sites for mountain homes.
16. Recreation Potential Good hunting area
17. Priority for Management Work: High _____ Medium X Low _____
18. Management & Protection Goals 1) Protect from wildfire, 2) Reduce
the fire hazard through salvage logging of dead trees, 3) Release
the remaining stands through thinning.
19. Lessee's Name Sotaburg - house at end of pavement on Buckhorn Road.
20. Watershed Condition or Erosion Some erosion occurring along the
roadbed in the meadows.
21. Should State Retain or Dispose (give reasons) Grazing lease and
timber value.

(Attach cyps of topog or sketch map)

Forester in Charge Jansky Date 12-8-77

Quad - Buckhorn Mtn.

Photos - 2073-182 (Flight line 59)
1973 Color
Fort Collins District

STAND DESCRIPTION FOR S36 T7N R71W

There is a severe infestation of MPB to the west and south of this section. Nearly 80% of the trees have been killed in these areas. However, the problem is less severe on the school section. MPB may be found throughout the stands, but only in pockets. The largest infestation occurs in the stand along the northern edge of the State boundary. Salvage logging and firewood cutting would be available in the accessible areas.

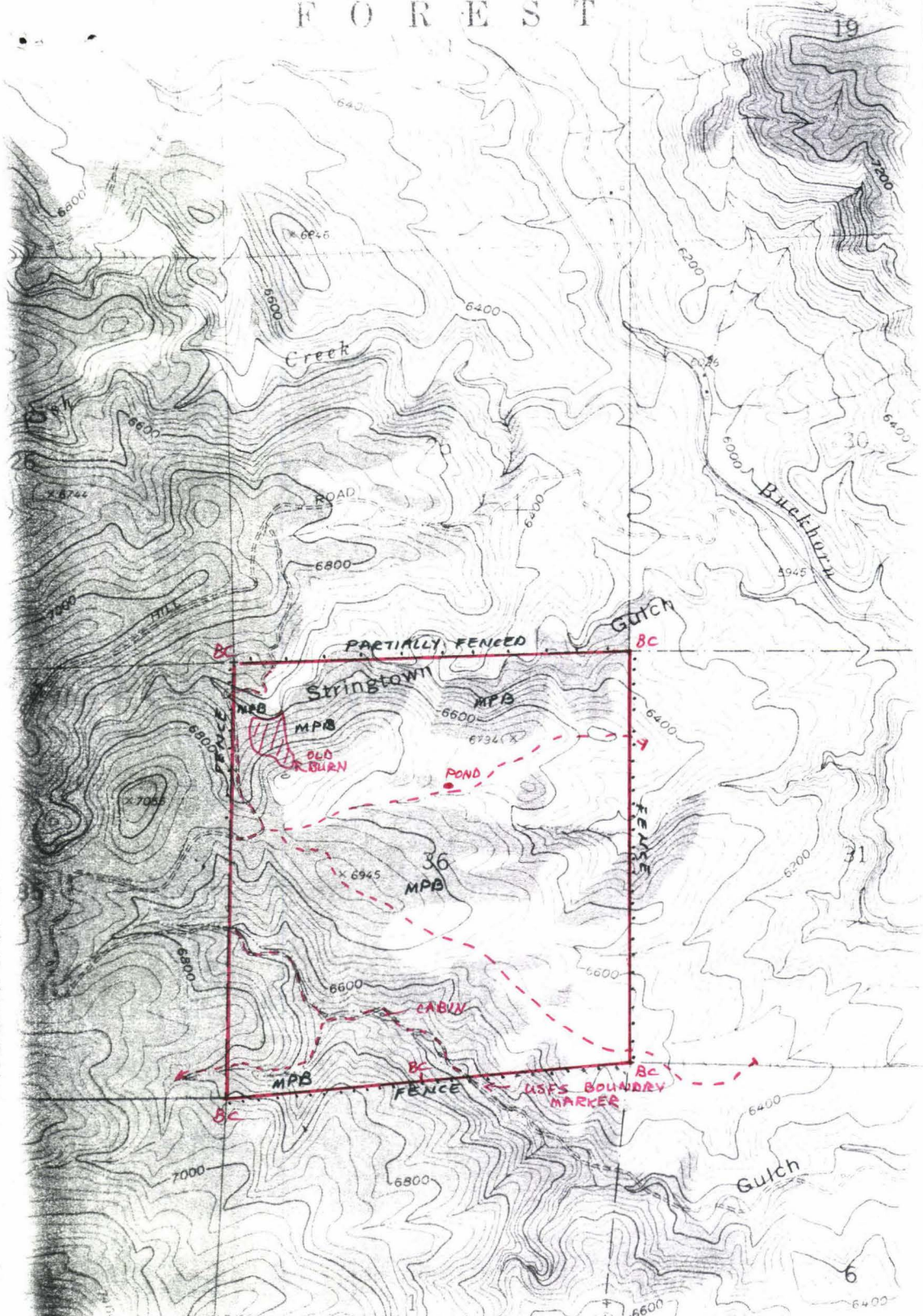
The Ponderosa in this section was cut over between 1949 and 1953 by the present lessee (Sotaburg). He is presently doing salvage logging on the adjacent National forest land.

The map indicates the location of a six acre fire which occurred in approximately 1967.

The present stand is primarily comprised of trees ranging from doghair to 10" DBH and from 20 to 40 feet tall. There are a number of patches of older trees which were not cut in '49 which average 10-15" DBH and 50 to 60 feet tall. The dense, almost doghair stands, occur in the central portion of the section on moderate slopes. There is abundant reproduction along the perimeters of this stand.

Overall, there is some merchantable timber on this section, but due to the excessive slopes in many areas, the accessible volume is low. Some TSI work and salvaging of MPB kills is recommended.

F O R E S T



STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date December 14, 1977
2. Legal Description: Sec. 36 Twp. 10N R. 72W
3. Geographic Location: County Larimer Other Just north of Lone Pine Creek
4. Acreage: Forest 450A Other (describe) 200A grass rangeland
5. Physical Features (boundaries, fences, section corners, roads, streams, water developments, etc.) No water developments were located - see map for all additional details.
6. Water for Fire Control Small intermittent stream through the center of the section.
7. Major Forest Type(s) Ponderosa pine, Douglas-fir, Rocky Mountain Juniper
8. Estimated Volumes See attached page
9. Growth Data -
10. General Stand or Range Condition Good - abundant grasses, low grazing pressure
11. Insects & Disease MPB in pockets of 10-20 trees, Dwarf mistletoe infestation in the Ponderosa pine

* Upon completing report, send copy to state lands staff forester, Land Board forester, and Land Board. Report due within seven days following reconnaissance.

12. Available Forest Products Firewood, sawlogs, posts, poles and Christmas trees
13. Potential Markets Fort Collins area
14. Cutting Recommendations Remove the beetle killed trees, and harvest the mature pine along the lower slopes
15. Subdivision Potential Some suitable sites available on the open areas with slopes less than 30%
16. Recreation Potential Hunting, hiking, etc. - scenic area
17. Priority for Management Work: High _____ Medium _____ Low x
18. Management & Protection Goals Protect from wildfire and maintain the good range condition and reduce the MPB losses
19. Lessee's Name Estate of Josephine A. Lamb
Adelphia Glass & William H. Allen, Administrators
20. Watershed Condition or Erosion P.O. Box 608, Fort Collins, CO 80521
No problems noted
21. Should State Retain or Dispose (give reasons) Grazing lease, game management area, and moderate timber potential

(Attach copys of topog or sketch map)

Forester in Charge Jansky Date 12-15-77

Quad - Haystack Gulch

Photos - 774-42 (FL 56)
1974 color
Fort Collins District

Additional Notes for S36 T10N R72W

<u>STAND</u>	<u>DESCRIPTION</u>
A	Poorly stocked Ponderosa pine mixed with some Rocky Mountain Juniper. A few 15-20" DBH Ponderosa may be found along the edges near the meadow. Slopes exceed 30% for the most part.
B	Ponderosa pine, medium stocked Slopes exceed 30% No cutting recommended
C	Mostly Douglas-fir with some Ponderosa pine on the lower slopes. Average DBH 6-8" with an occasional tree of 20-25" DBH. Well to overstocked pine along the meadow in the SE $\frac{1}{4}$. Some TSI work would be beneficial here. Products available - posts, poles, and Christmas trees.
D	Ponderosa pine - poor to medium stocking. Some sawlog size MPB kills here.
E	Ponderosa pine with Douglas-fir along the north aspect.

SUMMARY: There are some commercial size sawlogs along the edges and in the bottoms (est. 30 MBF). The Douglas-fir generally needs thinning. The overall limiting factors are excessively steep slopes and poor access.

STATE SCHOOL LAND
RECONNAISSANCE REPORT*

1. Reconnaissance Date December 13, 1977
2. Legal Description: Sec. 36 Twp. 11N R. 72W
3. Geographic Location: County Larimer Other Cherokee Park Road
10.25 miles west of Highway 287.
4. Acreage: Forest 115A Other (describe) 525A grass
rangeland
5. Physical Features (boundaries, fences, section corners, roads, streams,
water developments, etc.) See map and photograph for these details.
The area north of the road is part of the Middle Cherokee Park Game
Management Reserve of the Division of Wildlife. It is essentially
non-forested as only scattered Juniper and Ponderosa pine occur here.
6. Water for Fire Control A small amount is available from the
creek which passes through the center of the section.
7. Major Forest Type(s) Ponderosa pine with some Douglas-fir on the
north slopes and the drainage bottoms.
8. Estimated Volumes Less than 400 cu. ft./acre.
9. Growth Data -
10. General Stand or Range Condition -
11. Insects & Disease Numerous pockets of MPB killed trees were
sighted. Many old dead standing trees visible.

* Upon completing report, send copy to state lands staff forester,
Land Board forester, and Land Board. Report due within seven days
following reconnaissance.

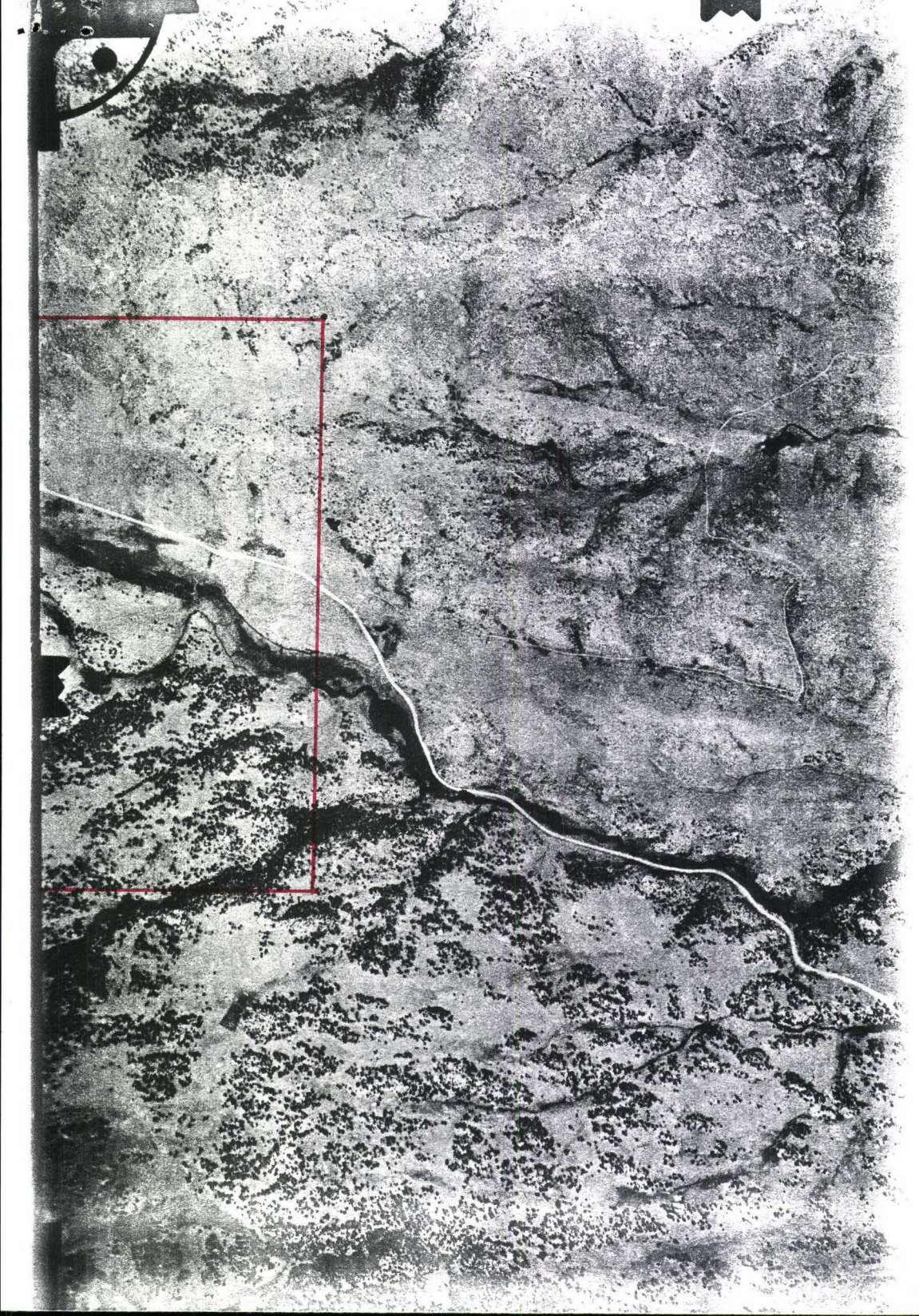
12. Available Forest Products Firewood, posts, poles and a few
small sawlogs
13. Potential Markets Fort Collins area
14. Cutting Recommendations None, except for firewood cutting
and perhaps some salvage logging of MPB kills.
15. Subdivision Potential Most of this section would be suitable for
homesites from the standpoint of low fire hazard and moderate
slopes.
16. Recreation Potential Hunting, hiking - no specific attraction
here
17. Priority for Management Work: High _____ Medium _____ Low X
18. Management & Protection Goals Control the MPB infestation, remove
the dead trees to reduce the fire hazard and thin any overly dense
stands.
19. Lessee's Name Partnership Investments of Minnesota, Inc.
2905 Metro Drive, Bloomington, Minnesota 55402
20. Watershed Condition or Erosion No problems
21. Should State Retain or Dispose (give reasons) Grazing lease
and limited timber potential

(Attach copys of topog or sketch map)

Forester in Charge Jansky Date 12-15-77

Quads - Cherokee Park and Haystack Gulch

Photo - 774-48 (FL 56)
1974 color - partial coverage
Fort Collins District



STATE LANDS
WITH
POSSIBLE MANAGEMENT POTENTIAL
—
GROUND RECONNAISSANCE RECOMMENDED
—
Larimer County

Township	Range	Section	Photo Number	Observations	
LaGarge	11N	77W	36	ECB-2-43 *(6)	300A well stocked LP.
E Shell Ck	12N	76W	36	ECB-2-111 (6B)	60A medium to well stocked LP.
Jimmy Ck.	11N	76W	36	ECB-2-116	30A LP, some spruce along stream.
Passy Ck	10N	76W	16	ECB-2-101 (15)	125A well stocked LP.
Sank Ck	11N	75W	16	ECB-5-47 (7)	100A well stocked LP.
Trail Ck	12N	74W	36	2274-120 (48)	Well stocked LP, some pole size DF. Entire section forested.
P-S. Side Rock	9N	74W	N $\frac{1}{2}$ 36	ECB-6-20 (21)	Steep slopes, PP, low volume and low stocking level.
Manhattan	9N	73W	W $\frac{1}{2}$ 16	472-80 (49)	50A of well stocked LP and DF on north slopes. Medium stocked PP on remaining area.
	4N	73W	36	574-30 (52)	Steep slopes and high elevations. Spruce on lower slopes. Upper slopes - limber or bristlecone pine.
Twin Sisters	12N	72W	36	774-54 (56)	Poor stocked PP with beetle kills. Pole size DF on north slopes.
George's Gulch	10N	72W	36	774-42 (56)	Poorly stocked PP, occasional beetle kills. Higher stocking level on north facing slopes.
Lone Pine	9N	72W	E 3/4 35	1572-366 (54)	40A of PP/DF mix. Some beetle kill evident.
Stevens Gulch	7N	71W	36	2073-182 (59)	Pole size PP poorly stocked. 100A of north slope PP/DF/LP mix.
Stringtown Gulch (Near Castor)	9N	70W	34	AIL-10R-15 (26)	40A PP, medium stocking.
Seaman Res	9N	70W	27	Not Available	300A forested (USGS Quad).
Graves	8N	70W	16	574-190 (61)	Pole size PP mixed with DF and LP on north slopes. Entire section forested.

ECB Series-1956 B&W
Remaining photos
-1974 Color
*Flight Line Number

DF - Douglas-fir
PP - Ponderosa pine
LP - Lodgepole pine
A - Acres