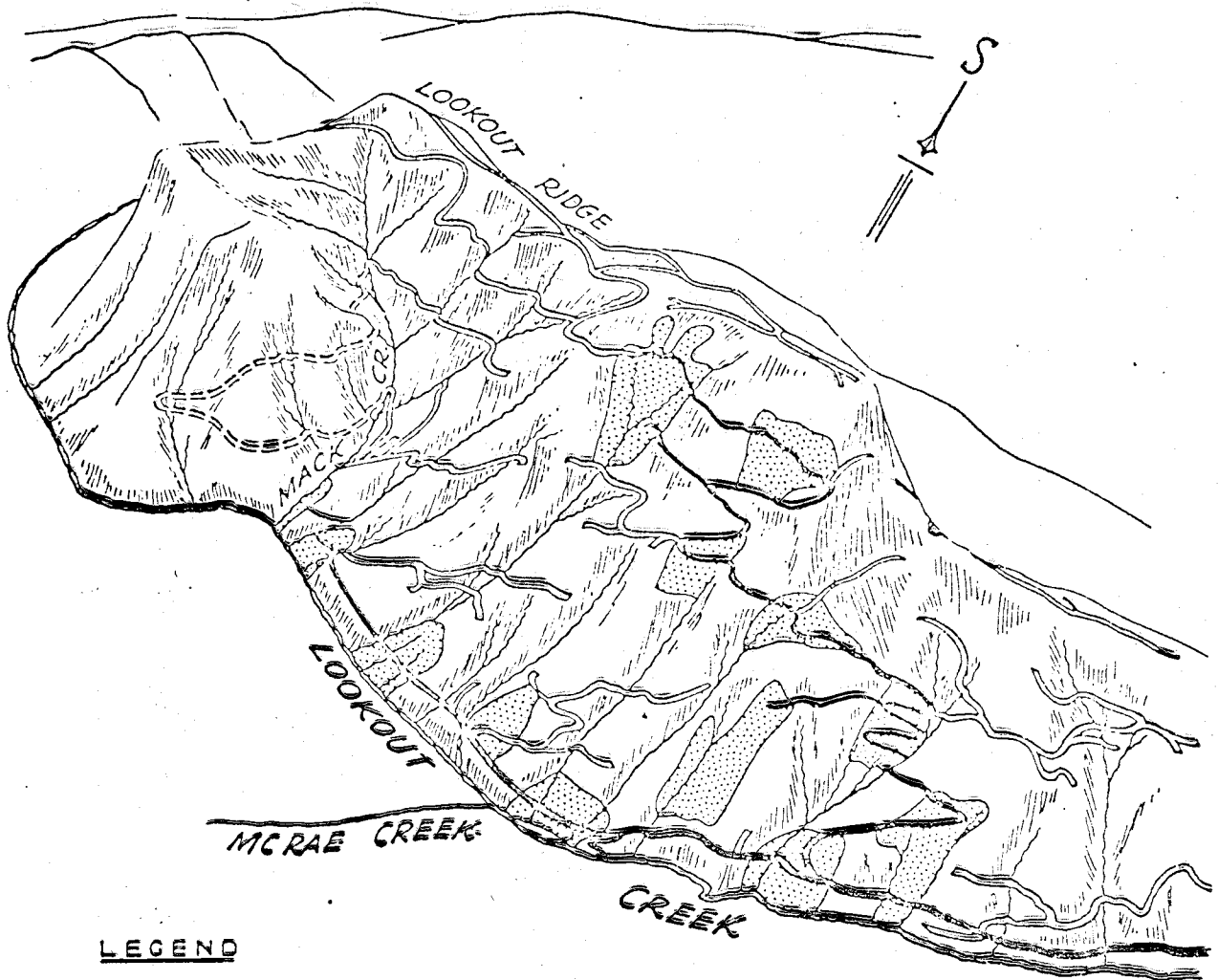


RANDOM LAYOUT

(U.S. Department of Interior, 1970)

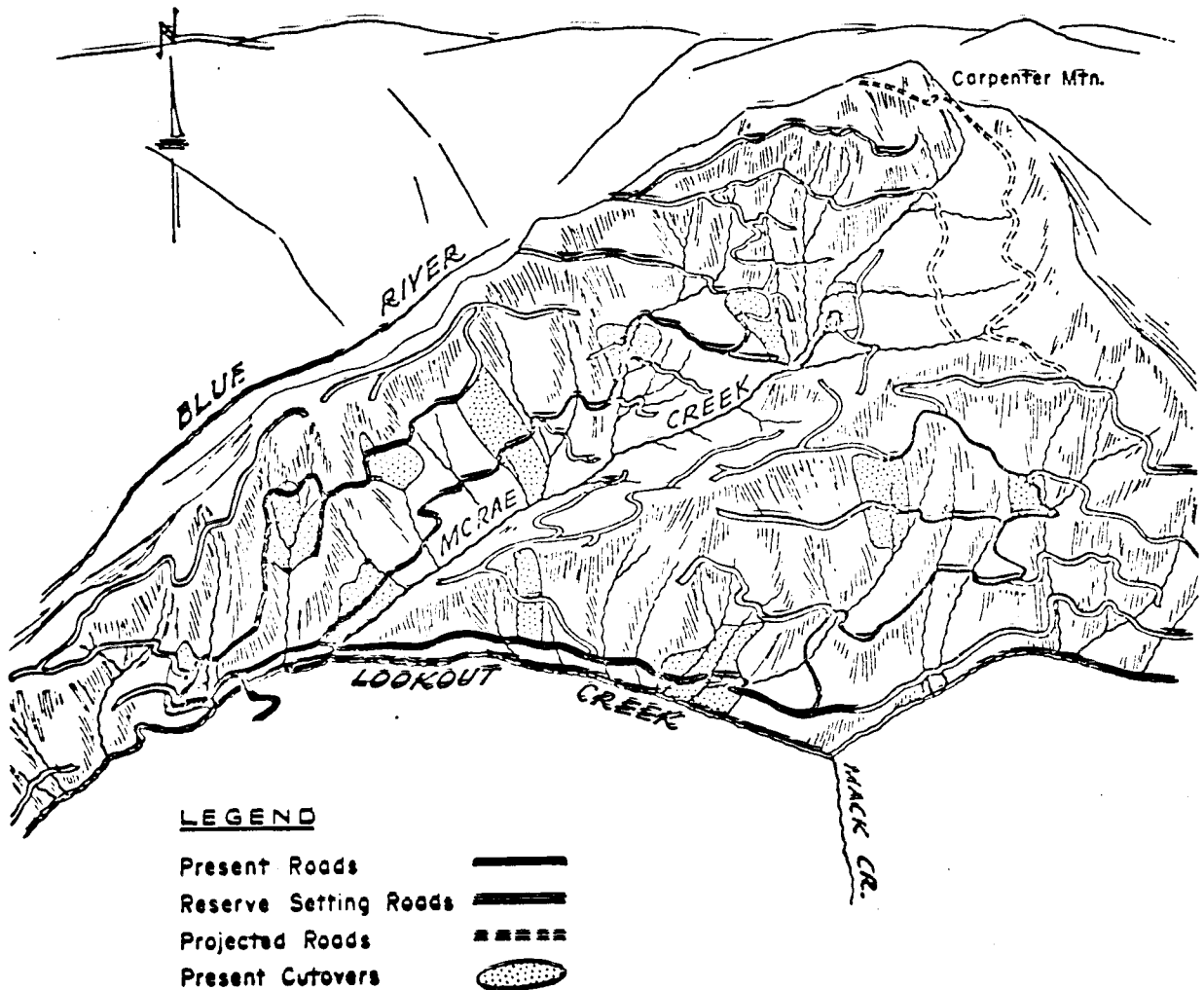
LEGEND

Present Roads	————
Reserve Setting Roads	=====
Projected Roads	- - - - -
Present Cutovers	•••••

"The roads on the south side of Lookout Creek in the H. J. Andrews Experimental Forest were located in "random" fashion and built far enough each year to permit an annual cut of 20 million board feet. The roads were constructed according to the best customary practices, utilizing a thorough knowledge of the terrain, a balance of economic yarding distances, and good watershed management principles. However, since a systematic approach was not followed, steep grades were prevalent, road density was high, and the yarding coverage was relatively poor. Drawing courtesy Forest Service, U.S. Department of Agriculture."

SYSTEMATIC LAYOUT

(U.S. Department of Interior, 1970)



"A systematic road pattern was used on the north side of Lookout Creek on the H. J. Andrews Experimental Forest. This pattern has distinct road levels, a minimum length of climbing road, a relatively low road density and good yarding coverage. Drawing courtesy Forest Service, U.S. Dept. of Agriculture."

A COMPARISON OF RANDOM AND SYSTEMATIC LOGGING ROAD LAYOUTS
(H.J. ANDREWS EXPERIMENTAL FOREST)

Item	Road Pattern	
	Random <u>a/</u>	Systematic <u>b/</u>
Road density, total in planned system-- miles per square mile	5.59	4.97
Road density, amount actually constructed-- miles per square mile	1.95	1.99
Area needed for road construction, acres per square mile of watershed	93	68
Area outside optimum yarding distance (400 - 900 feet), acres per square mile		
Less than 400 feet	64.4	38.6
More than 900 feet	19.0	10.6
Total	83.4	49.2
Percent of road system having grades of--		
8 to 12 percent <u>c/</u>	51.4	14.0
4 to 8 percent	10.9	40.6
0 to 4 percent	26.2	36.1
Adverse: 0 to 4 percent <u>c/</u>	11.5	9.3

a/ Basis: 38.53 miles of road in layout of 3,273 acres.

b/ Basis: 42.98 miles of road in layout of 5,534 acres.

c/ A few short stretches of road with favorable grades about 12 percent or reverse grades above 4 percent were built to avoid obstacles and are included in these classes.