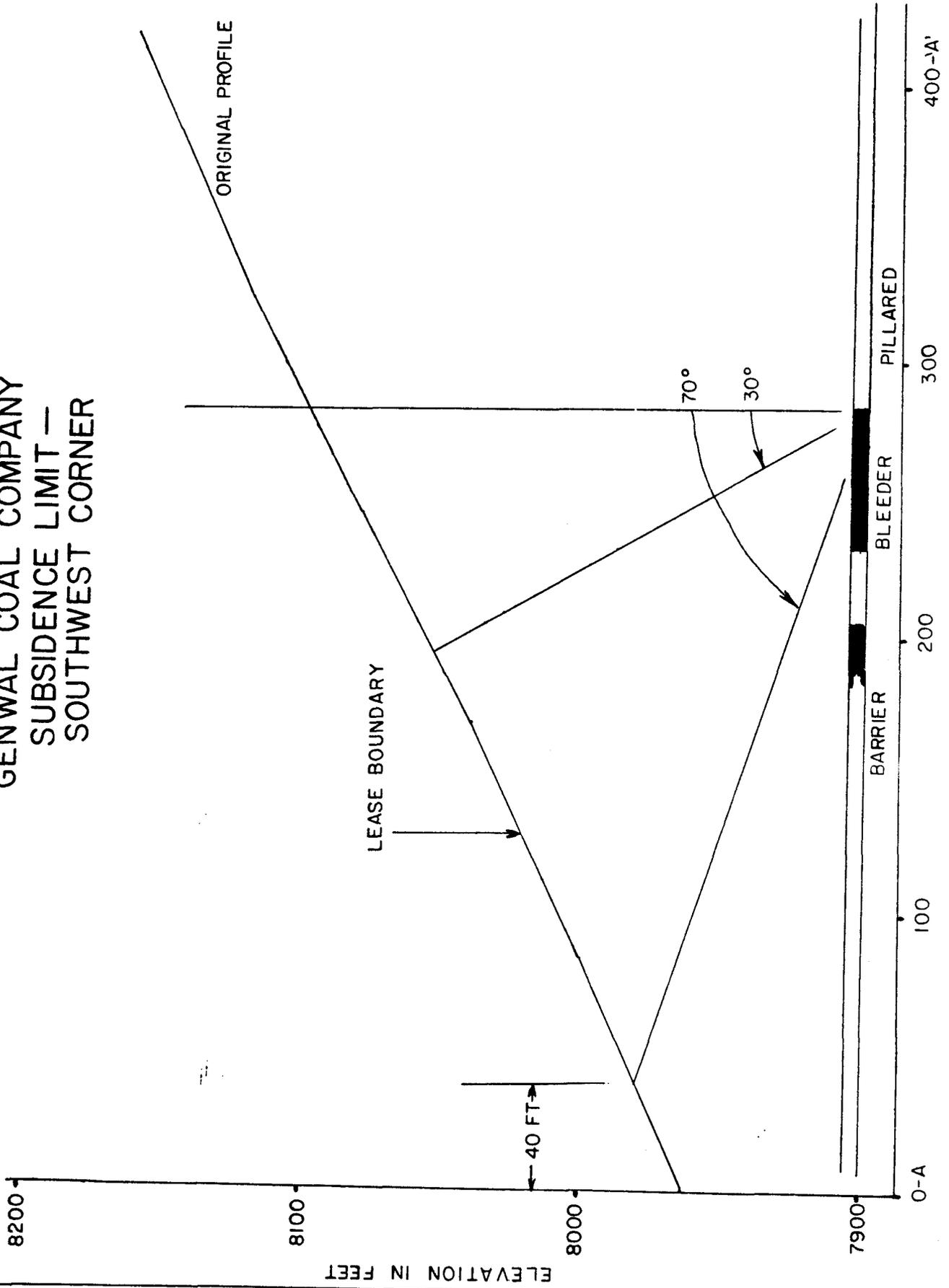


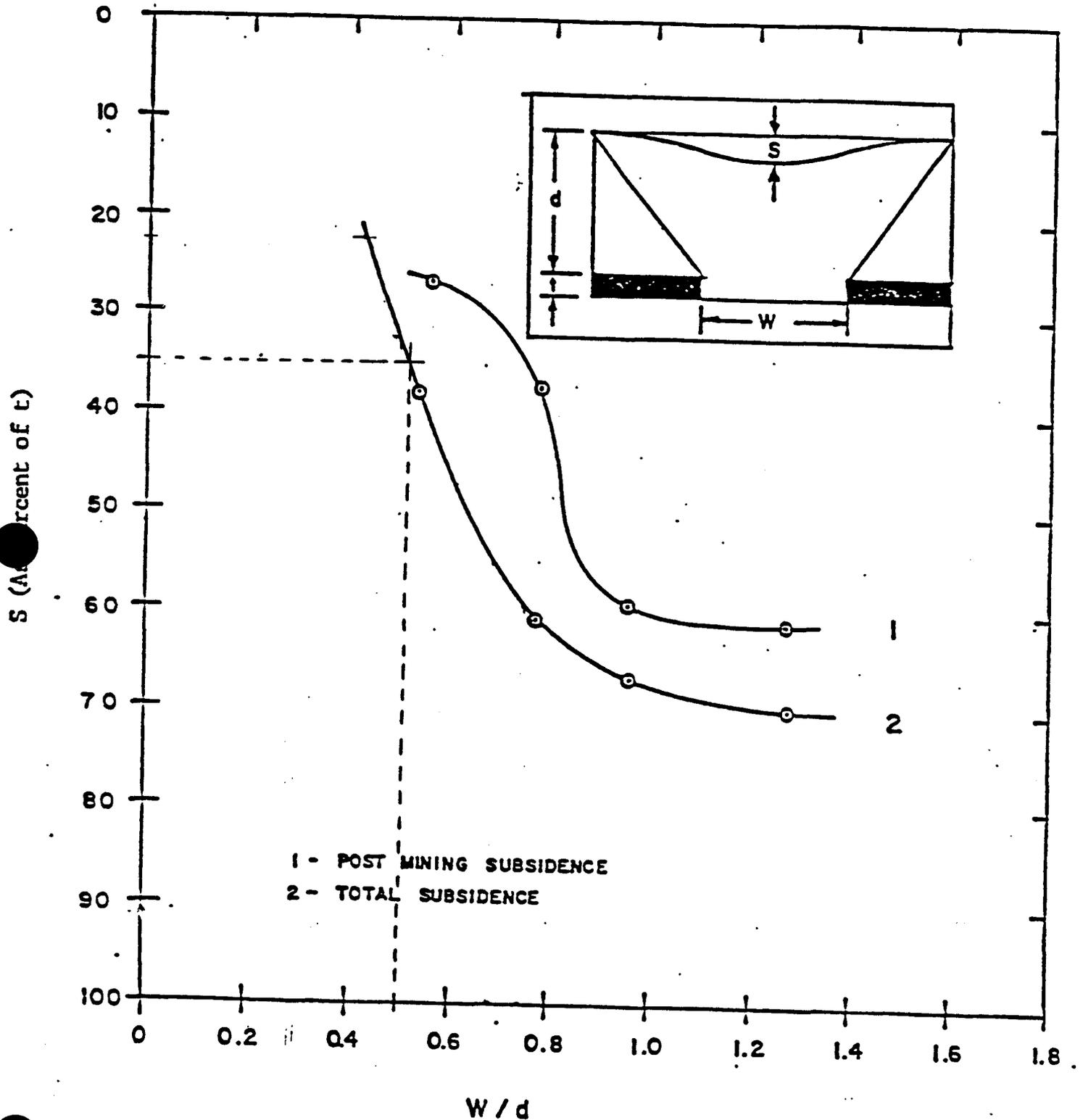
ITEM XII-8  
SUBSIDENCE LIMIT SOUTHWESTERN CORNER

GENWAL COAL COMPANY  
SUBSIDENCE LIMIT —  
SOUTHWEST CORNER



DISTANCE FROM CENTERLINE OF CRANDALL CREEK IN FEET

ITEM XII-9  
MAXIMUM SUBSIDENCE GRAPH

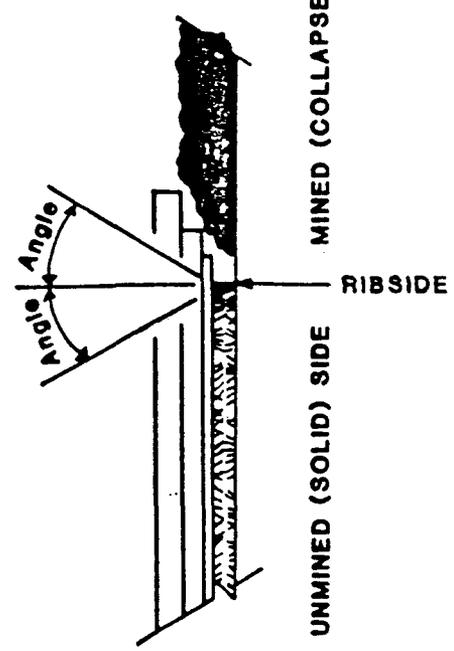
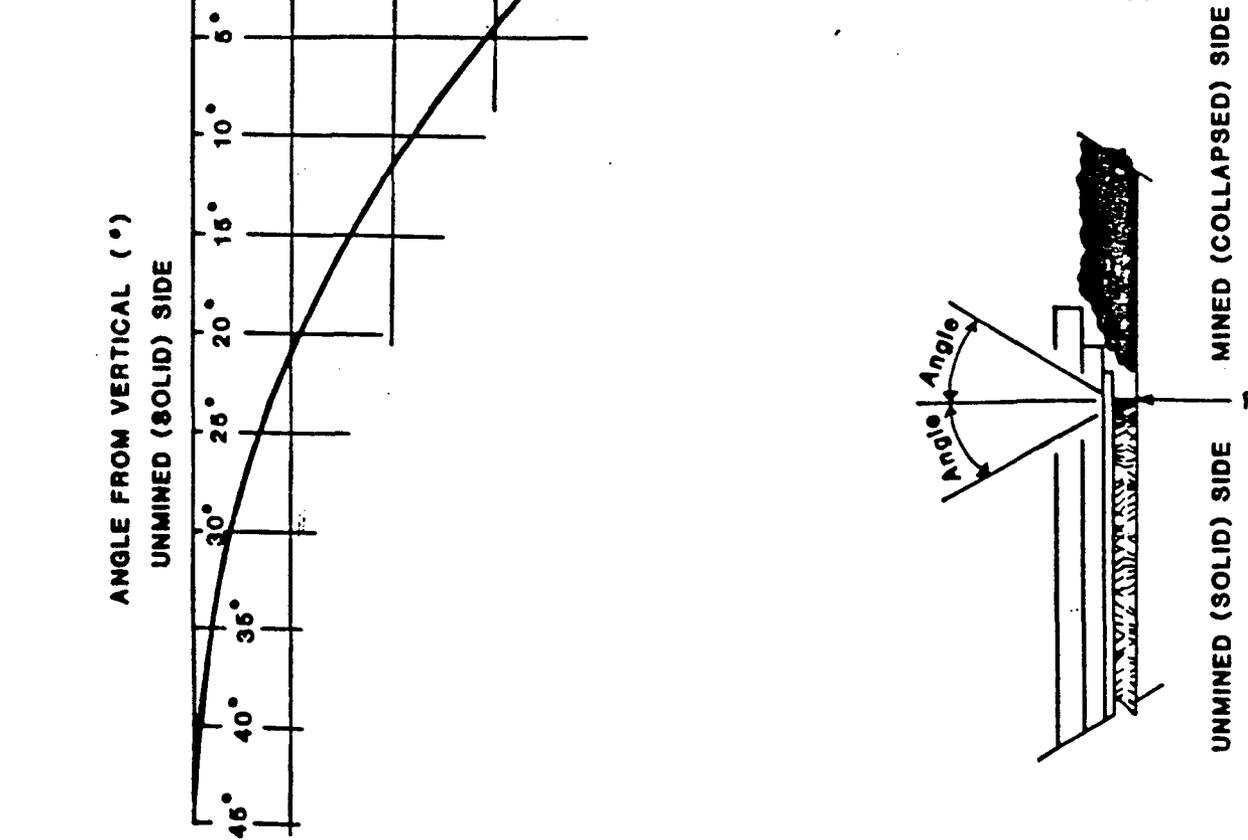
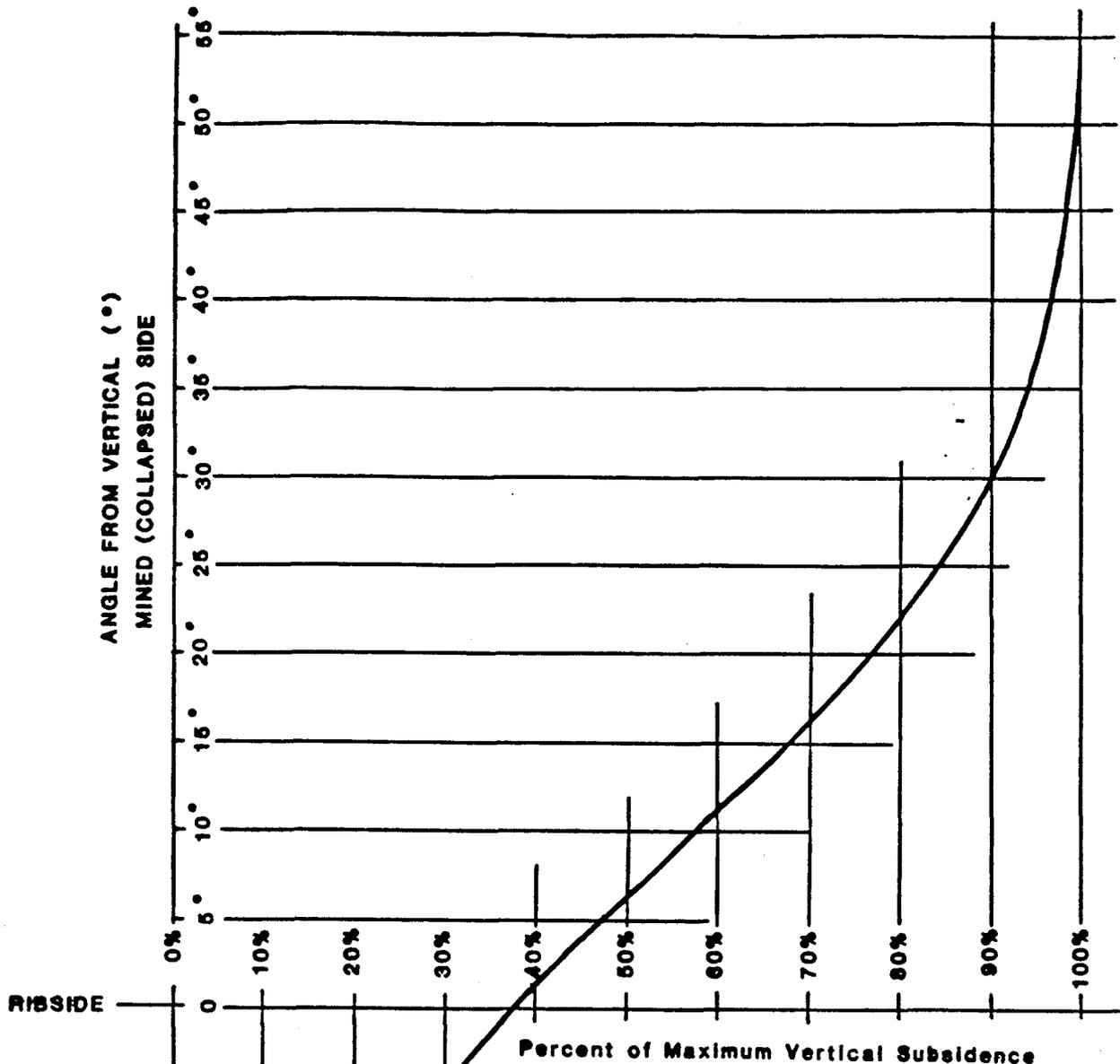


Maximum subsidence, as a percentage of seam thickness, versus width/depth ratio for room and pillar mining at Somerset, Colorado (after Durrud, 1980).

ITEM XII-10  
VERTICAL SUBSIDENCE DISTRIBUTION

GROUND SURFACE

ORIGINAL



ITEM XII-11  
SEEP AND SPRING INVENTORY

ITEM XII-12  
SUBSIDENCE MONITORING PLAN

ROUGH DRAFT  
WBoley:gd  
April 9, 1981

ITEM 12-12

FOREST PLAN FOR STUDYING THE EFFECTS  
OF  
UNDERGROUND COAL MINING ON SURFACE AND SUBSURFACE RESOURCES

Manti-LaSal National Forest

Public Law 86-517  
86th Congress, H. R. 10572  
June 12, 1960.

AN ACT

74 STAT. 215.

To authorize and direct that the national forests be managed under principles of multiple use and to produce a sustained yield of products and services, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes. The purposes of this Act are declared to be supplemental to, but not in derogation of, the purposes for which the national forests were established as set forth in the Act of June 4, 1897 (16 U.S.C. 475). Nothing herein shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish on the national forests. Nothing herein shall be construed so as to affect the use or administration of the mineral resources of national forest lands or to affect the use or administration of Federal lands not within national forests.

National forests  
management

30 Stat. 34.

SEC. 2. The Secretary of Agriculture is authorized and directed to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom. In the administration of the national forests due consideration shall be given to the relative values of the various resources in particular areas. The establishment and maintenance of areas of wilderness are consistent with the purposes and provisions of this Act.

Multiple use;  
sustained yield.

SEC. 3. In the effectuation of this Act the Secretary of Agriculture is authorized to cooperate with interested State and local governmental agencies and others in the development and management of the national forests.

SEC. 4. As used in this Act, the following terms shall have the following meanings:

(a) "Multiple use" means: The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

(b) "Sustained yield of the several products and services" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land.

Approved June 12, 1960.

