

STATE LAND
FOREST MANAGEMENT PLAN

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

S16 T11N R75W
SAND CREEK

Prepared by:
Richard P. Jansky

STATE LANDS
FOREST MANAGEMENT PLAN
A16 T11N R75W - Sand Creek - Larimer County

General Land Description

This section lies at the base of Bull Mountain with Sand Creek running by the southeast corner. The general aspect is easterly with an average elevation of 8800 feet. Most of the land is gently rolling except for the western half which slopes up to the west to nearly 9400 feet. Three intermittent streams originate within the section and run generally eastward to Sand Creek which eventually joins the Laramie River.

The southern and part of the western side is fenced along the Roosevelt National Forest boundary. The northern and eastern edges adjoin private land and are not fenced.

Fort Collins, Colorado and Laramie, Wyoming are the nearest manufacturing centers, each being over 60 miles distant. The main access route is a maintained county road which diagonally intersects the the southeast quarter of the section. See the access map for the locations of the numerous unimproved roads which cross the section.

Current land use is limited to seasonal grazing from June to October. The eastern half is more heavily grazed while some of the upper meadows in the western half appear to be untouched. The adjacent property to the east and west is presently being subdivided.

Vegetation

Forest Area

There are 160 acres of coniferous forest on this section; 143 acres of relatively pure, even aged lodgepole pine and 20 acres of subalpine fir. The fir often occurs in groups within the aspen stands. Aspen covers nearly 140 acres in scattered groups. The aspen stands average six to seven inches DBH and 30 to 40 feet tall (ocular estimate). The aspen also tends to have considerable defect in the form of crook and sweep, however taller and straighter trees do occur along the bottoms of the drainages. The lodgepole pine was cruised in two units. See the section on timber resources for complete stand data. Although the average basal area is 180 to 160 for these stands, in many local areas the density is well over 200. Additional sample plots should be taken within specific sale areas. Some areas show evidence of some very old cutting (by axe) and most of the lodgepole stands contain fire scarred stumps and snags from old burns.

Defect in these stands is due mainly to forked tops and sweep. Dwarf mistletoe is located in the southern edge of stand A although the infestation is not widespread. Damage caused by porcupine is present throughout the steeper slopes in the western quarter of the section. Reproduction is very sparse

with a few lodgepole seedlings in small openings or on disturbed sites. Only an occasional true fir seedling could be found under the dense lodgepole stands. However the fir are reproducing prolifically on a few limited sites (see timber type map).

Non-Forest Area

Approximately 340 acres are mountain rangeland including limited areas of big sagebrush. The prominent grass species present appears to be mountain muley. The soil is stable and no erosion problems are developing.

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.

The lodgepole pine stands on this section are overstocked and are partially infested with dwarf mistletoe. The present stocking levels are approximately GSL 240 for stand A and GSL 210 for stand B. A general stocking level of 100 has been determined as nearly optimum for timber production objectives, which indicates the extent of over stocking of these stands.

General recommendations for these stands are:

1. thin from below to a GSL of 100
2. patch cut small areas (3-5 acres) where the \overline{DMR} is greater than 3. (Only one such area at the southwestern edge of stand A was located.)
3. selectively thin the area surrounding the patch cuts, removing as many infected trees as possible without creating large openings. Usually trees with a DMR of 4 or higher should not be retained. (PSW-31)

The average age of these stands is approximately 80 years. Hawksworth has noted that age 70 years is generally considered to be the upper limit of thinning feasibility. However even a marked improvement can be seen even at this age. This stand therefore should be thinned as soon as economically feasible to avoid any further loss of growth response.

It has been shown that lodgepole pine is generally considered susceptible to windthrow (RM-121). Mason and Alexander have identified windfall risk situations based on exposure. According to their scheme stand A has a low risk rating, and stand B is also low risk except for the northwest portion where the slopes are greater than 30% where the windfall risk is moderate. Thinning to a GSL of 100 could be accomplished in one cut except for the area of moderate risk where only 50% of the total

cut should be harvested at a time with a five year interval between cuts to allow the trees to stabilize and become more wind firm.

No recommendations for management of the aspen stands are made due to the lack of a market for aspen products and the small size and generally low quality of the aspen present.

The subalpine fir reproduction should be managed for commercial Christmas tree production. A permit for cutting and culturing these trees over a five to ten year period should be granted to encourage complete development of this resource.

THE TIMBER RESOURCE

S16 T11N R75W

	STAND	
	<u>A</u>	<u>B</u>
Species Composition By % Of BA	(68%-LP (23%-FIR (9%-AS	100%-LP
Acreage	47	96
Aspect	East	East
Average Elevation	9000	9000
Average Percent Slope	20%	25%
Site Index	60	60
CCF (Lodgepole Pine)	195	170
Average Age of Dominants	77	81
Number of Rings/Last Inch	27	33
Percent Growth	1.97%	1.76%
Average Percent Defect	5.0% (all species)	2.7%

THE TIMBER RESOURCE
STAND DATA

Stand A

BAF 20 - 8 Sample Points - 4.0 % Sampling Error

	<u>Total Stand**</u>	<u>4-9"DBH</u>	<u>10"DBH & Greater</u>	<u>Lodgepole Total</u>
Trees/Acre	792	495	15	511
Average DBH	6.45	6.38	12.22	6.63
Average Height	47.7	42.7	51.6	49.4
BA/Acre	180	110	12.5	122
Merchantable Cu. Ft./Acre	3,555	2,240	315	2,555
Board Feet/Acre	14,136	8,870	1,395	10,205
*Post & Poles linear Ft./Acre	-	15,608	-	-
Total Stand Volumes				
Merchantable Cu. Ft.	167,085	89,600	12,600	102,200
Board Feet	565,440	354,800	55,800	410,600
Linear Feet	-	733,581	-	-

*Assumes a merchantable height of 75% of total height

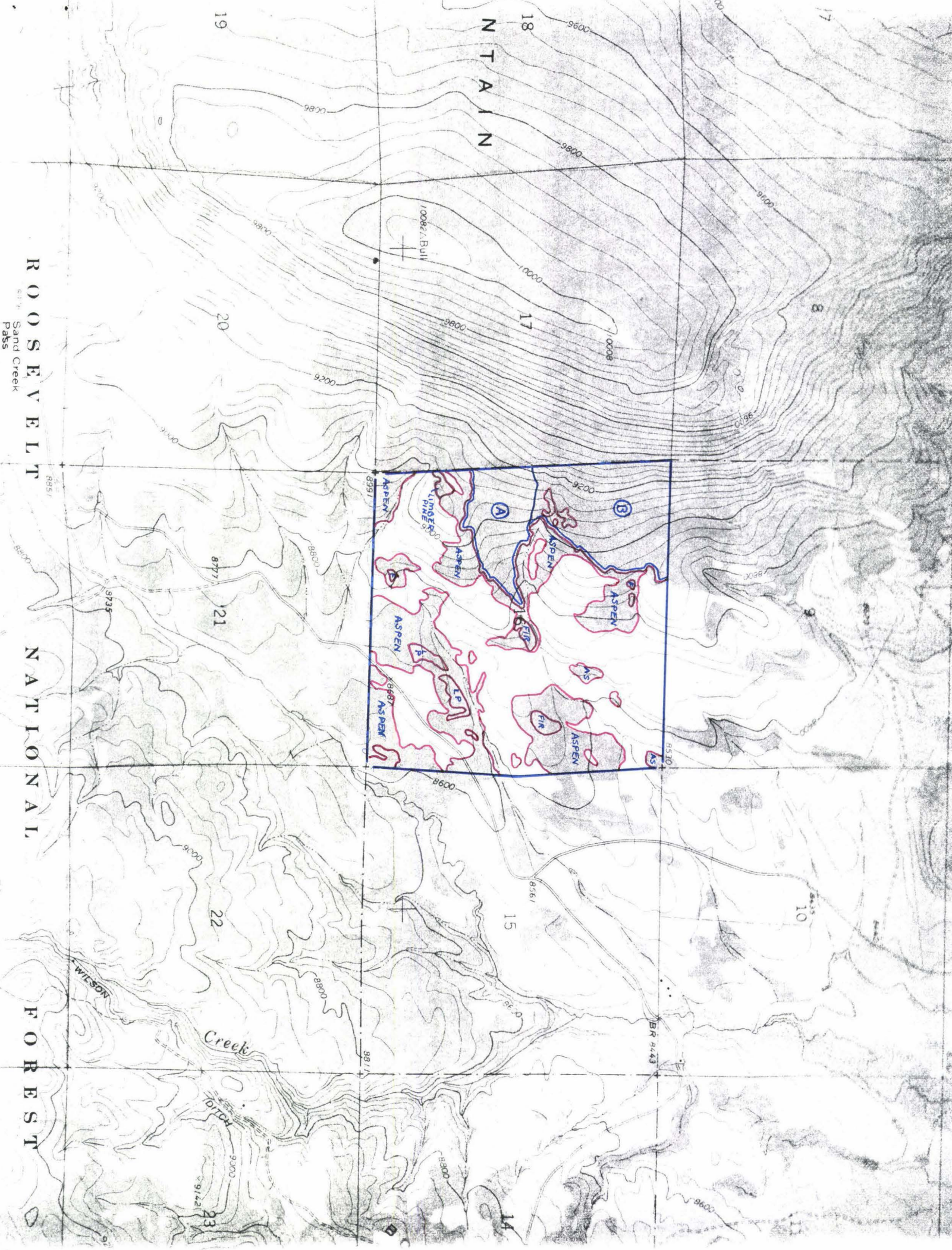
**Includes aspen, subalpine fir and lodgepole pine

Stand B

BAF 20 - 9 Sample Points - 11.4 % Sampling Error

	<u>Total Stand</u>	<u>4-9"DBH</u>	<u>10"DBH & Greater</u>
Trees/Acre	621	594	28
Average DBH	6.92"	6.68"	10.84"
Average Height	47.6'	47.3'	53.7'
BA/Acre	162	145	18
Merchantable Cu. Ft./Acre	3,345	2,890	459
Board Feet/Acre	13,460	11,518	1,942
*Posts & Poles Linear Feet/Acre	-	21,489	-
Total Stand Volumes			
Merchantable Cu. Ft.	321,120	277,440	44,064
Board Feet	1,292,160	1,105,728	186,432
Linear Feet	-	2,062,944	-

*Assumes a merchantable height of 75% of total height



ROOSEVELT NATIONAL FOREST

SAND CREEK PASS

MOUNTAIN

19

18

17

20

17

18

21

19

22

10

23

14

Creek

BR 2443

10082.7 Bull

8991

8530

8600

8961

9811

8800

9142

9000

8096

8600

9036

10008

10000

9986

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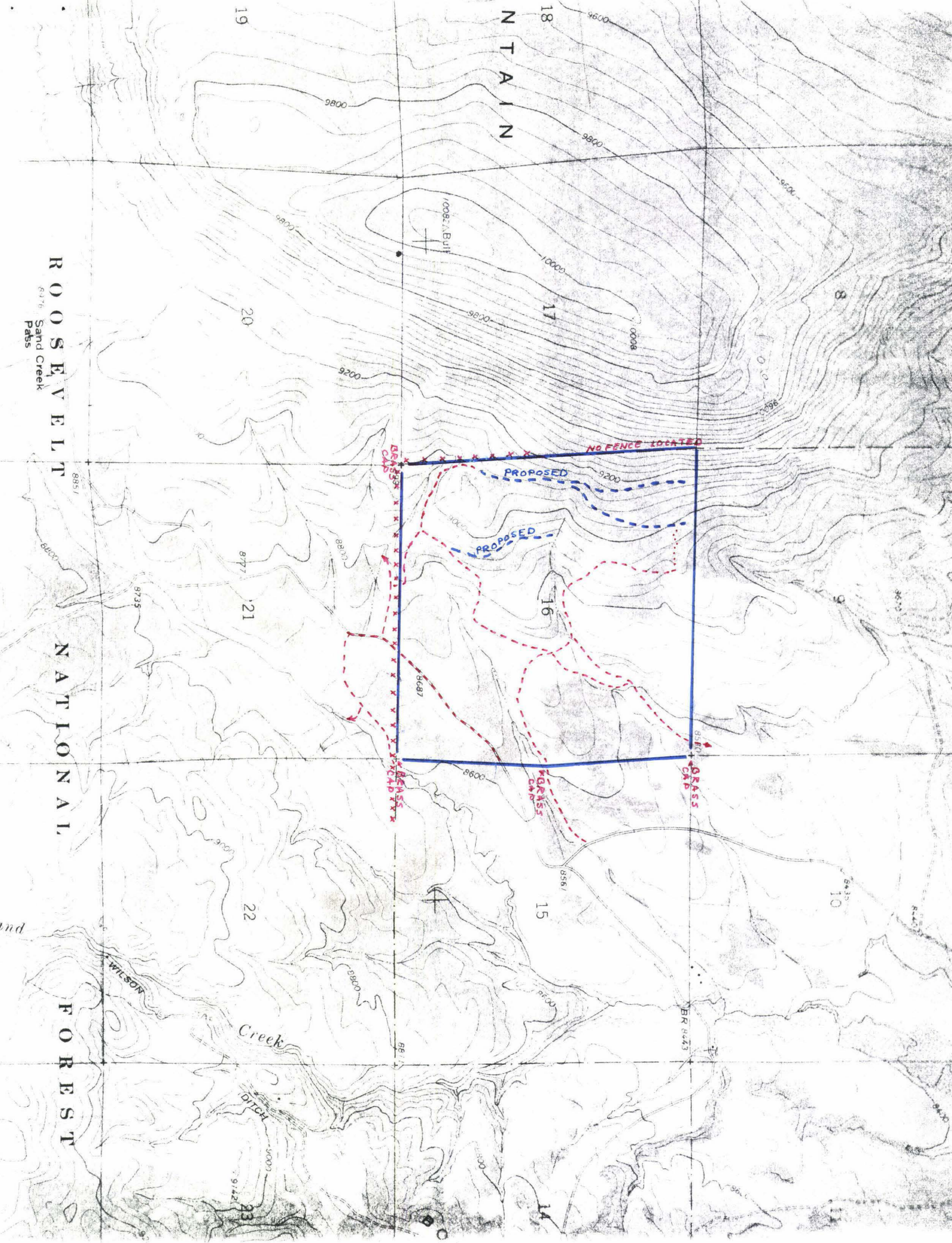
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6476 Sand Creek
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LOGEPOLE THINNING GUIDE BASED ON WINDFALL RISK AND BASAL AREA

	<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.

Volume Specifications
(continued)

DOUGLAS-FIR

Board Foot Volumes

Publication - R-2 supplement No. 12

Specifications - Scribner rule

Top diameter 8" inside bark

Total height in feet

Cubic Foot Volumes

Origin - Equations from Intermountain Forest & Range Experiment Station programmed by D. L. Brown

Specifications - Total height in feet

Minimum DBH - 5"

Merchantable stem excluding stump and top

SPRUCE

Board Foot Volumes

Publication - RM-95

Table - 4

Specifications - Scribner rule

Top diameter 6.0 inches inside bark

Stump height

Total height in feet

Minimum DBH - 7"

Cubic Foot Volumes

Publication - RM-95

Table - 2

Specifications - Top diameter 4.0 inches inside bark

Stump height 1.0 foot

Total height in feet

Merchantable stem excluding stump & top

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.

**FOREST PRODUCTS SALES AGREEMENT
STATE LANDS**



SALE NAME: Sand Creek/Trail Creek #7

THIS AGREEMENT, made this 29th day of May, 2008, by and between the State Board of Agriculture in behalf of the Colorado State Forest Service, Fort Collins District, lessee of the property subject to this agreement, hereinafter referred as the CSFS, and Duane Sellner, whose place of business is 43308 Weld County Rd. #15, Fort Collins, CO 80524 (970) 221-2135, hereinafter referred to as the PURCHASER.

RIGHT TO SELL:

The CSFS warrants that it has the authority to sell the forest products covered by this agreement from the property herein described: Sand Creek & Trail Creek, Section 16, T11N, R75W, and Section 36, T12N, R74W, 6th principle meridian, Larimer County, Colorado.

SALE LOCATION:

The boundaries of the sale area are marked as follows: Brass cap section corners, as set forth in Exhibit A, which is attached hereto and incorporated herein, the same as if set forth in full.

SALE PERIOD:

The effective dates of this agreement will be from May 29, 2008, to December 31, 2008, inclusive, and may be extended by mutual agreement of both parties per AGREEMENT MODIFICATION section.

ACCESS:

The CSFS grants to the PURCHASER access to the above described property for the purposes of the agreement. Access will be via: The Sand Creek Pass Road and the Boulder Ridge Road.

DESCRIPTION OF PRODUCT SOLD:

<u>PRODUCT</u>	<u>QUANTITY (EST)</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>PRODUCT VALUE</u>
Christmas trees	100	Trees	\$9.00	\$ 900
Transplants	200	Each	\$6.50	\$1300

PRODUCT DESIGNATION:

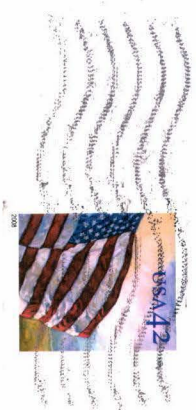
The products sold are marked in the following manner: N/A

Sellmer
302 Northshores
Windsor, CO. 80550

Att: Mike Hughes

DENVER CO 8002

28 NOV 2008 PM 5 L



Colorado State Forest Service
Foothills Campus, Building 1052
Colorado State University
Fort Collins, CO 80523-5075

80523-5075



9-17-15 Boyd + I went to Sand Creek together.

We saw Ben and discussed progress. He

was nearly to the upper edge of the

original cut from last February. It's

getting steeper so Ben doesn't know how

further west he'll be able to go. He

has nearly hit the west edge, further to

the south.

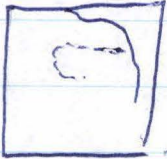
10-13-15 I met with Steve Shreiner on site. Not

much progress -- equipment breakdowns.

We looked at another road, lower,

coming off the lower edge, looping

around from the east.



--- new road

Steve gave me a check for 60 loads (\$3000⁰⁰)

11-14-15 Boyd, Greg, Zack, Ryan, + I went to Sand Creek State

Section to get Christmas trees. Ben Shreiner helped

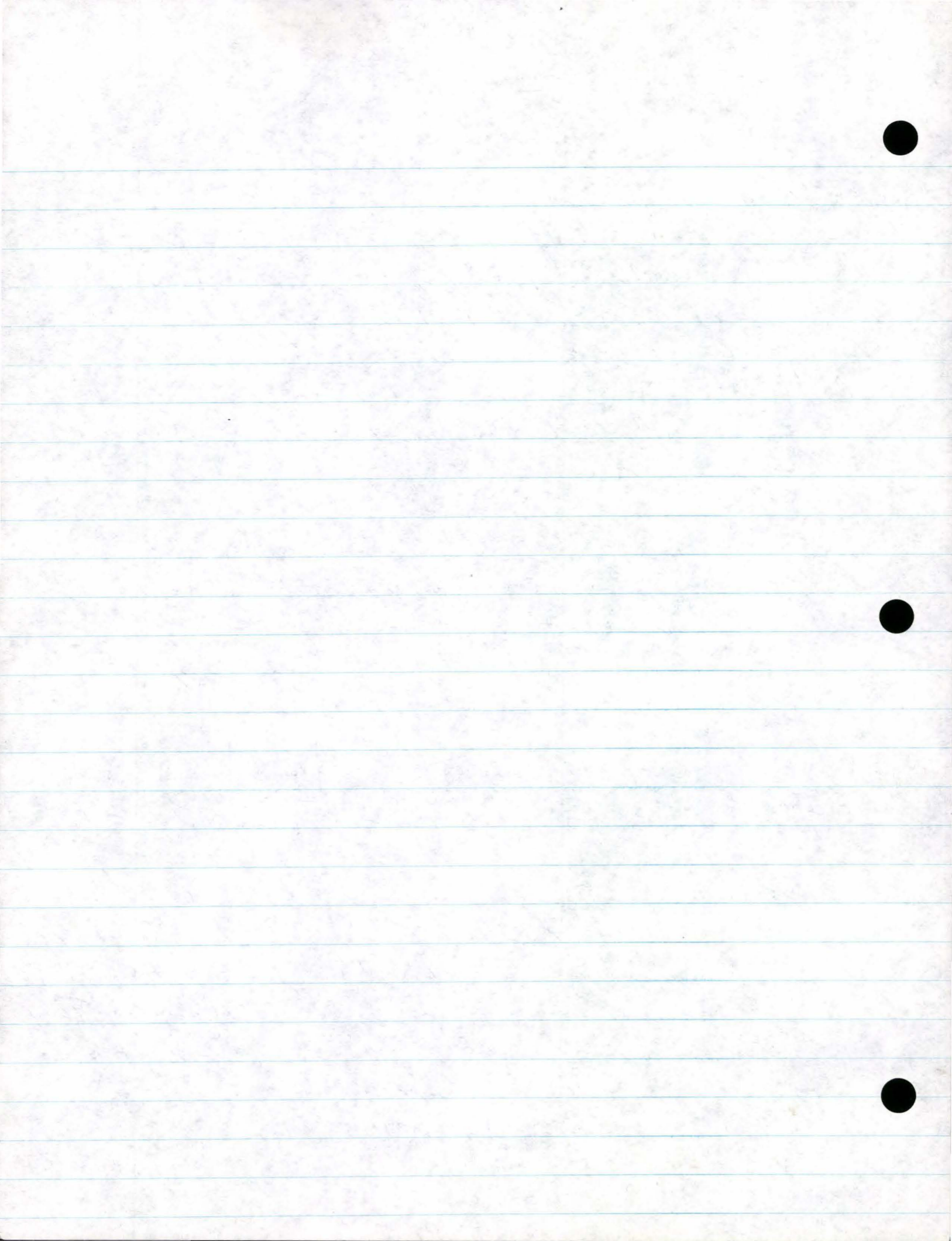
us by plowing with skidder. After cutting trees

I went to check out progress of Shreiners. They

are using new road and cutting on east side

approx 15-20 new acres.

Done for 2015



Sand Creek

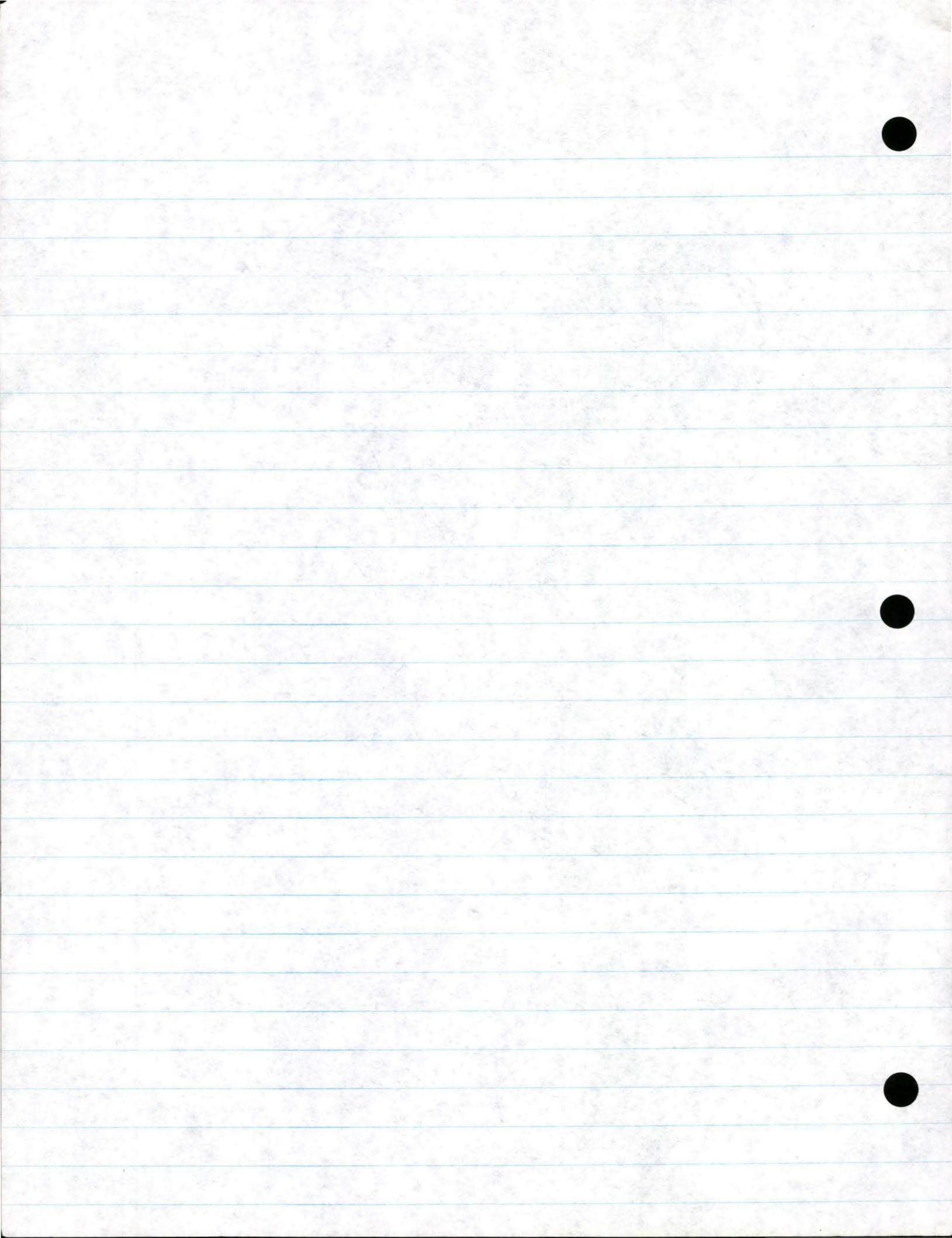
8-5-15 met with Steve at Sand Creek. Look at newly constructed road going north - almost to the cut where they ended in March 2015. They only have about 200' left to connect.

Road looks good. They crossing at the ravine looks good. They laid in 2 culverts and have a new log deck north of the crossing. All deck dead is hauled but there is still large deck of green

8-19-15 Walk the harvest area. No one was there Harvesting head on Timbo was in repair

They completed road to north harvest unit. Cutting looks to be moving up slope to the west. Some of the green deck has been hauled away Everything looks good.

9-1-15 met Ben Shreiner at the harvest area. He was on the Timbo, Brett was loading, and another guy (don't know his name) was running the skidder. Ben is working to the west. He's about 100 yards from the west boundary. Things look good. A few loads of green went to larvae, but there's still a lot decked. Told Ben to leave gates unlocked now. Estimate over 30 acres harvested



Sand Creek

- 7-17-15 Visited Sand Creek section and no one was working or there. Looks like there was a lot of rain, but was drying out. A lot of work has been done since last visit. Estimate over ^{150'} 20 acres has been harvested. Looks good. Some aspen/fir islands are left. Paced about 500 ft. from harvest edge to west boundary. Ben has created a couple of fingers to the east. Somewhat large deck of green, but small deck of dry.
- 7-28-15 Met with Steve Shreiner at Sand Creek. Walked around and looked at harvest area. I estimate around 20-25 acres have been harvest. We looked at where the road will cross the drainage. Steve asked me about it, but there's no easy way thru out the road. I asked if he could drop a culvert or two in. He said he would try. They're trying to get toward the north end where there is more dead LLP. All the ~~dead~~ logs in the deck have been hauled away. Steve gave me a check for \$1000⁰⁰. There are about 25 load of green decked. Steve is having a tough time finding a market for it.

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Sand Creek

- 6-2-15 Met with Steve + Ben Shreiner. They're ready to resume harvest activities. We took ATVs and looked at access thru southern boundary. Will NOT use USFS access road. We flagged a road to be built from Cedar Rd through the Aspen stand along south fence. Timbercreek ~~is~~ ~~the~~ ~~access~~ ~~road~~ ~~is~~ ~~already~~ ~~in~~ ~~progress~~. Steve ~~is~~ ~~already~~ ~~in~~ ~~progress~~. Steve
- 6-9-15 Mike went to check on progress. Steve Shreiner has already punched-in access road. Met Brent Shreiner + he was bringing new loader on site. Met Ben and he has already cut almost 2 acres. No skidding or hauling yet. Looks good. Skidders on site. They hope to start hauling later this week.
- 6-23-15 Visited the Sand Creek SL section and met Ben + his brother Brent. Another acre or so had been cut since last visit. Progress was slowed because hydraulic pump had to be replaced on the Timbercreek. It took about a week. Now there is a hose leak on the processing head near the saw blade. I walked the west line and located where the old fence (wire) divert off to west on Mt Forest land. Brent brought a located down to LaPorte. Received a check for \$5000 (11 leads).

on 2/19/20
activities
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SAND CREEK Sale to Shreiner

1-14-15

Ben Shreiner signed contract and provide \$1000⁰⁰ bond.

1-20-15

Mike + Greg went to check on progress Shreiner have only been in < 2 days.

2-10-15

Mike went to check on progress west section boundary
So far looks good. Greg + Mike flagged (blue)

3-19-15

about 8 acres was cut. Hiked to west end of cut. Did not make it to west (flagged) boundary. Ben + brother Bret (truck driver) showed up and spoke briefly. All looked good. Mike went to sales area. No one was there.

3-5-15

Not much different from last visit. Noticed that cutting went a little across the line on north boundary toward west end Mike got stuck in snow along forest Circle. Ben + Isaac pulled him out after some digging. Ben gave a check for \$1350⁰⁰ (27 loads)

3-12-15

Mike met with Ben + Isaac on site. Things look good. Mountain View R.R. looks O.K. -- some physical tracks, but it has died out. It will need to be graded Ben has partnered with his father, Steve Mike met with Ben + Brent on site

4-2-15

They were fixing (closing) fence. Asked about road that Randy McCall is upset about. They knew nothing about it. Told them about Jake Brakle issue. No more fires. The one was still smoldering. Spent an hour spreading around. There are cuts

on state section that they'll have to come back
and fix when it dries out. It was snowing
while I was there, Had to leave to help
get Ben + Brent unstuck.

Sand Creek
State Trust Land

Sec 16

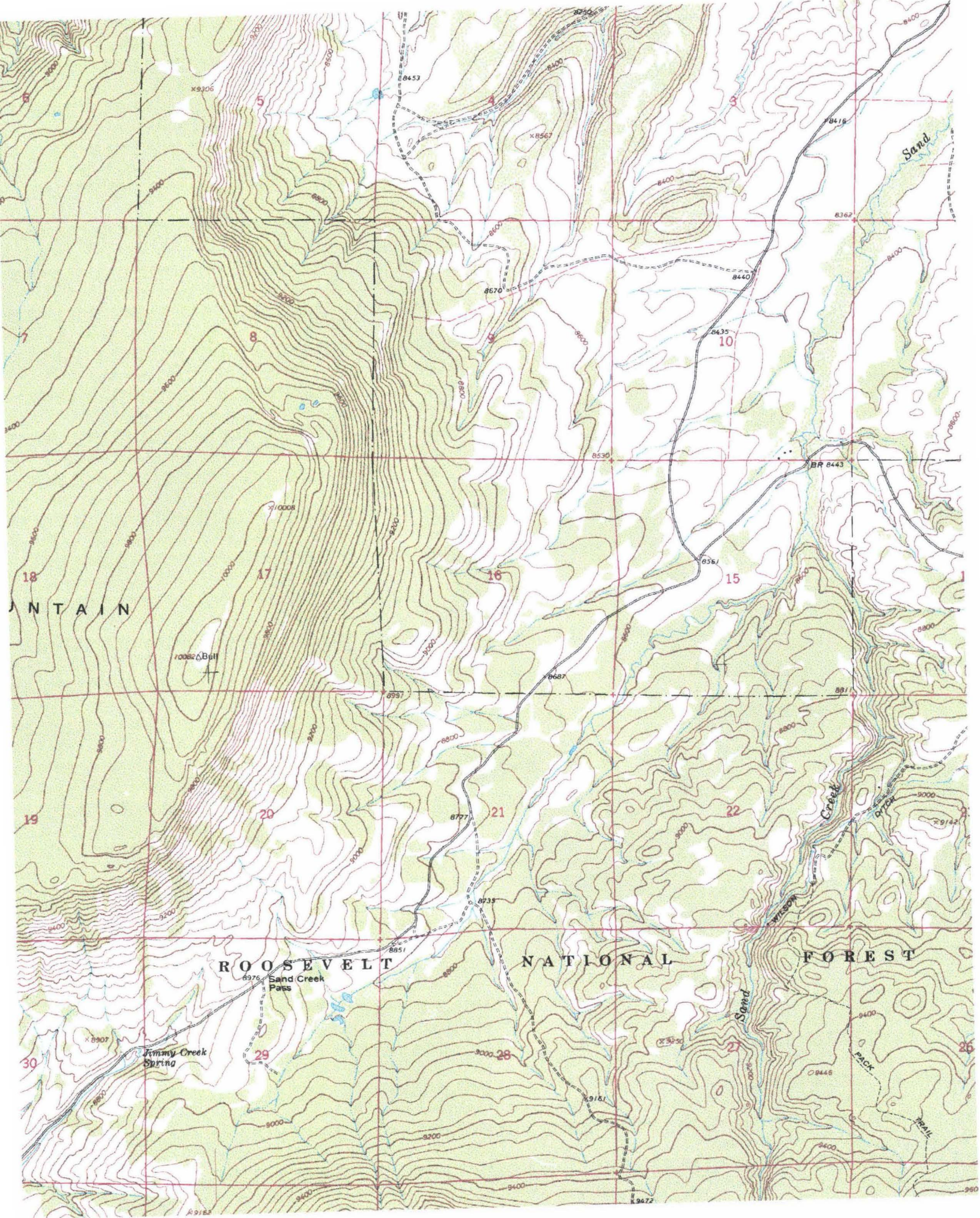
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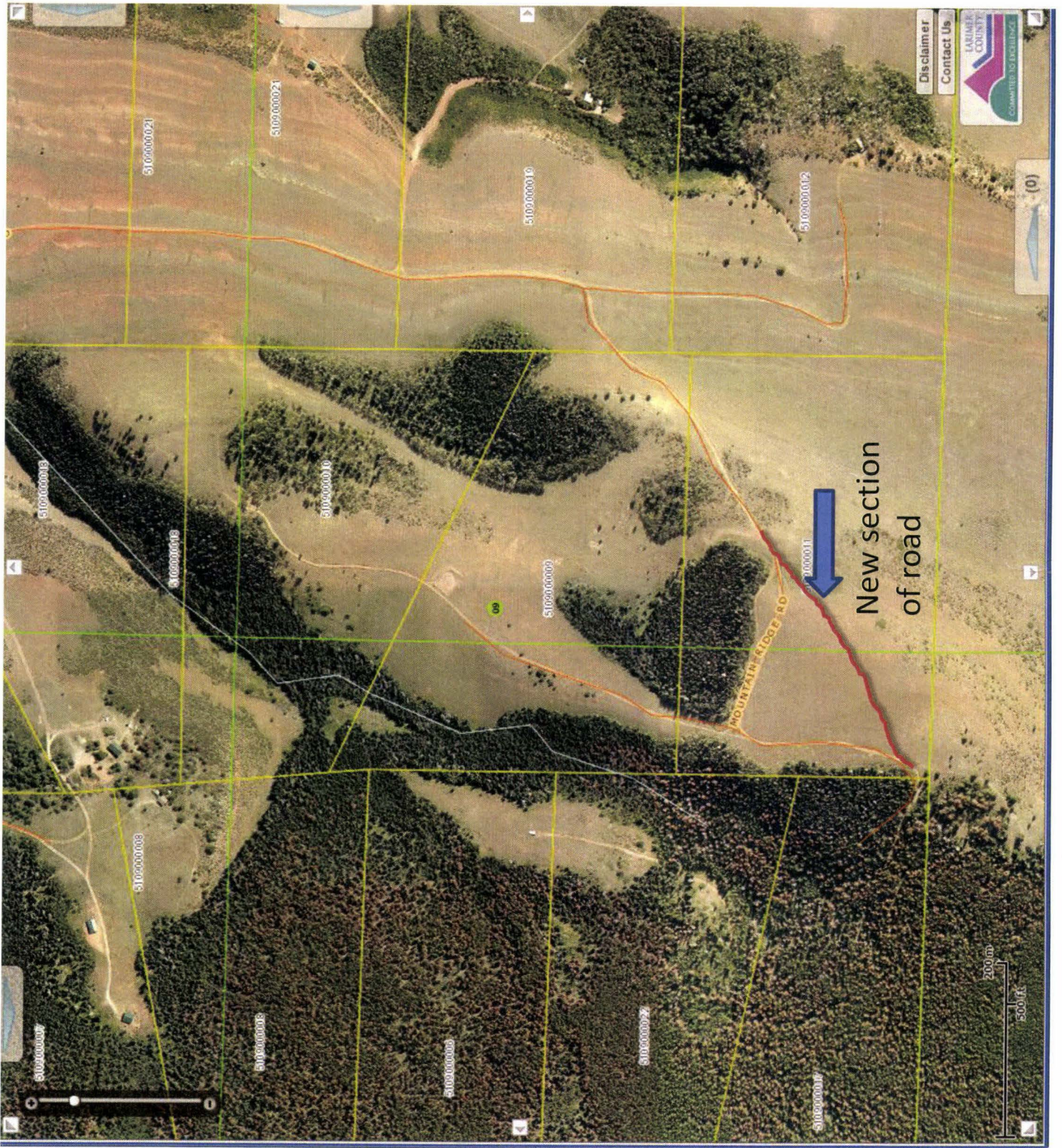
R 75 W

Parcel * 51160 - 00 - 926



H7 on ArcView





New section of road

MOUNTAIN RIDGE RD

Disclaimer
Contact Us



(0)

200 m
500 ft

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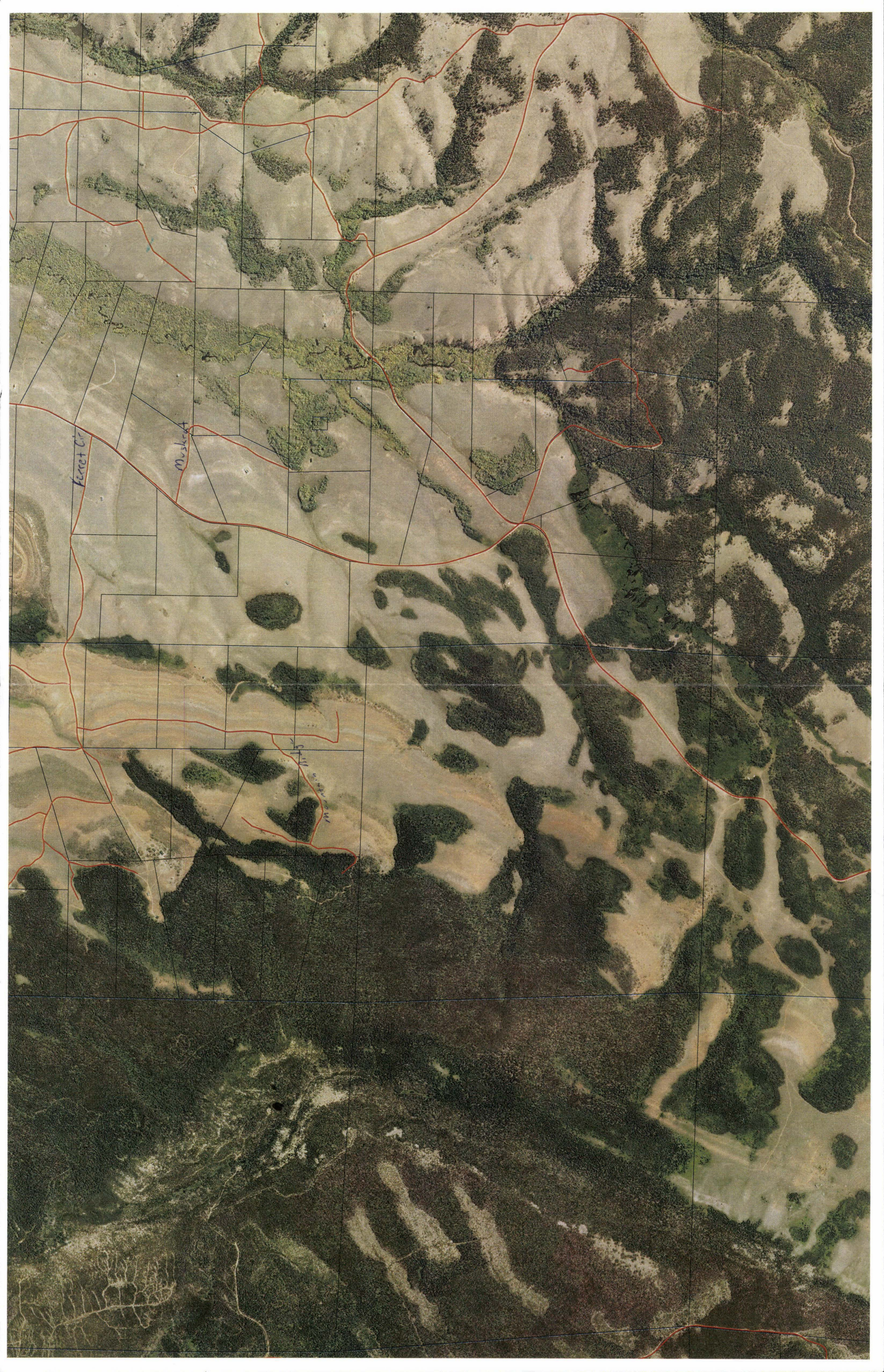
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Section 16. East End of Bull Mtn.
State land.

Ridgeline Services
Schriner ~~Services~~ logging.

Burning slash piles at night.

Greg Helmos. = 970 590 6285
Bottom Bull Mtn.

Grant Van (720) 243-8560

Terry = property owner to north

Randy McCall (308) 730-2298

