

INSTRUCTIONSFORAGE AND TIMBER INVENTORYBURGESS SPRING EXPERIMENTAL RANGE

Object: To ascertain as accurately and completely as possible with the time and men available the forage and timber resources on the Burgess Spring Experimental Range.

LOCATION:

Lassen National Forest T 33 N, R 8 E, T 33 N R 9 E, parts of sections 24 and 25 and parts of sections 18, 19, and 30.

SIZE:

Approximately 1200 acres

TYPE

Ponderosa pine, Jeffrey pine with principally *Festuca idahoensis*, *Wyethia mollis*, *Geanothus prostratus*, *Artemisia tridentata* and *Artemisia* sp. in the understory.

FIELD WORKSize of crew.

The field party will consist of three men, a mapper and two timber cruisers. The mapper will be the chief of the party.

Procedure of workControl

First establish adequate control.. At least three men will be necessary for subsequent mapping and cruising.

Accurately run the section lines common to S 13 and 24, S 24 and 25 T 33 N R 8 E and S 18 and 19 T 33 N R 9 E

and set stake at five chain sistance along these lines. The section corners on the range line should be the points of origin of these surveys. Controls run with transit, a two chain trailer tape and abney using the abney to convert slope to horizontal distance. Survey the section lines common to S 23 and 24 24 T 33 N RBE and S24 and 19 on the range line for direction and distance; five chain stakes will not be necessary. Run section line common to sections 19 and 13 T 33 N R9E east from the section corner on the range line until it intersects the logging railroad spur which lies about 20 chains east of the corner. Set fivechain stakes on this line. Determine the elevation of each five chain stake by starting from some known bench mark and running a set of differential levels using a transit over line on which these stakes are at as a level. At the same time set direction stakes from each five chain stake on the section lines five chains north of the section line common to S 24 and 25 and south of the line common to S 13 and 24 T 33 N R 8 E and south of the line common to S 18 and 19 T 33 N R 9E. Place all direction stakes with respect to their corresponding stakes on the section's lines that lines between them are parallel to the range line common to S 24 T 33 N RBE and S 19 T 33 N R9E.

This set of controls will allow each square mile to be traverse sixteen times. Mapping and cruising will extend two and one-half chains on either side of each control line and therefore 100% of the area will be covered.

INVENTORY

Make all maps on a scale of 8" equal one mile. Prepare topographic map showing contours (10 ft. interval) and culture such as roads, telephone and power line, railroads, springs, streams, buildings,

main skid roads and conspicuous rock outcrops.

Make a vegetative type map which will show all important and conspicuous types which can be drawn and designated on the scale required.

Following are the most important species that will be encountered:

<u>Species</u>	<u>Symbol</u>
Festuca idahoensis	1
Corex sp.	2
Wyethia mollis	3
Ceanothus prostratus	4
Artemesia tridentata	5
Artemesia arbuscula	6
Purshia tridentata	7
Cercocarpus ledifolia	8
Arctostaphylos sp.	9
Chirpothamis blownei?	10

Additional species may be added to this list as they are encountered in the field. Species with symbols above 9 should be circled so as not to confuse them with mono numeric symbols which may be placed side by side.

The three to four most important or conspicuous species within each type should be designated with their corresponding symbols on the map. Map types that are one sq. chain or larger in area.

Prepare a third map showing groups of tree reproduction. All trees less than 36 inches in diameter are considered reproduction. For each group express to density of trees by the average number per milacre, estimate the average height, and determine the average age by cutting two or three trees and counting the annual rings.

Make a 100% cruise of all trees over 3.6" in diameter recording the species, diameter and tree class. Separate twigs from living trees. Obtain site values by selecting over mature trees (Class 5) and measuring the diameter and height. Where over mature trees are not found measure dominant trees for which age can be determined by boring into the tree with an increment borer.

Method

Starting at a suitable five chain stake on a section line

sight on the direction stake and measure out two and one-half chains. The mapper with the assistance of one cruiser will carry direction, distance and elevation for the two and one half chains using compass, tow chain trailer tape and double abney. Thereafter the mapper will work along preparing the necessary maps for the block $2\frac{1}{2}$ chains on either side of the control line and $2\frac{1}{2}$ chains long. Each cruiser will take one side of the block and proceed to cruise the timber. When all work is completed in one block another two and one-half chains should be measured off and the procedure used before repeated.

Part of the Burgess Spring Experimental Range has already been logged. As a result it will be impossible to record tree classes on the cut-over area except for leave trees and trees below the commercial diameter limit. The uncut area should be worked first should time not be available to complete all the work this year.