

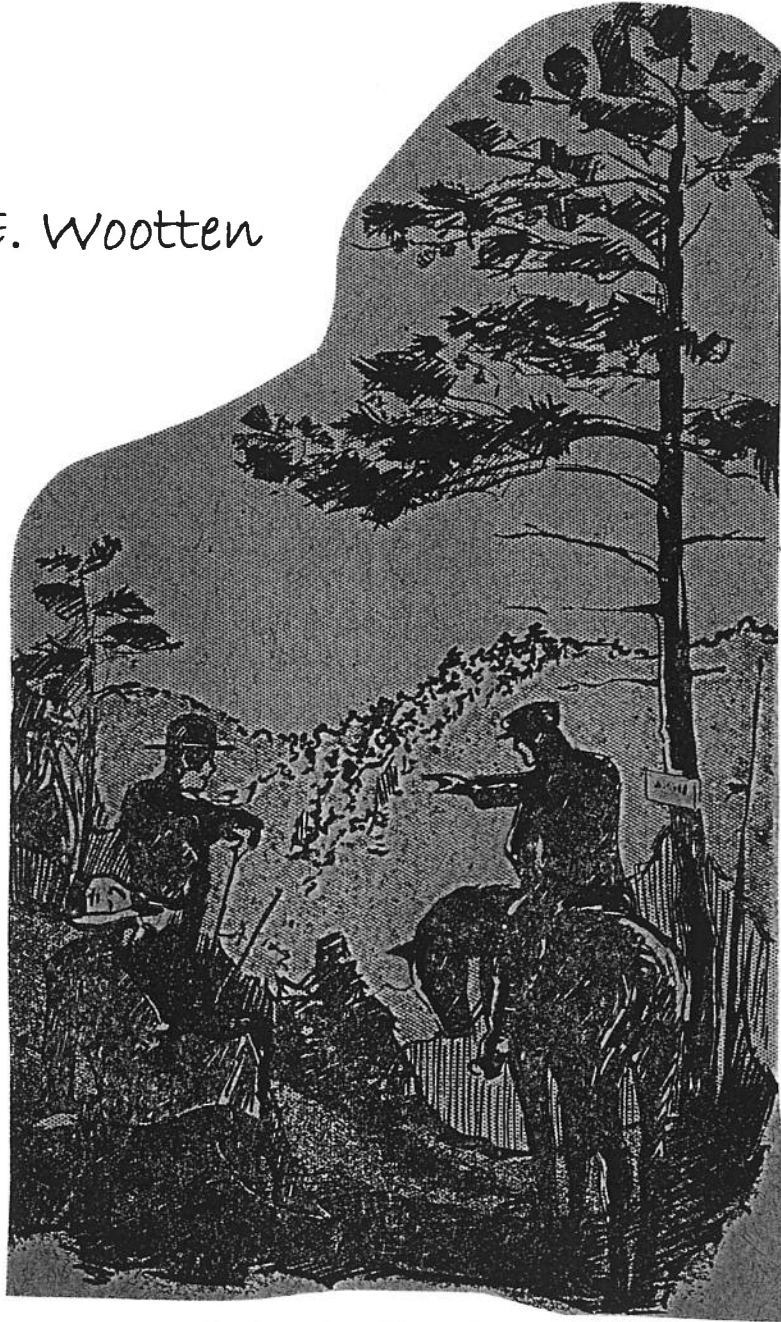
Extensive and Intensive
Land Classification
of the Arkansas National Forest

by

William E. Wootten

1917

Vol. I



Introduction by
Meeks Etchieson

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**Cover drawing from**

**"Horseback & Hiking Trails"**

**A brochure published in 1926 by the Hot Springs Hiking Club**

**2005**

**Clark County Historical Association  
P. O. Box 516  
Arkadelphia, Arkansas 71923**

## Introduction

The Arkansas National Forest was created in 1907 encompassing hundreds of thousands of acres within the Ouachita Mountains of west central Arkansas. At the time, vast tracts of lands within the Ouachita Mountains were heavily cut-over timber lands, though the peak of logging expansion into the Ouachita Mountains was in 1909 (Strausberg and Hough 1997:7). Most of the lands in the fertile valleys along the major streams, however, had previously been acquired from the public domain as early as the mid-19<sup>th</sup> century, and by the time of the creation of the Arkansas National Forest, were well established farms. The higher and drier uplands had been deemed unsuitable as agricultural and rarely settled. William Hall had been sent into Arkansas in 1906 by Gifford Pinchot, Chief of the recently created Forest Service, to select lands suitable for designation as "forest reserves." Based on this effort, large tracts of land in Arkansas were withdrawn from the public domain and established as forest reserves. These lands, south of the Arkansas River, were designated as the Arkansas National Forest<sup>1</sup> by President Roosevelt in December 1907 (Strausberg and Hough 1997:8-9).

As the Forest Service began to manage the lands in the newly established national forest, public opinion began to sour as the forest rangers began to identify illegal activities within the forests. These activities included cutting timber "without regard to ownership, timber speculators operated with little regard for legal land titles," and local homesteaders believed that the Forest Service was going to interfere with long-standing local practices (Strausberg and Hough 1997:11-12). In early 1910, a group of 600 homesteaders in Montgomery County, Arkansas, organized as the "Homesteaders Protection League of Montgomery County" and then petitioned the U.S. Congress to abolish the forest reserves in the county. Ranger William Wootten was then assigned the task of inventorying and classifying the lands within the Arkansas National Forest (Strausberg and Hough 1997:12-13) resulting in a report entitled *Extensive and Intensive Land Classification of the Arkansas National Forest, Ouachita, Vol. 1*. Roger Coleman [Zone Archeologist with the Ouachita National Forest] describes the Wootten volume:

Classification of lands within the Arkansas National Forest was prompted by the Act of June 11, 1906 (34 Stat., 233) which authorized homestead entries for lands within forest reserves. The Act further directed the Secretary of Agriculture to inventory and list all lands chiefly valuable for agricultural purposes and to open those lands to settlement and entry under the Homestead laws. In response to the new legislation, forest land examiners spent nearly a decade classifying the forest, culminating in the classification study of 1917. As William Wootten repeatedly emphasized,

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<sup>1</sup> The Arkansas National Forest was renamed the Ouachita National Forest in 1926 by Executive Order of President Calvin Coolidge; he also proposed extending the Ouachita National Forest into eastern Oklahoma at this time.



the most valuable agricultural land within the forest had already been "taken up" and he attributed the popular movement to open the forest to settlement as "misdirected ambition." In 1917, he noted that since creation of the Forest there had been only four listings under the Act of June 11, 1906. Upon completion of the study, a convictive Wootten stated that "were agricultural land here bottled up, as some seem to think, it would have passed to patent long before the creation of the Arkansas National Forest. I repeat [said Wootten] the people have classified this land." Although he may have considered the classification study as a waste of government resources, Wootten produced a document that is, at once, a history of the Arkansas Forests, an ethnography of the early 20th century inhabitants of the Ouachitas, and a record of early environment and ecology. The report contains valuable information relevant to present-day issues. In hindsight, this was not a waste of funds, but a fortuitous investment in the future.

The volume produced by William E. Wootten remains extremely important today in terms of his descriptions and discussions of vegetation conditions, soils and erosion, and photographs and descriptions of natural and man-made features, including farmsteads, as they existed within the forest in the early 20<sup>th</sup> century.

*Meeks Etchieson*

Heritage Program Manager  
Ouachita National Forest  
Hot Springs, Arkansas

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Coleman, Roger E.

n.d. Excerpts from the *Extensive and Intensive Land Classification of the Arkansas National Forest, Ouachita, Vol. 1.* by William E. Wootten (1917). On file in the Heritage Resource Section, Supervisor's Office, Ouachita National Forest, Hot Springs, Arkansas.

Strausberg, Stephen and Walter A. Hough

1997 The Ouachita and Ozark-St. Francis National Forests: A History of the Lands and USDA Forest Service Tenure. General Technical Report SO-121, Southern Research Station, USDA Forest Service. Asheville, North Carolina.

This book has been transcribed as closely to the original document as possible. Any changes made simply served to preserve continuity throughout the book. Some pictures from the original work have been placed in the text while other pictures and maps were excluded. References to these resources remain in their original location in the text. Should the reader be interested in viewing these items in their entirety, they should contact the Heritage Resource Section, Supervisor's Office, Ouachita National Forest, located on Indiana Avenue in Hot Springs, Arkansas. The original work is housed in this location.

ARKANSAS NATIONAL FOREST
LAND CLASSIFICATION STATISTICAL SUMMARY

1. Total Gross Area Proclaimed as National Forest 1,663,300 acres.
2. Total Gross Area Eliminated from National Forests 705,010 acres.
3. Total Gross Area within the National Forests 958,290 acres.
4. Total Area in Forest Classified as Chiefly Valuable
for Agriculture 15,839 acres.
5. Gross Total Area of Alienated Lands in Forest Excluding
Lands Classified as Agricultural 317,289 acres.
6. Gross Total Area Alienated Land (all classes) in Forest 333,128 acres.
7. Total Area Government Lands Classified as Nonlistable,
but not Segregated; because
 - a. Valuable for standing timber 1,340 acres.
 - b. Possible mineral land 0 acres.
 - c. Reclamation or other withdrawal 0 acres.
 - d. 0 acres.

(Write in, if any other)

TOTAL 1,340 acres 1,340 acres.
8. Total Area Government Lands now in Forest
Classified and Segregated as Nonlistable 592,402 acres.
9. Total Area Government Land Remaining Unclassified, if any. 55,945 acres.
10. Total Net Area Government Nonlistable Land in Forest 625,162 acres.
11. Cover Classified of Government Land Classified and
Segregated as Nonlistable:
 - a. Timberland 592,402 acres.
 - b. Woodland 0 acres.
 - c. Brush land 0 acres.
 - d. Burn 0 acres.
 - e. Barren 0 acres.
 - f. Grassland or Sagebrush 0 acres.
 - g. Water 0 acres.

TOTAL 592,402 acres.

(The total number under the above should
Be the figure given for No. 8)
12. Classification of Alienated Land by Titles
 - a. Agricultural alienations 211,820 acres.
(Include homestead, preemption, desert land, or small holding entries or patents
and all other land classified as agricultural)
 - b. Mineral alienations 0 acres.
(Alienations under any of the mineral laws)
 - c. State lands, selected 23,840 acres.
 - d. State lands, place 0 acres.
 - e. Railroad or other grant lands:
 1. Place lands 0 acres)
 2. Selected lands 0 acres) Total 63,130 acres.
 - f. Timber and stone entries or patents 34,338 acres.
 - g. Other alienations 0 acres.

(Give details where any important class occurs)
13. Other Classifications or Withdrawals
 - a. Area classified as 0 acres.

(Write in "coal," "phosphate," "oil," or any other mineral classification)

- b. Area under Reclamation Withdrawal acres.
c. Area under Water Power Withdrawal 31,420 acres.
d. 0 acres.
(Any other)

TOTAL 31,420 acres.

14. Administrative Sites

- a. Number 12
b. Total area. 1,120 acres.
c. Total area retained for administrative sites (not public service sites)
having soil, climate, and topography suitable for agriculture . . . 112 acres.
d. Total number and area of administrative sites included under Forest
withdrawal No. 1,120 acres.
e. Total number and area of administrative sites not included under
Forest withdrawal No. 0 acres.
(Under this heading include only administrative sites
withdrawn under the Act of June 25, 1910)

15. Classification by Use

- a. Total number of patented homesteads, preemptions, desert land entries and small
holdings (only in S.W.) 1,748; total area 209,879 acres; number
occupied by original entrymen 437; by others 700;
unoccupied 611; total area of such homesteads under cultivation producing
hay 6,821 acres; other crops 13,642 acres.
b. Total number of patented homesteads listed under Act of June 11, 1906, 110;
number occupied by original entrymen 60; by others 50;
unoccupied 0; total area of such homesteads under cultivation producing
hay 596 acres; other crops 2,397 acres.
c. Total number of pending June 11 homesteads 80; occupied 60; apparently
abandoned 20;
d. Average area of such entries 48 acres; total area under cultivation producing hay
..... 144 acres; other crops 576 acres.
e. Total number of homestead patents or entries used for grazing purposes only 0;
Area 0 acres.
f. Total area of listed land not entered 3,900 acres; Number of home units 76.
g. Total area alienated land under cultivation producing hay 16,656 acres; other crops
33,312 acres.
h. Total area alienated land used for grazing or forest purposes only 283,160 acres.
i. Total area alienated land grazed under Regulation G-7 13,325 acres.

Date of Data June 30, 1919.

W.F. Hill
Forest Supervisor

EXTENSIVE AND INTENSIVE LAND CLASSIFICATION
of the
ARKANSAS NATIONAL FOREST
by
Wm. E. Wootten

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Detailed Description:

(Maps of individual Units will be found following the
description both Extensive and Intensive)

Township	Range	Map No.*	Page	Township	Range	Map No.	Page
4-North	30-31-32 West	2	-	4-5 North	26 West	25	154
Part of 3-North	31-32	"	2	3-North	26 "	26	158
3-North	33	"	2	1-North	26 "	27	-
Part of 3-North	31-32	"	3	1-South	25-26 "	27	162
2-North	31-32-33	"	3	3-4-5-South	26 "	28	-
1-North, 1-South	32-33	"	4	4-South	25 "	28	166
1-2-North	31	"	5	3-4-South	25 "	29	174
1-South	31	"	6	1-2-North	25 "	30	178
1-South, 1-2 North	30	"	7	Part of 3-North	24 "	31	-
2-South	31	"	8	4-North	23-24 "	31	182
3-South	30-31	"	8	2-North	24 "	32	-
4-South	30-31	"	9	Part of 3-North	24 "	32	185
1-North	29	"	10	1-North, 1-South	24 "	33	189
1-South	29	"	11	2-3-South	24-25 "	34	193
3-4-South	29	"	12	3-North	23 "	35	197
4-North	28	"	13	2-North	23 "	36	200
3-North	28	"	14	1-North	23 "	37	204
1-North	28	"	15	2-3-South	23 "	38	208
1-South	28	"	16	1-South	22 "	39	210
2-3-South	28	"	17	3-North	22 "	40	213
4-5-South	28	"	18	2-North	22 "	41	217
4-North	27	"	19	1-North	22 "	42	221
3-North	27	"	20	2-South	22 "	43	226
2-North	26-27-28	"	21	2-3-North	21 "	44	228
1-North	27	"	22	1-North	21 "	45	232
1-South	27	"	23	1-2-South	21 "	46	237
3-4-5-South	27	"	24				

(* The Intensive maps have equal numbers with the Extensive maps but are indicated by the letter "A".)

EXTENSIVE LAND CLASSIFICATION
OF THE
ARKANSAS NATIONAL FOREST

LIST OF AREAS HELD FOR FINAL EXAMINATION OF POSSIBLE AGRICULTURAL LAND

Map No.	Township	Range	Meridian	In Sections	Acres
2	3 north	32 west	5th P.M.	3-9	320
3	2 north	32 west	5th P.M.	29-30	
3	3 north	31 west	5th P.M.	32	
3	2 north	31 west	5th P.M.	6-20-21-22-23-24-26-29-31-32-33-34-35-36	2,560
4	1 north	32 west	5th P.M.	19-20-21-23-24-27-28-36	
4	1 south	32 west	5th P.M.	13-14-15-19-20-21-22-24-26-28-29	
4	1 north	33 west	5th P.M.	24	4,194
5	1 north	31 west	5th P.M.	1-2-10-11-13-25-29-35-36	
5	2 north	31 west	5th P.M.	All vacant land	3,160
6	1 south	31 west	5th P.M.	1-2-5-7-8-20-21-22-24-27-28-29-32-33-34	2,500
7	1 south	30 west	5th P.M.	14-15-18-30	
7	1 north	30 west	5th P.M.	3-13-14-19-20-25-26-27-28-34	
7	2 north	30 west	5th P.M.	19-20-27-28-29-30-31-32-33-34	4,777
8	2 south	31 west	5th P.M.	35-36	
8	3 south	30 west	5th P.M.	5-8-9-10-12-14-15-23-24-25-26-29-30-31-32-36	
8	3 south	31 west	5th P.M.	1-23-24-25-26	4,324
9	4 south	30 west	5th P.M.	5-6-7-8-9-10-11-15-21-27-28	
9	4 south	31 west	5th P.M.	12-13-24	2,385
10	1 north	29 west	5th P.M.	22-28-29-30	600
11	1 south	29 west	5th P.M.	7-8-9-10-20-22-23-24-28	1,529
12	3 south	29 west	5th P.M.	21-22-25-31-33-34-35-36	
12	4 south	29 west	5th P.M.	1-4-5-7-12-17-18-21-25-26	3,338
13	4 north	28 west	5th P.M.	36	240
15	1 north	28 west	5th P.M.	1-2-10-35-36	760
16	1 south	28 west	5th P.M.	17-23-24-25	590
17	3 south	28 west	5th P.M.	13-21-28-30-31	258
18	4 south	28 west	5th P.M.	1-2-7-8-13-22-28-29-30-31-32-33-34-36	1,715
19	4 north	27 west	5th P.M.	1-2-3-8-9-10-13-15-17-20-22-23-31-32-33	2,147
20	3 north	27 west	5th P.M.	11-12	360
21	2 north	27 west	5th P.M.	4-7-8-10-12-13-14-15-17-18-19-21-22-23-27-28	
21	2 north	28 west	5th P.M.	2-3-4-10-13	3,244
22	1 north	27 west	5th P.M.	31	200
23	1 south	27 west	5th P.M.	4-5-6-8-14-23-25-26-29	1,403
24	3 south	27 west	5th P.M.	29	
24	4 south	27 west	5th P.M.	8-9-13-14-15-18-20-21-23-24-27-36	1,390
25	5 north	26 west	5th P.M.	35	
25	4 north	26 west	5th P.M.	5-6-10-15-23-24-25-26	720
26	3 north	26 west	5th P.M.	6-7-22-23-28	360

27	1 north	26 west	5th P.M.	7-8-24-25-26-27-32	913
28	4 south	25 west	5th P.M.	18	
28	4 south	26 west	5th P.M.	6-11-13-14-28-29-31	940
29	4 north	25 west	5th P.M.	3-4-5-20	
29	3 north	25 west	5th P.M.	1-3-9	860
30	1 north	25 west	5th P.M.	1-2-11-12-18-19-29-30-33	1,060
31	3 north	24 west	5th P.M.	5	120
32	3 north	24 west	5th P.M.	25-36	
32	2 north	24 west	5th P.M.	6-10-11-17-19-22-24-26-27-30-34-35	1,088
33	1 north	24 west	5th P.M.	10-11-12	320
34	3 south	24 west	5th P.M.	8-9	
34	3 south	25 west	5th P.M.	11-12	440
36	2 north	23 west	5th P.M.	14-15-21-22-23-25-31	712
37	1 north	23 west	5th P.M.	2-8-10-11-12-13-14-15-24	970
40	3 north	22 west	5th P.M.	11-12-24	440
41	2 north	22 west	5th P.M.	1-5-6-22-24-25-28-33	647
42	1 north	22 west	5th P.M.	6-10-11-12-14-15-21-22-23-25-26-27-28-31-32-33-34-35	2,298
45	3 north	21 west	5th P.M.	36	
45	2 north	21 west	5th P.M.	13-17-34	200
46	1 north	21 west	5th P.M.	5-6-7-8-10-12-13-22-23-26-27-28-29-31-33-34	1,863

Total acreage for area included within this report 55,945

LAND CLASSIFICATION
of the
ARKANSAS NATIONAL FOREST

List of Areas

Classified as Most Valuable for Water Power Purposes

All vacant land in Township 1						South,	Range 24	West
"	"	"	"	"	2-3	South,	Range 23	West
"	"	"	"	"	1	South,	Range 22-23	West
"	"	"	"	"	2	South,	Range 22	West
"	"	"	"	"	1-2	South,	Range 21	West

List of Areas

Held for Temporary Higher Values and to be Re-examined
when Timber is Removed

Description			Section	Township	Range
-	N ½	NE ¼	80	-	-
E ½	NE ¼	NW ¼	20	-	-
NW ¼	NE ¼	NW ¼	10	-	-
E ½	SE ¼	NW ¼	20	-	-
N ½	SW ¼	NE ¼	20	-	-
SW ¼	SW ¼	NE ¼	10	1 North	28 West

NE ¼	NE ¼	SE ¼	10	-	-	-
S ½	NE ¼	SE ¼	20	-	-	-
-	SE ¼	SE ¼	40	-	-	-
NE ¼	SW ¼	SE ¼	10	-	-	-
S ½	SW ¼	SE ¼	20	21	2 North	23 West
-	N ½	NW ¼	80	27	4 South	30 West
			340			

INTENSIVE LAND CLASSIFICATION
of the
ARKANSAS NATIONAL FOREST
List of Areas
Classified as Listable Land under the
Act of June 11, 1906

Township 1 North, Range 31 West

<u>Section 10</u>	Acres		
SE ¼ NW ¼ NW ¼ SE ¼	2.50		
S ½ NE ¼ NW ¼ SE ¼	5.00		
SE ¼ NW ¼ SE ¼	10.00		
E ½ SW ¼ NW ¼ SE ¼	5.00		
NE ¼ SW ¼ SE ¼	10.00		
E ½ NW ¼ SW ¼ SE ¼	5.00		
SW ¼ NW ¼ SW ¼ SE ¼	2.50		
S ½ SW ¼ SE ¼	20.00	60	
S ½ N ½ SE ¼ SW ¼	10.00		
S ½ SE ¼ SW ¼	20.00		
S ½ N ½ SW ¼ SW ¼	10.00		
S ½ SW ¼ SW ¼	20.00	60	120.00

Township 2 North, Range 31 West

<u>Section 26</u>	Acres		
SE ¼ SE ¼ SW ¼	10.00		
NW ¼ SW ¼ SW ¼	10.00		
N ½ NE ¼ SW ¼ SW ¼	5.00		
N ½ SW ¼ SW ¼ SW ¼	5.00		
 <u>Section 29</u>	 Acres		
NW ¼ SE ¼	40.00		70.00

Township 1 South, Range 30 West

<u>Section 14</u>	Acres		
SE ¼ SW ¼	40.00		
W ½ SW ¼ SE ¼	20.00		
SE ¼ SW ¼ SE ¼	10.00		
SW ¼ NW ¼ SE ¼	10.00		
 <u>Section 15</u>	 Acres		
S ½ NE ¼ SE ¼	20.00		
S ½ N ½ NE ¼ SE ¼	10.00		

SE ¼ SE ¼	40.00	
S ½ SW ¼ SE ¼	20.00	
S ½ N ½ SW ¼ SE ¼	10.00	
S ½ SE ¼ SW ¼	20.00	
S ½ N ½ SE ¼ SW ¼	10.00	
S ½ SW ¼ SW ¼	20.00	
S ½ N ½ SW ¼ SW ¼	10.00	240.00

Township 1 North, Range 30 West

<u>Section 25</u>	Acres	
SW ¼ NW ¼	40.00	
N ½ NW ¼ SW ¼	20.00	
W ½ SW ¼ NW ¼ SW ¼	5.00	

<u>Section 26</u>	Acres	
SE ¼ NE ¼	40.00	
NE ¼ SE ¼	40.00	

<u>Section 28</u>	Acres	
NE ¼ SE ¼	40.00	

<u>Section 27</u>	Acres	
NW ¼ SW ¼	40.00	
N ½ NE ¼ SW ¼	20.00	245.00

Township 3 South, Range 30 West

<u>Section 30</u>	Acres	
N ½ SE ¼ NW ¼ SW ¼	5.00	<i>Disapproved</i>
SW ¼ NW ¼ SW ¼	15.24	
W ½ NW ¼ SW ¼ SW ¼	10.13	30.37

Township 4 South, Range 30 West

<u>Section 27</u>	Acres	<i>Disapproved</i>
N ½ NE ¼	80.00	80.00

Township 1 North, Range 29 West

<u>Section 22</u>	Acres	
E ½ SW ¼	80.00	
W ½ W ½ SE ¼	40.00	
<u>Section 30</u>	Acres	
NE ¼ NW ¼	40.00	160.00

Township 3 South, Range 29 West

<u>Section 21</u>		Acres
S ½ NW ¼ NE ¼	20.00	

<u>Section 22</u>	Acres	
S ½ SW ¼ NE ¼	20.00	
SW ¼ SE ¼ NE ¼	10.00	
S ½ SE ¼ SE ¼ NE ¼	5.00	
<u>Section 35</u>	Acres	
E ½ SE ¼	80.00	135.00

Township 4 South, Range 29 West

<u>Section 12</u>	Acres	<i>Disapproved</i>
NE ¼ SE ¼ NE ¼	10.00	
N ½ N ½ SW ¼ NW ¼	10.00	
N ½ NW ¼ SE ¼ NE ¼	5.00	
SW ¼ NW ¼ SW ¼ NE ¼	2.50	
W ½ SW ¼ SW ¼ NE ¼	5.00	
W ½ NW ¼ NW ¼ SE ¼	5.00	
SE ¼ NW ¼ NW ¼ SE ¼	2.50	
NE ¼ NW ¼ SE ¼	10.00	50.00

Township 1 North, Range 28 West

<u>Section 36</u>	Acres	
NE ¼ SE ¼	40.00	
E ½ NW ¼ SE ¼	20.00	60.00

Township 1 South, Range 28 West

<u>Section 24</u>	Acres	<i>Disapproved</i>
NE ¼ NW ¼ SE ¼ SW ¼	2.50	
N ½ NE ¼ SE ¼ SW ¼	5.00	
E ½ W ½ SW ¼ SE ¼	10.00	
NW ¼ NW ¼ SW ¼ SE ¼	2.50	

<u>Section 25</u>	Acres	<i>Disapproved as to</i>
W ½ NW ¼ NE ¼	20.00	<i>E ½ W ½ NW ¼ NE ¼ 10 acres</i>
W ½ W ½ NW ¼ NE ¼	10.00	40.00

Township 3 South, Range 28 West

<u>Section 13</u>	Acres	
N ½ NE ¼ NE ¼	20.00	
N ½ S ½ NE ¼ NE ¼	10.00	30.00

Township 4 South, Range 28 West

<u>Section 1</u>	Acres	
SW ¼ NE ¼ NW ¼	10.00	
N ½ NW ¼ SE ¼ NW ¼	5.00	
S ½ SW ¼ NW ¼	20.00	
N ½ NE ¼ SW ¼ NW ¼	5.00	
S ½ S ½ SE ¼ NW ¼	10.00	

SW ¼ SW ¼ SW ¼ NE ¼	2.50	
<u>Section 2</u>	Acres	<i>Disapproved</i>
E ½ SE ¼ SE ¼ NE ¼	5.00	57.50
<u>Township 2 North, Range 28 West</u>		
<u>Section 13</u>	Acres	
N ½ NW ¼ SE ¼ NE ¼	5.00	
N ½ NE ¼ SW ¼ NE ¼	5.00	10.00
<u>Township 1 North, Range 27 West</u>		
<u>Section 31</u>	Acres	<i>Disapproved</i>
NW ¼ SW ¼	39.83	
SW ¼ NE ¼ SW ¼	10.00	
N ½ SW ¼ SW ¼	19.97	69.80
<u>Township 1 South, Range 27 West</u>		
<u>Section 4</u>	Acres	
Fractional NW ¼	73.85	
N ½ NW ¼ SW ¼	20.00	
N ½ S ½ NW ¼ SW ¼	10.00	
NW ¼ NE ¼ SW ¼	10.00	
N ½ SW ¼ NE ¼ SW ¼	5.00	
<u>Section 5</u>	Acres	
W ½ fractional NE ¼	38.25	
N ½ NW ¼ SE ¼	20.00	
SW ¼ NW ¼ SE ¼	10.00	
W ½ SE ¼ NW ¼ SE ¼	5.00	
NW ¼ NE ¼ SE ¼	10.00	
<u>Section 8</u>	Acres	
W ½ W ½ NW ¼ NE ¼	10.00	
SE ¼ SW ¼ NW ¼ NE ¼	2.50	
SW ¼ SE ¼ NW ¼ NE ¼	2.50	
<u>Section 14</u>	Acres	<i>Disapproved</i>
E ½ SE ¼ SW ¼	20.00	
<u>Section 23</u>	Acres	<i>Disapproved</i>
E ½ NE ¼ NW ¼	20.00	
NE ¼ SE ¼ NW ¼	10.00	
NW ¼ SW ¼ NE ¼	10.00	277.10
<u>Township 4 South, Range 27 West</u>		
<u>Section 24</u>	Acres	<i>Disapproved</i>
NE ¼ SE ¼	40.00	

E ½ NW ¼ SE ¼	20.00	
NW ¼ NW ¼ SE ¼	10.00	
N ½ NE ¼ SW ¼	20.00	
NE ¼ NW ¼ SW ¼	10.00	
<u>Section 13</u>	<u>Acres</u>	
SE SE ¼ NE ¼	15.00	
E ½ SW ¼ SE ¼ NE ¼		
<u>Section 27</u>	<u>Acres</u>	
NW ¼ SE ¼ NE ¼	10.00	125.00
<u>Township 4 North, Range 26 West</u>		
<u>Section 23</u>	<u>Acres</u>	
S ½ SE ¼ SE ¼	20.00	
NE ¼ SE ¼ SE ¼	10.00	
<u>Section 24</u>	<u>Acres</u>	
SW ¼ SW ¼	40.00	
<u>Section 25</u>	<u>Acres</u>	
W ½ NW ¼ NW ¼	20.00	
<u>Section 26</u>	<u>Acres</u>	<i>Disapproved</i>
E ½ NE ¼ NE ¼	20.00	
NW ¼ NE ¼ NE ¼	10.00	120.00
<u>Township 1 North, Range 26 West</u>		
<u>Section 26</u>	<u>Acres</u>	
NW ¼ NW ¼ NE ¼	10.00	
S ½ SW ¼ NW ¼ NE ¼	5.00	
S ½ NE ¼ NW ¼ NE ¼	5.00	
E ½ NE ¼ NE ¼ NW ¼	5.00	
<u>Section 23</u>	<u>Acres</u>	
S ½ SW ¼ SW ¼ SE ¼	5.00	
SE ¼ SE ¼ SE ¼ SW ¼	2.50	
<u>Section 27</u>	<u>Acres</u>	
S ½ SE ¼ NW ¼	20.00	52.50
<u>Township 4 South, Range 25 West</u>		
<u>Section 18</u>	<u>Acres</u>	
S ½ S ½ SW ¼ NW ¼	14.46	14.46
<u>Township 4 South, Range 26 West</u>		
<u>Section 29</u>	<u>Acres</u>	<i>Disapproved</i>
S ½ NW ¼ NW ¼	20.00	
NW ¼ NW ¼ NW ¼	10.00	
S ½ NE ¼ NW ¼ NW ¼	5.00	35.00

Township 1 North, Range 25 West

<u>Section 1</u>	Acres
S ½ SW ¼ SW ¼	20.00

<u>Section 2</u>	Acres
S ½ SE ¼ SE ¼	20.00

<u>Section 11</u>	Acres
NE ¼ NE ¼	40.00
N ½ N ½ SE ¼ NE ¼	10.00

<u>Section 12</u>	Acres
W ½ NW ¼ NW ¼	20.00
W ½ E ½ NW ¼ NW ¼	10.00

<u>Section 30</u>	Acres	
N ½ NE ¼ NW ¼	20.00	140.00

Township 2 North, Range 24 West

<u>Section 6</u>	Acres
S ½ NW ¼ SW ¼	20.00

<u>Section 19</u>	Acres	
W ½ NE ¼ SE ¼ NE ¼	5.00	<i>Disapproved</i>
W ½ SE ¼ NE ¼ NE ¼	5.00	
SW ¼ NE ¼ NE ¼ NE ¼	2.50	32.50

Township 3 South, Range 25 West

<u>Section 11</u>	Acres
N ½ SE ¼ NE ¼	20.00

<u>Section 12</u>	Acres	
N ½ SW ¼ NW ¼	20.00	
N ½ NE ¼ NW ¼	20.00	60.00

Township 1 North, Range 22 West

<u>Section 10</u>	Acres	
S ½ NE ¼	80.00	<i>Disapproved</i>

<u>Section 11</u>	Acres	
SW ¼ NE ¼	40.00	<i>Disapproved</i>
W ½ SE ¼ NE ¼	20.00	
N ½ NW ¼ SE ¼	20.00	
SE ¼ NW ¼ SE ¼	10.00	
NW ¼ NE ¼ SE ¼	10.00	

<u>Section 14</u>	Acres	
NE ¼ NE ¼	40.00	<i>Disapproved</i>

<u>Section 21</u>	Acres	
		<i>Disapproved</i>

E ½ E ½ SW ¼ SE ¼	10.00
SW ¼ SE ¼ SE ¼	10.00

<u>Section 28</u>	Acres	<i>Disapproved</i>
N ½ NE ¼ NE ¼	20.00	260.00

Township 1 North, Range 21 West

<u>Section 26</u>	Acres
N ½ SW ¼ SW ¼ SW ¼	5.00

<u>Section 27</u>	Acres
E ½ NW ¼ SE ¼ SE ¼	5.00 10.00

Total acreage of listable land for area included within this report

	2,524.23
<i>Disapproved</i>	940.17
Total	1,584.06

PREFACE REPORT
LAND CLASSIFICATION
ARKANSAS NATIONAL FOREST, ARKANSAS

By
William E. Wootten

The general classification of lands in the Arkansas National Forest, which was created December 18, 1907, was made possible through an Act of Congress during 1912.

The first work under this appropriation on the Arkansas National Forest was the La Fourche Project, in 1912 and 1913, under the direction of Deputy Forest Supervisor Ralph C. Huey. This project embraced Townships 1, 2, and 3 north, Ranges 17, 18, 19, and 20 west, and these townships will not be further discussed in this report.

With gratitude I acknowledge much valuable data secured from Forest Supervisor Huey's report, "Land Classification, La Fourche Project," "Soil Survey of the La Fourche Project," by Cornelius Van Duyne, of the Bureau of Soils, "Geological Survey of Arkansas," by John C. Branner.

I am especially indebted to my able corps of assistants, Forest Rangers Dave Winbray, Herbert A. Regan, Charles E. Beaumont, and Jesse J. Coker, for their hearty cooperation and the diligence they at all times displayed while engaged upon this work, and the other members of the Arkansas National Forest personnel who, one and all, have lent their best efforts toward making this work as complete and thorough as possible.

Also, I thank the settlers within and near the boundaries of the Forest for the many courtesies they extended to the members of the Land Classification party. We have failed to record a single instance where one was not at all times, both by word and deed, willing to lend every assistance in his power when called upon.

The Intensive Land Classification was based upon the following letter to the Honorable Secretary of Agriculture, from Acting Forester W.B. Greeley, under date of May 8, 1915, and the "Rules for the Intensive Classification of Land in the Arkansas National Forest," issued December 14, 1915, by Acting Forest Supervisor R. C. Huey:

L
Classification, Arkansas
Listing Rules

"Washington, D.C.,
May 8, 1915."

The Secretary of Agriculture.

Dear Mr. Secretary:

I have the honor to transmit herewith the following reports:

Land Classification, La Fourche Project, Arkansas National Forest, by Deputy Forest Supervisor Ralph C. Huey.

Soil Survey of the La Fourche Project, Arkansas National Forest, by Soil Expert Cornelius Van Duyne, of the Bureau of Soils.

Report of the Correlation Committee of the Bureau of Soils on Land Classification of the La Fourche Project, Arkansas National Forest.

Preliminary Report upon Agricultural Possibilities of the Arkansas National Forest, Particularly with Reference to Settlement Policy under Act of June 11, 1906, by Forest Expert George L. Clothier.

General Report on Settlement Policy of the Forest Service in the Arkansas National Forest by Forest Expert George L. Clothier.

Report entitled "The People's Ozark Highlands," by Assistant Forester William L. Hall.

The first three reports among those named have already been before you for consideration and approval in acting upon the La Fourche Classification Project, whereby you classified 106,688 acres of Government land as follows: Agricultural 10,443.05 acres, non agricultural 94,865.47 acres, suspended 1,379.48 acres. This work was done very thoroughly and cost a total of \$3,790, which did not include the salary of the Soil Expert. Compass lines were run through each 40-acre tract by topographers and the land was mapped accurately, the maps showing contours at 25-foot intervals. Each 40-acre tract was also crossed by a timber cruiser and the timber was estimated and tallied by diameter classes on a strip four rods wide. In addition, each 40-acre tract was, as a rule, crossed twice in making the detailed agricultural land examination in addition to the work done by the Soil Expert, and frequent borings were made to ascertain the character and depth of soil and subsoil, amount of rock, etc.

Unusual pains were taken with this area in order to get as nearly as possible absolutely accurate data. This is desirable to have for a representative area in order that certain demonstrated principles may be followed in the classification of the remainder of the Forest. However, it is now apparent that such painstaking and costly work would not be justified on the remainder of the Forest. On this basis it would take over fifty years to classify our total National Forest area at the present rate of appropriations for this work, and the cost would be approximately \$5,000,000. In my opinion the remainder of the Forest may be classified even more satisfactorily than this sample project by making reasonable use of the information now made available to us through this work and its results and through the other reports herewith submitted.

It is shown by these reports that the Arkansas National Forest is extremely rough. In the past geological ages the rock strata were folded into parallel anticlines and synclines trending in a general east and west direction. Severe erosion for millions of years has dissected the anticline ridges and valley troughs into innumerable mountain, hillocks, and hollows. The hardest strata, turned up at angles of from 20 to 75 degrees, now form the mountain ridges, which for this reason are very sharp, narrow, and rocky. Mr. Clothier states that less than two per cent of the land area included within the exterior boundaries of the Forest can be said to be flat, and that not over 10 per cent of the country has a slope of less than 10 degrees, which marks the limit of successful tillage. His estimates have been verified by the results secured by intensive examination.

There are three classes of agricultural land found in the general region of the Arkansas National Forest. The first class lands are alluvial valley lands along the principal streams. The best of these lands were taken up 60 or 70 years ago and every acre of this type, so far as known, passed into private ownership years ago. Beginning with the earliest settlements, the hills and valleys of this region have been secured by homeseekers until there is little left of real value. While it is not believed that any land of this class will be found remaining in Government ownership, still it must be considered in discussing the agricultural features of this region as it forms the basis of practically all the successful farming in this region and fixes the standard of farm values.

The second class lands are bench or second bottomlands. These lands produce about half as heavily as the alluvial bottomlands of the first class and wear out quickly if not heavily fertilized. Very rarely, if ever, can a 40-acre tract of land of this second class be found under Government ownership or even within the exterior boundaries of the Forest, and when such lands are found they usually have been settled upon and abandoned by some previous homesteader and have remained unclaimed through error in the records and lack of knowledge that they were open for settlement. Such cases are very exceptional.

The third class lands occupy the lower ridges and benches near the foot of the mountains and occasionally the tops of flattened ridges. The productivity of these lands is from 25 to 35 per cent of that of lands of the first class.

Our chief problem now has to do with these lands of the third class. In fact, the first and second class will probably not be encountered in classifying the Forest except where some error in the records or mistake in survey is discovered. Fifty per cent of the third class lands, where settled upon, have been abandoned as homes, and many former homesteads are now held by timber speculators. However, the present demand for these lands is not from people who wish to engage in timber speculation, but from people who are willing to use this land for home-building purposes under most adverse conditions. In many instances the standard of living is exceedingly low. Families are raised on small corn patches cleared on hillsides, cultivated among rocks, yielding after the most wearisome effort only 10, 15, or 20 bushels to the acre, such hillside fields soon losing their fertility and requiring the homesteader to clear land elsewhere. The total annual gross value of farm crops produced by many of the hill families amounts to not more than \$100. The ground is so steep and rocky and the areas so small that it is impracticable to use improved farm machinery. Improved 160-acre farms of this kind having log house and barn, eight or ten acres cleared and fenced, can be bought for \$500, \$100 down and the remainder on reasonable terms. In many places such farms are assessed locally at a total valuation of \$100 each. The price for which such places can be purchased does not represent more than the fair value of the improvements alone. Similarly the scanty return from the soil represents less than a sweat-shop wage standard. It is such lean land as this which represents our problem in the Arkansas National Forest.

While there is a popular demand for such land for farm purposes in that region, it is believed it is based upon misdirected ambition and lack of knowledge of the real need of the State. Arkansas has a total area of 33,616,000 acres. Of this amount 1,208,384 acres, or about 3 ½ per cent, are withdrawn, administered, and protected as National Forests. The remaining 32,408,000 acres are either privately owned or comprise Government land practically all open to entry. Of this amount only 17,413,000 acres were in farms in 1910 and only 8,076,000 acres of these farms were in cleared fields. In other words, there were available for farm purposes outside the National Forests approximately 24,332,000 acres of undeveloped land, most of it much more suitable for agriculture than the best land remaining in the National Forests. It is apparent that extensive agricultural development in Arkansas in the future must come through intensive use of the land already patented rather than by adding to the acreage of "lean land" by securing rocky timbered hillsides and ridges from the Government. Furthermore, even though this entire 1,208,384 acres of land were immediately opened to settlement it would not result in more than five per cent ever being cultivated, for of the 32,408,000 acres of much better land available for agriculture less than 25 per cent is being used for farm purposes. It is apparent that the elimination of these Forests would be exchanging 1,208,384 acres of splendid forest land for less than 60,000 acres of questionable agricultural land; or, as shown by Mr. Hall's report, it would result in converting a property worth more than \$10,000,000 to the general public for forest purposes into property worth possibly \$1,500,000 for farm purposes.

Another thing which has added to the difficulty of this problem is the fact that the people who wish to take up land in this Forest usually hold the locally accepted belief that the forests should be burned over frequently. Repeated burnings have impoverished the soil of this region. On the ridges occasional giant veteran trees are found which grew and flourished while the soil was rich, before the country was repeatedly burned. Now the forest growth on the ridges shows the poverty of the soil. So far incendiarism has prevented the two Arkansas Forests from being successfully protected against fire. Settlement, which in most of the western Forests is desirable as an assistance in protection and

administration, in this region adds to the fire danger. Consequently, every acre listed for farm purposes has reduced our productive area and increased the cost of protection and administration.

A careful study of the entire problem has convinced me that our classification must be upon broader lines, and that where any land is listed for agricultural purposes the listing must be on the most liberal lines possible, thereby allowing the settler freedom in opportunity and a sufficient acreage to allow progress and provide for a fairly comfortable and prosperous livelihood as judged by the standard of living prevailing in the leading sections of the State, for it is apparent that the coming of good roads and the automobile into this region is certain to raise the standard of living, bring news of better opportunities elsewhere, and result in the abandonment of lean acres not meeting the requirements of reasonable comfort. I therefore desire to submit for your consideration and approval the following general rules to be followed hereafter in the classification of lands in the Arkansas National Forest.

1. Eliminate from the Forest at the earliest practicable date all areas embracing considerable agricultural settlements where the land left in Government ownership is so isolated or limited in area as to make an impracticable forest unit. In making such eliminations, adjoining areas of slopes or benches of third-class agricultural land should be included. In other words, in making such eliminations the line should be drawn so as to resolve all reasonable doubts in favor of the agricultural community.

2. Within the areas left after all agricultural communities are eliminated, all reasonable doubts should be resolved in favor of forest values and use.

3. If any land of the first class should be found within the areas to be permanently retained for forest purposes, such lands will be classified and listed upon application for entry under the Forest Homestead Act if of 10 acres or more in extent, unless for some good reason it appears that such segregation would result in greater loss to the Forest than gain to agriculture.

4. If any lands of the second class should be found within the areas to be permanently retained for forest purposes, such lands will be listed if found in reasonably compact bodies of 40 acres or more in extent within homestead limits. In applying this rule not more than 50 per cent of nonagricultural land may be included. If the cultivable land is in such irregular area or broken patches that 40 acres of such land can not be included within reasonable lines without also including more than a total area of 60 acres, then the entire area should be classified as nonlistable.

5. Lands on the lower slopes and benches and on the tops of flattened ridges free from reefs of rock or large boulders having even slopes not exceeding 20 per cent, and having not to exceed 50 per cent of rock and gravel content in the first eight inches of soil, are known as third class agricultural lands. It is my belief that third-class lands in small areas are of greater actual value for forest purposes than for agriculture. However, when found in reasonably compact bodies of 80 acres or more within homestead limits, they present sufficient agricultural values and possibilities to warrant their development and permanent use for farm purposes. I therefore recommend that if any such tracts be found within the areas to be permanently retained, such lands be listed unless it is shown that for some special reason such action would injure National Forest interests more than it would advance the interest of agriculture. In applying this rule, nonagricultural land may be included if necessary in the same proportion as in Rule 4. In applying this rule of making exceptions to it, more favorable consideration should usually be given to land on the lower slopes and benches. Owing to their relative inaccessibility and to their forming the actual core of forest units, the limited areas of arable land on flattened ridges should usually be listed only when they will add to adjoining agricultural settlements already established.

6. Land having to exceed 20 per cent slope will be classed as nonagricultural, but that is the maximum slope allowed for limited areas. As areas having such steep slopes deteriorate rapidly under cultivation, they will only be listed for use in connection with much less sloping land. Usually at least 50 per cent of the area to be listed should have a slope not to exceed 10 per cent, the extreme slope at which we can reasonably expect permanent use without entire loss to fertility.

7. Reasonable exception may be made to any of the foregoing rules in any specific case upon a showing of facts sufficient to justify such exception being made.

The foregoing plan and rules are in keeping with the general plan and policy which have already been considered by you in considerable length in numerous conferences with the Forester and which, it is understood, have already received your approval informally. It is now submitted in concrete form preliminary to attempting to fix the final Forest line on the Arkansas and undertaking to complete the classification of the entire Forest upon lines which form the most practical basis, under existing circumstances, for both farming and forestry.

Very sincerely yours,
(Signed) W.B. Greeley,
Acting Forester.

Approved: May 11, 1915.
(Signed) Carl Vrooman,
Acting Secretary.

"L-Arkansas
Classification

Rules for the Intensive Classification
Of Land in the Arkansas National Forest

Field

1. Nonagricultural Lands

In the field examination a plat on a scale of 4 inches to the mile may be prepared and accompanied by notes to determine all the nonagricultural land in the area examined. This will be classed as Stony Sandy Loam (Symbol SSL) and will indicate all lands which are classified as nonagricultural because of the excessive proportion of rock content (ordinarily more than 50 per cent) in the first eight (8) inches of soil, and which will also almost invariably include lands having more than 20 per cent slope. It also includes the stony creek flats, which should be clearly differentiated from the agricultural types.

2. Agricultural Lands

It has been found convenient to group the various grades of soil under three general divisions in practically close conformity with the three recognized classes of farm units. These three soil types should be defined on the plat according to their class regardless of the area, while the areas to be listed from the various agricultural tracts will depend upon their desirability as a homestead or adjoining farm entry.

Class 1. Alluvial bottomland (Symbol AB), of which scarcely any will be found with the exception possibly of a few small nooks which were left out by the earliest locators along some of the principal streams where currents have been slow enough to allow soil precipitation rather than the silt and sand precipitation which characterizes the following class.

Class 2. Second bottom, creek bottom, or bench lands (Symbol FSL) ordinarily formed through erosion of adjacent slopes and precipitation from moving currents. These include numerous grades of sandy and silty loams, usually flat or of very moderate slope, fertile and easily cultivated.

Class 3. Includes the rolling coarse sandy, silty or gravelly loams (Symbol SL) left in the process of erosion, and having less than 50 per cent rock content and less than 20 per cent slope, which is recognized as the limit of successful cultivation, and it is believed this maximum slope should be allowed only to a limited extent and under extraordinarily favorable conditions.

The field examiners may easily indicate all the above types of land with a lead pencil on 4-inch section plat, which will also afford room for any explanatory notes which will be necessary later in transferring the data to a 2-inch scale topographic township plat for Mr. Wooten's final report. A sample section plat is attached as a suggestion for this basis of the field examiner's report. This shows the method of indicating the soil types by Symbols, their location by dotted lines, and the area recommended for listing by shaded lines. These plats should, of course, be accentuated by appropriate contour maps wherever it is found that the topographic maps already on hand are inadequate because of erroneous location or lack of expression. Additional symbols should be adopted to indicate essential features not

heretofore considered and which might become factors in determining the land valuation. Standard Atlas symbols should, of course, be adhered to wherever possible.

Timber

Since all the Arkansas Forest areas are covered with a fair stand of timber of some valuable age and none of it is heavily timbered except in a locally comparative sense, it does not seem necessary to indicate the timber stand on these intensively classified areas except in cases where the present stand may give some agricultural areas a temporary higher value for timber. In the event such cases are found, they should be indicated by broken lines parallel to the lines of section subdivisions. On areas which have not been previously cruised various stands of timber per acre on agricultural areas should be indicated by numerals, as 2 M, 3M, etc., while the estimate by legal subdivisions may be entered on the Form 321 reconnaissance plat book which will be used for the field reports.

Photographs

Should be made wherever they bring out some particular phase of the topography, buildings, or culture.

Examinations should be thorough enough to insure accuracy, at least once through each 10-acre tract of agricultural land.

(Signed) R.C. Huey,
Acting Forest Supervisor."

Prior to the final approval of this report a review of the work done by the field examiners was made by Mr. W.F. Hill, of the District Office, Washington, D.C., and full approval given to the recommendations herein set forth. See page 40-a.

Experience of Examiners

William E. Wootten,

National Forest Examiner.

Since early boyhood has been a student of agriculture; since 1891 has been connected with the timber and lumber industry of Arkansas, with the exception of eight months during 1898, during Spanish-American War, when Captain in 1st Arkansas Volunteer Infantry, Commanding Company A, and thirteen months during 1906-7 when connected with the construction of the Gurdon & Fort Smith and Memphis, Dallas & Gulf Railroads. Entered the Forest Service, July 1, 1909, as Forest Guard, and since that date a great portion of the time has been spent on the examination of agricultural lands applied for under the Act of June 11, 1906.

Dave Winbray

Forest Ranger

Was raised on a farm and ranch; can pick 200 pounds of cotton in a day and rope and brand a steer without assistance; from 1888 to 1895 most of time was devoted to agriculture, horticulture, and ranching on his own account; from 1895 to 1898, was employed by the Government on agricultural surveys; from 1898 to 1900 was with the topographic branch of the Geological Survey, during part of this time was on the Sulphur River Reclamation Project and in collaboration with men in the Bureau of Soils; from 1901 to 1903 was engaged on agricultural surveys and land appraisements for the Commission to the Five Civilized Tribes, during the latter part of this employment was with the Indians in the field and assisted them personally to make their land selections; continued on this latter class of work in a private capacity for nearly two years after Government commission expired. Since entering the Forest Service in 1909 has made other land examinations from time to time, and has had additional instruction in a small

way from experts with the Bureau of Soils. This makes a total of about 28 years experience with farm operations and the relative value of agricultural lands.

Herbert A. Regan
Forest Ranger

Born and raised on a farm. Administrator of Hacienda Paso del Rio (sugar plantation), Colona, Mexico, one year. Examination of agricultural lands on the Arkansas National Forest (in connection with other duties) from 1913 to 1915.

Charles E. Beaumont
Forest Ranger

Considerable experience on tobacco farms in Connecticut. Entered Forest Service in 1911, and has been almost wholly on Land Acquisition since. Had opportunity to be in close touch with Bureau of Soils Expert in Alabama in 1914, where considerable knowledge was obtained in the classifying of soils.

Jesse J. Coker
Forest Ranger

Was reared on a farm in Alabama, of from four to six-horse capacity. Upon reaching manhood managed this farm for several years; farmed two years for himself. Attended 4th District Agricultural College in Alabama, where demonstration work was carried on, one term. Considerable experience on June 11 examinations during the past six years.

FOREST DESCRIPTION

1. TOPOGRAPHY

The Arkansas National Forest may be said to consist of two mountain ranges. The Ouachita Range, composing the southern portion, or that part lying south of the Ouachita River, and the Fourche Range, which covers the northern part, or that portion lying north of same river. For convenience, they will be discussed in this report in that way.

The Ouachita Mountain System is a name that has been given by State geologists to a belt of rugged mountainous country running from Polk County and the Oklahoma line on the west, in an easterly direction, to Pulaski County, where the rocky country is abruptly cut off by the low area of eastern Arkansas. It is the first really mountainous country met going north from the low flat or rolling pine region of the southern part of the State. Speaking in a general way, the Ouachita Mountains consist of a series of parallel ridges running in a direction varying from east-west to northeast-southwest and north-west-southeast, but characterized on the whole by a general east-west trend. Sometimes eight or ten of these ridges are crossed in a distance of as many miles, and at other times the whole range is represented by less than half that number scattered over a breadth of twice the distance. Whatever the local strike of a given area may be, all the ridges of that area follow general parallel directions, often curving around and joining each other at their extremities, thus forming a zigzag across the country in a manner directly dependent upon the disturbance to which the region has been exposed. An example of this is the well-known "S" of Gap Mountain, in T. 4 S., R. 25 W.

The ridges are separated by mountain streams and frequently rise abruptly to a serrated crest only a few feet wide. Seen from a distance they form long, narrow elevations with undulating summits rising in prominent and isolated peaks to a height of from 1,000 to 2,800 feet above sea level and from 500 to 1,000 feet above the surrounding drainage, then sloping off in low places through which mountain roads

and trails find passage across the country. The Ouachita Mountains are divided into locally named divisions such as Caddo Range, Northern or Ouachita Range, Cossatot Range, and Crystal Mountain Range. The first three take their names from the rivers receiving their drainage, while the Crystal Mountain Range receives its name from the abundance of rock crystal found in veins in the quartzose sandstones of which the mountains are composed. The range is continued northeastward through Bear Mountain to Mill, Blakely, and Cedar mountains east of the Ouachita River. All these belong to the same formation, are characterized by the same development of quartz, and should be included in the Crystal Mountain system. The detailed structure of these mountains is complicated, but in a general way they represent a series of parallel folds.

Novaculite is the most prominent rock of this region and usually forms the crest of the ridges. The slopes consist of belts of rather hard sandstone with intervening belts of soft shale. Practically the whole Ouachita Range is underlain with slate of more or less commercial value. This slate is most prominent in the Little Missouri Mountains and Bear and Blakely mountains, of the Crystal Mountain Range.

The Northern Range.—This is the longest but least prominent of the novaculite ranges. Its trend is from Little Rock to Board Camp post office, in Polk County. The range is composed of several parallel ridges, but sometimes is represented by a single ridge, which may become so low as to be without topographic importance. The ridges are usually not more than three or four hundred feet above the valleys, but occasionally reach an elevation of from six hundred to eight hundred feet above the drainage. The Northern Range starts at the east end from a single ridge rising near the junction of McHenry's Creek and Fourche Bayou, in Sections 28 and 33, T. 1 N., R. 13 W. The direction is at first northwest for about 15 miles, with a width of 3 or 4 miles for the greater part of the distance. The direction then changes to west for another fifteen miles; thence the trend is steadily south of west. In this latter part of its course the range is seldom more than two miles wide. The total length of this range is over 100 miles. It contains no extremely high peaks and but few of the higher elevations have received names; these are Bald Mountain, Goosepond Mountain, and Muddy Mountain.

The Caddo Range.—Uniting at the western end with this Northern Range is another series of ridges having a trend south of east to Caddo Gap; thence the range changes its general direction to northeast, becoming less prominent near the Ouachita River. This range consists in the main of parallel ridges forming a subordinate system two or three miles wide; but these ridges are much more prominent than those of the Northern Range, rising in prominent peaks from 1,500 to 2,000 feet above sea level and about 1,000 feet above the surrounding drainage. Since the greater part of this range lies in the Caddo River drainage the name Caddo Mountains may be conveniently applied to it. The most prominent peaks of this range are Blow-out Mountain, Fork Mountain, Little Missouri Mountain, State House Mountain, Cogburn Mountain, the Fodder Stack Mountain, southwest of Womble, the Gap Mountains at Caddo Gap, and the Three Sisters, in Sections 1, 2, and 3, T. 4 S., R. 24 W.

The Cossatot Range, south of the western part of the Caddo Mountains and west of the Caddo River, is a series of ridges which are conveniently grouped by themselves, and are separated from the Caddo Mountains topographically by the valleys of the South Fork of the Caddo River, part of the Little Missouri River, Long Creek, Mine Creek, and the headwaters of the Cossatot River. The name Cossatot will be used here to include the whole of this small system, though this name has hitherto had only a local application to the mountains in the western end of the Forest which are drained by the Cossatot River. This range is the grandest on the Forest, as it contains more and taller peaks than any of the rest, among which are the following: Ward's, Bald Eagle, Dog, Shadow Rock, Buckeye, Boar Tusk, Lost, Nickols, Baker, Katy, Rachel, West and East Hanna, High Point, Porter, Tall Peak, Brushy, Raspberry, Fodder Stack, Musgrove, Blalock, Leader, Brier Creek, He, Sugar Tree. All of these, and others without names, rise very sharply from 800 to 1,000 feet above the valleys of the larger streams.

The Crystal Mountain Range is another range of mountains deserving separate mention, lying north of the eastern end of the Caddo Range. This range continues northeastward through Bear Mountain to Mill, Blakely, and Cedar Mountains, east of the Ouachita River. This range derives its name from the abundance of rock crystals found in veins of the quartzose sandstone of which the mountains are

composed. It is from these mountains that the famous "Hot Springs Crystals" and "Hot Springs Diamonds" are secured. These mountains are very rough and have many peaks as high as those of the Caddo and Cossatot ranges, but as a rule they are not so steep. Prominent in this range are the Locust Mountain, Fork Mountain, Logan Gap Mountain, and High Peak. High Peak, in Section 19, T. 3 S., R. 24 W., is the most prominent in this range. That part of the range south of Silver City is sometimes known as the Silver Leaf Mountain, but this name is not so generally known nor for a general name so applicable as Crystal Mountains.

The Zigzag Mountain Range.—East of the Ouachita River rises a continuation of the Caddo Range, and through a system of northeast and southwest zigzagging ridges, trends in an east-southeast direction. This range is approximately twenty-five miles long with a breadth of six or eight miles. A striking feature of this range is the general trend of the ridges, which is almost at right angles to that of the system. The ridges are sharp and range in height from 500 to 1,000 feet altitude. There are some prominent peaks and ridges which have names. Near Hot Springs are West Mountain, Hot Springs or Observatory Mountain, North, also called Quarry, Mountain, Sugar Loaf Mountain, and Indian Mountain. Other prominent peaks of the range are Cutter's, Bald, Teager, and Basin.

The Trapp Mountain Range.—South and west of the Ouachita River, southwest of the Zigzags, but connected with them through low ridges at the eastern end, is the last division of the Ouachita System, called the Trapp Mountains. This range trends almost east and west with an approximate length of thirty-five miles and a maximum breadth of about four miles. The ridges are not as a rule much over 300 or 400 feet in height, but there are many sharp peaks which approach 700 or 800 feet. Few names have been given to individual mountains, but Jack, Bear, and Panther mountains are the most prominent elevations.

The last two named ranges are entirely outside, though adjacent to, the Forest boundary, and are only mentioned in connection with this report because of their having a prominent place in the Ouachita System and to show that the same conditions exist, agriculturally, in their vicinity as does in the mountain ranges within the Forest boundary. The writer has been intimately acquainted with both the Trapp and the Zigzag mountains for the past twenty years and know that such conditions do exist.

On the whole the Ouachita System is one of the steep slopes, rendering climbing extremely difficult. The crests are covered with a large amount of rock debris and scrubby timber. (See Photo. No. 22020A) The rocks of this system have been so intensely folded that they stand for the most part on edge. During the process of folding they were lifted out of the sea, converting the area into one of high mountains. In the long period that followed these mountains were worn down by atmospheric agencies and running water, leaving the truncated edges of the rocks at the surface. Neglecting minor changes of level, there was subsequently a period of elevation that brought the rocks to about their present altitude. During the time following this elevation the belts of soft rock have undergone denudation more rapidly than the hard ones, with the result that the former have eroded to such an extent that they now form the troughs through which the drainage waters pass while the latter stand up as mountains.

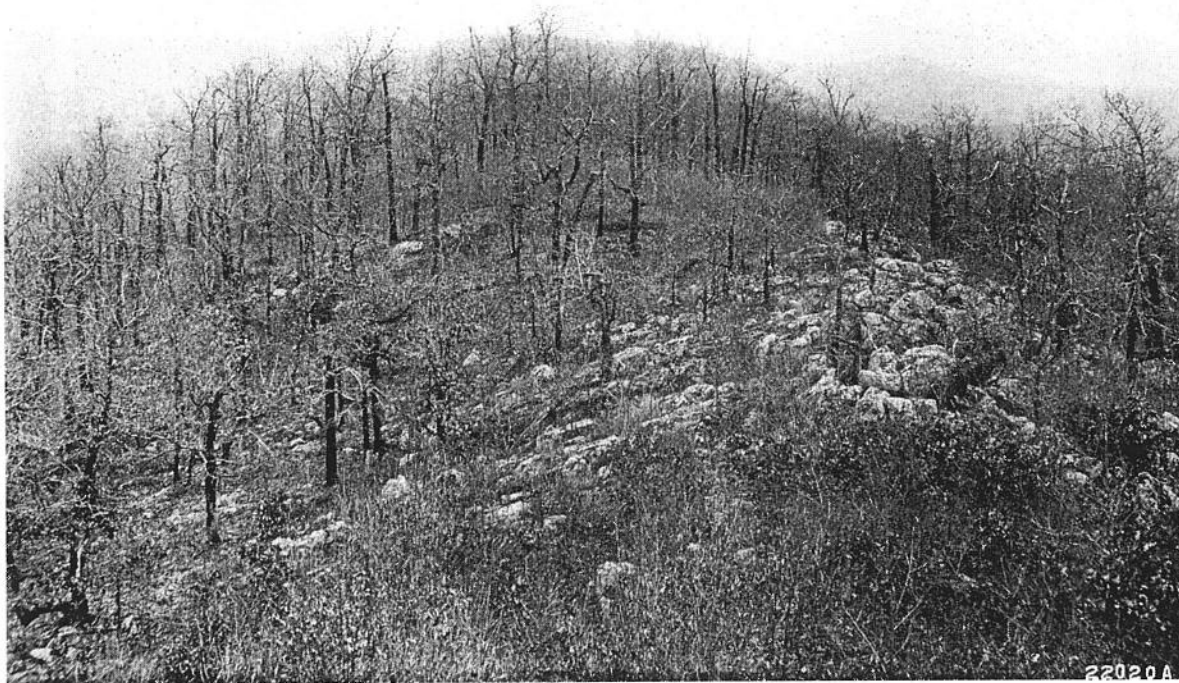


Photo No. 22020A. – Crystal Mountain Range showing characteristic mountain crest

The Fourche Mountain System.—The mountains of the Fourche System are on the whole of greater magnitude than those of the Ouachita System. The ridges, like those of the Ouachita, are parallel, with a general east-west course, but they are larger and higher than those of the Ouachita System, and are separated by wider valleys. In a general way it is divided into two parts by the valley of the Fourche La Fave River. In the northern division are the Poteau Mountains in Sebastian and Scott counties; Petit Jean and Dutch Creek mountains in Logan, Scott, and Yell counties; Danville and Fourche Mountains in Yell County. In the southern division are Rich and Irons Fork mountains in Polk County; Black Fork and Fourche mountains in Polk and Scott counties; Blue Mountain in Garland County; and White Oak Mountain in Saline County.

While the mountains of the Fourche System as a rule are longer and higher than those of the Ouachita System, their slopes are not so steep and their crests are much broader. Sandstone is the principal rock of this area. A great deal of coal is mined from Poteau Mountain and in its vicinity. In a general way the topography of these mountains conforms very closely to that of the Ouachita System.

Drainage.—The principal drainage of the southern portion of the Forest is the Ouachita River. This river rises at Rich Mountain Station, in Sec. 7, T. 1 S., R. 31 W., near the western border of the State, and flows in a meandering course to the western edge of Garland County, a distance of about seventy-five miles, though to follow the sinuosities of the river the distance would be much greater. (See Photo. No. 2) At the western edge of Garland County it turns southeast, cutting directly across the mountains and forming numerous steep-sided ravines. At the old town of Rockport, where it emerges from the mountains, it changes its course to a general southerly direction, and flows thence south and southeast until it empties into Black River, a tributary of Red River, in the State of Louisiana. Along its course it receives Board Camp Creek, Big Fork Creek, North and South Forks of the Ouachita, Irons Fork, Big Mazarn Creek, Caddo River, and Little Missouri River, and many other streams of smaller size from the Ouachita Mountain ranges which have their source within the Forest boundary. (See Photo. No. 3)



Photo No. 2 –
Scene on Ouachita
River, Arkansas
National Forest



Photo No. 3. –
Scene on Irons
Fork, of the
Ouachita River,
Arkansas National
Forest

The stream of next importance within the exterior boundaries of the Forest is the Fourche La Fave River (being French for "Bayou of Fevers"). The streams which create the source of this river are Clear Fork, which rises just below the Base Line, in T. 1 S., R. 31 W., near the town of Eagleton; Johnson Creek, which heads west of Gate post office, in Sections 29 and 32, T. 1 N., R 30 W.; Mill Creek, which heads in T. 1 S., R. 27 W., southeast of Buck-knob. This river has a course slightly northeast and empties into the Arkansas River at the western edge of Perry County. It receives the northern drainage of the Fourche Mountains in Polk and Scott counties, Mill Creek Mountain, Irons Creek Mountain, Powell and Sand Lick mountains, the Fourche Mountains of Yell County, White Oak and Cedar mountains, and the southern drainage of Henry Mountain, in Scott County, Dutch Creek Mountain, and Danville mountains. Prominent streams from which it receives water are Heath Creek, Black Fork of Fourche, Cedar, Little Cedar, Garner, Gafford, Cane, Barnhart, Gilly, Porter, Hogan, the two Brush Creeks, and South Fourche La Fave. The last named is by far its most prominent feeder, itself being fed by such prominent streams

as Dry Fork, Little Bear, Trace, Big and Little Cove, and Caney creeks. Many other smaller streams which are not named empty into the Fourche La Fave within the Forest.

The Caddo River heads in Township 3 S., Range 27 W., near Slatington, and runs in an easterly direction through the towns of Womble and Black Springs until it passes through Caddo Gap, a deep gorge in the western edge of T. 4 S., R. 24 W., one-half mile north of the town of Caddo Gap. (See Photo. No. 4) Its course is then southeast, passing near the towns of Glenwood and Amity, until it empties into the Ouachita River near Arkadelphia. Along its course through and near the Forest it receives Dead-Fall Creek, Swindle Creek, Lick Creek, Montgomery Creek, Collier Creek, Polk Creek, and Mill Creek, in T. 4 S., R. 25 and 26, South Fork of Caddo, and many other smaller streams.

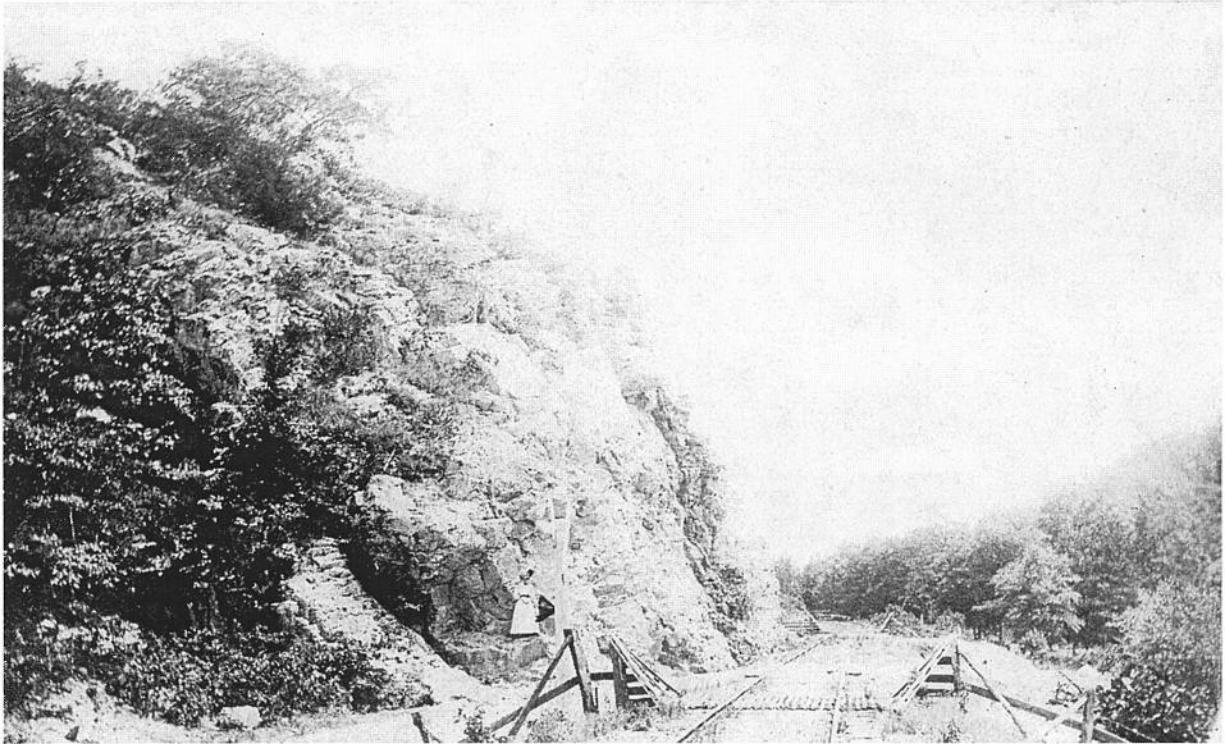


Photo No. 4- Scene showing "Caddo Gap"



Photo No. 5 - Picturesque view on
Little Missouri River, Arkansas
National Forest

The Little Missouri River rises along the north line of Sec. 2, T. 4 S., R. 28 W., and runs in an easterly direction until it reaches the northeast corner of Sec. 7, T. 4 S., R. 27 W., where it passes through a very narrow gorge, creating a "rapids." This point is known locally as the "Little Missouri Falls." (See Photo. No. 5) It then assumes a southeasterly course until it empties into the Ouachita River near the southeast corner of Clark County. Its prominent "feeders" in the Forest are Crooked Creek, Straight Creek, Long Creek, Brier Creek, Blalock Creek, and Blocker Creek. (See Photo. No. 6) This river practically drains Townships 4 south, Ranges 27 and 28, and Townships 5 south, Ranges 26, 27, and 28.

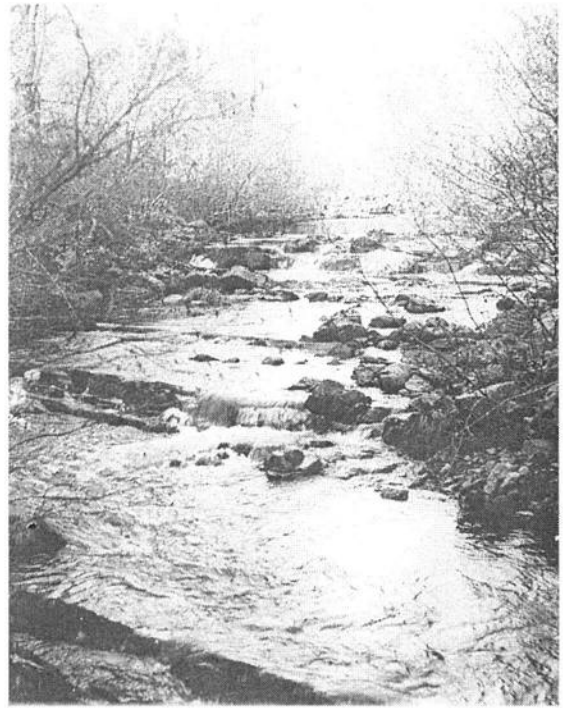


Photo No. 6 – Scene on Crooked Creek, a tributary of the Little Missouri River, Arkansas National Forest

Photo No. 7 – Scene on Cossatot River



Creek, Caney Creek, Little Brushy Creek, and Big Brushy Creek, and drains the southwest portion of Polk County.

The Poteau River heads in and drains the northeast portion of the Forest. Jones' Creek, its principal tributary, rises in T. 2 north, R. 32, and flows northeast in a direction directly opposite to that of the river until it reaches T. 3 north, R. 30, when its waters become that of the Poteau River and the flow is southwest to the State line. The Poteau empties into the Arkansas River near Fort Smith. It receives the waters of Black Fork, Haw Creek, East Fork, and many other smaller streams.

As the Saline River and Little Maumelle River were covered in the report of the La Fourche Project they will not be discussed at this time.

The West Saline River rises in the southwestern portion of T. 4 south, R. 28, draining this portion of the township, leaving the Forest boundary about the middle of the south line of Section 31, and continuing in a southern course to T. 11 south, R. 28, where it connects with Little River.

The peculiar interest of several of these streams, especially the Little Missouri, Cossatot, and West Saline, lies in the fact that they take a course transverse to that of the ridges, cutting through them and forming numerous water gaps. These water gaps are always narrow, and constitute one of the most important topographic features of the area. (See Photo. No. 21987A.) The water passes through them as cataracts and falls, some of which possess water power that must in time be utilized. (See Photos. No. 8, 9, 10,11)



Photo No. 21987A – Little Missouri Falls

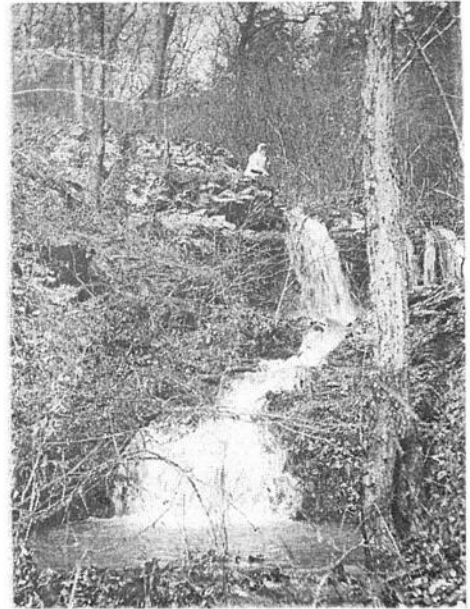


Photo No. 8



Photo No. 9



Photo No. 10

Photo No. 11



Why it is that these streams have assumed a direction across ridges of hard rock, when in many cases it appears they could more easily have taken courses around the ridges, is a physiographic question that has never been satisfactorily answered by geologists. It is the belief that the region was base-leveled during post Carboniferous times; that it subsequently subsided beneath sea level, and received a heavy cover of new material during Cretaceous times; and that it again emerged from the sea, the streams taking southward courses over the new deposits, which courses were maintained across the ridges as erosion went on and the beds were lowered.

Rock Formation.—As stated earlier in this report, Novaculite is the principal formation of the Ouachita Mountain system. For years the quarrying of this stone, known locally as Arkansas whetstone, has been carried on a large scale near Hot Springs. These stones were quarried and shipped out to market as far back as 1818. Nearly all of this stone quarried is shipped to the Pike Manufacturing Company, at Pike Station, N.H. The stones are sold all over this country and Europe and are rated

with the best in the world. The accompanying photograph of "Standing Rock," located in Section 18, T. 3 south, Range 29, is a fair example of its resistance to erosion. This rock is a novaculite ledge consisting of a single stratum four feet thick and rises perpendicularly to a height of 75 feet or more. This rock is located on the west bank of Board Camp Creek. (See Photo. No. 13) Corresponding with it on the east bank is a broken ledge called the "Devil's Pulpit" or "Pilot Rock" (No. 12) Similar ledges can be seen in Back Valley, in Township 4 south, Range 26, on the head of the South Fork of the Caddo River.

Photo No. 13



Photo No. 12



The Caddo Mountain Range and the Crystal Mountain Range are the principal slate areas of the Forest. It must not be understood that the entire area of these ranges is covered with slate deposits. In parts it occupies considerable areas, in other parts it outcrops only in belts, usually along the mountain sides, while in other parts there is none at all. (See Photo. No. 21988A.) There are five formations of the Ouachita System that contain slate. These are the Ouachita shale, the Polk Creek shale, the Missouri Mountain slate, the Fork Mountain slate, and the Stanley shale. As early as 1859 slate quarries were opened in Arkansas near Little Rock. In 1902 the Southwestern Slate Company opened quarries in Section 33, Township 3 south, Range 27, at the town which is known as Slatington. They acquired a large body of land and worked the quarries extensively for some five or six years. This company has not operated since 1908. Numerous other slate companies have been organized and much work done in this belt, but poor railroad facilities have kept them from being a paying proposition and the works are now all abandoned, though a great area of Government land is still being held by different companies and individuals under the placer mining laws.



Photo No. 21988A – Crooked Creek Valley, Caddo Mountain Range

The sandstones of the Ouachita System are primarily confined to the Crystal and Blalock mountains. While often this is found in beds of 100 feet or more in thickness of almost wholly sandstone, in other parts it is made up of alternating beds of sandstone and shale. (See Photos. No. 14 and 15.)

A peculiar formation is known as the Big Fork Chert, taking its name after Big Fork post office, in Section 15, Township 3 south, Range 28, where it is principally found. However, it is not limited to this area but is found in many parts of the Ouachita System. It is common on the heads of the Caddo River, Polk Creek and Collier Creek. This is a very close-textured, even bedded, silicious rock, in layers

of from one to eighteen inches thick, but the most common thickness is from three to six inches. The color varies from a slate to a dark gray, the former being most common. It is very brittle and when struck a hard blow flies into small pieces. Weathered portions have the appearance of fine-grained, gray, weathered sandstone. This stone literally covers some of the fields in the district named, but does not retard cultivation, as the particles are small and it seems to be a great moisture retainer.

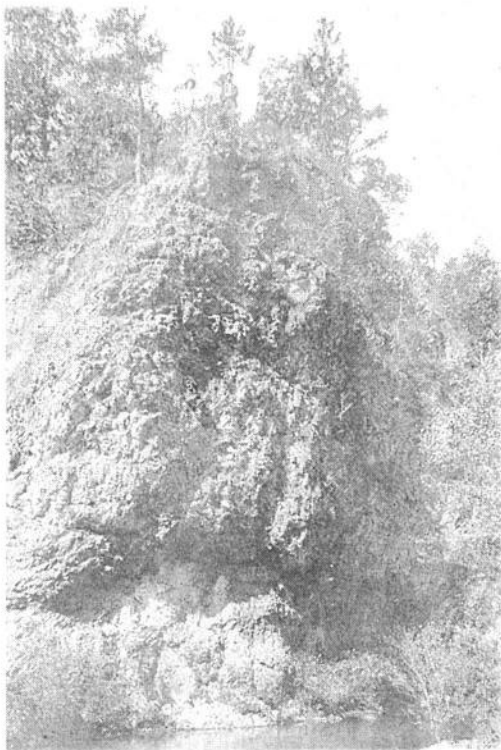


Photo No. 14 – “The Narrows”

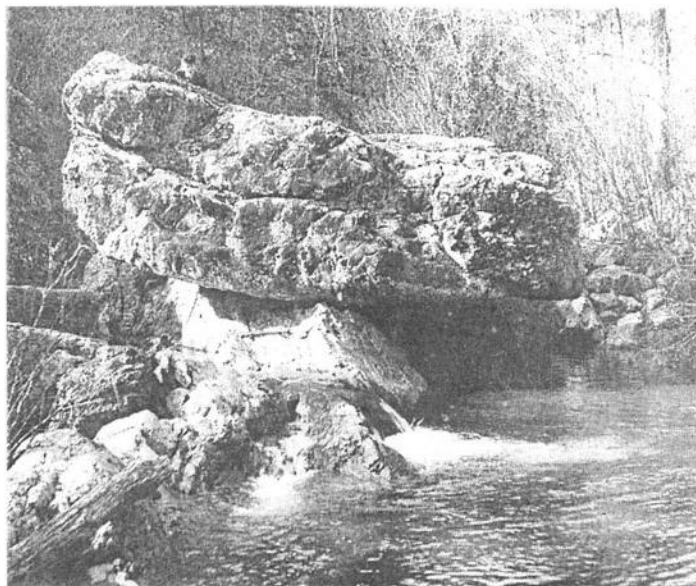


Photo No. 15 – “The Narrows”

Limestone is not found on or near the Forest to any great extent though outcroppings appear in numerous places, notably on Buckner Creek, in the southeastern part of Township 1 south, Range 22; on Cedar Fourche Creek, in Section 20, Township 1 south, Range 21; near Buckville, Silver City, and Mt. Ida; near the old Lena post office, north of Cedar Glades; also in Section 3, Township 3 south, Range 25, on Hyatt Creek; along Colliers Creek, in Section 22, Township 3 south, Range 24; along Beech Fork, of the Caddo River, in Section 26, Township 3 south, Range 26. The largest bed is probably found near Boles, in Scott County. The limestones on the south side of the Boston Mountains are surrounded by regions whose soils are derived almost entirely from sandstones and shales, rocks which contain scarcely any lime. Lime kilns have been burned some nine or ten miles northwest of Hot Springs; at Boles; near Beech Fork of the Caddo River; for local use, but these kilns have not always proven successful. These limestones are usually conglomerated with shales, quartz veins, and sandstones. The beds range from a few inches to several feet in thickness.

The Fourche Mountain System, with the exception of Poteau Mountain, may be said to be a series of sandstones, quartzites, and shales, though bordered on the north by the Coal Measures of the Arkansas River Valley. Poteau Mountain has been extensively mined for coal for a number of years.

The sandstones quarries of Shut-In Mountain are used extensively by residents of that locality for chimney stones, well curbings and tops, and table tops. This stone can be quarried and split to any desired thickness from one-half inch to two feet or more, and takes a very smooth finish, at the same time being hard enough to allow of holes being drilled through it without breaking or cracking.

Indications of phosphate occur in Township 1 north, Range 31, near the Eagle Gap Ranger Station.

Accessibility.—One has only to look at a diagram of the Forest to note its accessibility. The public roads, with few exceptions, follow the meanderings of the streams, and there is no stream of any consequence but has a road following it for miles. The valleys and low ridges are honeycombed with secondary, settlement, and private roads and trails. (See Photos. Nos. 16, 17, and 18.) The larger mountains are connected with each other and the valleys between by numerous stock trails. Situated within and near the boundary of the Forest, within a short half-day's ride across the country in any direction, there are numerous small towns of from 500 to 5,000 inhabitants, and on the Forest there is no place where one can get twenty-five miles from one of the ten railroads near the Forest boundary. The many old towns along these railroads and inland, and the many new towns that have sprung up with the building of new railroads in the last twenty years, bringing into these parts many people from many States, nearly all of whom were seeking a home, is substantial evidence that practically all the land topographically situated so as to be susceptible to cultivation has passed into private ownership many years ago. Many hundreds of 160-acre tracts were entered and patented under the agricultural homestead law where the topography was of such a nature as to preclude the possibility of successful farming. Just enough improvement was made on these entries to obtain patent when they passed into the hands of large timber companies or land speculators.



Photo No. 16



Photo No. 17

Photo No. 18



2. CLIMATE

Forest Supervisor Huey's Climatological Report in his La Fourche Classification Project is quoted in full for this report, though it is conceded that climatical conditions do not enter into the classification of lands on this Forest, as any of the local crops can be planted, grown and gathered between the occurrence of killing frosts:

Climatological

I have quoted from Weather Bureau reports as follows:

"Mean annual temperature,"

"Highest and lowest temperature," and

"Annual precipitation" from 1891 to 1911 inclusive for the State of Arkansas. This is introduced to show the relation between conditions within this particular project and the State at large.

"Monthly and annual average precipitation" through ten-year periods at Hot Springs, Mt. Nebo, and Spielerville.

"Mean monthly and annual temperature with departure from normal years 1909, 1910, 1911, 1912" from observations at Hot Springs, fifteen miles south, and Dardanelle, twenty-three miles north from the boundaries of this project. These will serve very well for the purposes of this report, though the figures are slightly high because of the lower elevations of these stations. This difference in elevation with reference to the valleys, where practically all the agricultural land occurs within the project, varies from 100 to 600 feet, which would cause but a very slight departure from the records quoted.

"Monthly and annual precipitation with departure from normal for the years 1909, 1910, 1911, and 1912" from observations at Hot Springs and Dardanelle. Data on the departure at Hot Springs are incomplete, but compare favorable with Dardanelle during years in which complete records were kept.

"Monthly maximum and minimum temperatures for 1909, 1910, 1911, and 1912" for Hot Springs, Dardanelle, and Mount Nebo as far as data are available. As the altitude of Mount Nebo corresponds very closely to the higher portions of this project and Hot Springs bears a similar relation to the valleys, it is believed that a scale graduated between the records of these extremes will apply very closely to corresponding altitudes within the La Fourche Project.

"Killing frosts or freezing temperatures, last in spring and first in fall for 1909, 1910, 1911, and 1912" for Hot Springs, Dardanelle, and Little Rock and for Mount Nebo and Spielerville in the mountains northwest, as far as records were kept. Also the average date of killing frosts through periods of many years, which determine a fairly accurate normal growing season for the district under consideration.

Note the direction of prevailing winds from the south or southwest and the effect on precipitation. Observation has shown that with the east and west trend of the mountain ranges, with a constant southwest wind, rain or mist may fall all day on the south side of a range, while the sun shines continually on the north side. Within this project we find the better grades of land presenting a southern aspect.

Comparative Annual Data
Arkansas
(U.S. Weather Bureau)

T e m p e r a t u r e

Year	Mean	Highest	Lowest	Precipitation
1891	60.5	108	6	44.49
1892	60.0	106	-14	57.75
1893	60.7	103	-13	47.91
1894	61.3	108	-22	49.05
1895	59.8	105	-17	44.69
1896	63.0	112	8	38.02
1897	62.4	111	-2	46.52
1898	61.4	108	-4	56.83
1899	60.6	112	-25	41.49
1900	62.0	108	-5	49.03
1901	61.1	116	-6	35.28
1902	60.4	108	-2	51.70
1903	59.3	105	-12	44.62
1904	60.5	105	-5	43.45
1905	59.5	100	-29	63.65
1906	60.2	101	-7	56.97
1907	61.7	113	-8	49.71
1908	62.1	103	0	48.88
1909	62.1	111	-19	44.05
1910	61.0	105	-13	45.21
1911	62.9	107	-9	49.53

Precipitation in Arkansas
Monthly, annual, and average amounts
(inches and hundredths)

The information in the table below is taken from observations through ten-year periods at three United States Weather Bureau Stations which are subject to similar topographic and climatic conditions as the area within the project. Hot Springs, situated fifteen miles south at an altitude corresponding closely to the lower portions of the area within the project; Mount Nebo, twenty-five miles northwest, having an altitude and weather conditions closely related to those of the higher portions of the project, and Spielerville, forty miles northwest, having an altitude closely approximating the average between Hot Springs and Mount Nebo, but slightly less than the average elevation of the lands under consideration.

PRECIPITATION
(In Inches)

Speilerville, Logan County, Arkansas
Elevation 1,050 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1899	5.03	1.24	2.79	3.44	8.33	1.89	5.47	0.07	0.81	2.76	4.34	4.18	40.35
1900	3.63	3.46	2.52	5.04	3.82	6.05	2.01	4.89	3.23	8.43	4.93	2.10	50.11
1901	1.50	2.00	5.73	4.79	2.29	1.36	4.39	1.80	1.10	3.13	3.52	..	..
1902	1.86	2.53	3.38	2.34	3.77	5.95	3.81	5.44	3.97	1.43	7.63	6.32	48.43
1903	1.81	8.40	4.37	2.04	9.77	1.72	2.48	5.81	3.54	1.83	0.37	1.76	43.96
1904	4.60	2.42	4.18	2.89	5.10	10.26	4.01	1.82	2.50	0.53	0.49	1.27	40.07
1905	4.17	1.84	3.67	4.27	9.33	3.05	5.33	5.45	5.63	4.98	2.23	3.99	53.94
1906	4.92	2.45	5.45	2.74	8.63	7.76	6.40	7.08	3.21	1.10	3.18	5.50	58.42
1907	3.51	2.12	1.89	3.44	8.76	3.53	1.31	2.42	1.88	1.83	4.02	1.78	36.49
1908	4.14	3.08	3.55	6.33	6.10	3.75	4.00	6.22	4.00	0.40	5.74	0.32	47.63
Mean	3.51	2.95	3.75	3.73	6.59	4.53	3.92	4.10	2.98	2.64	3.64	2.72	41.94

Mount Nebo, Yell County, Arkansas
Elevation 1,750

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1891	5.54	1.69	2.54	2.66	3.74	2.87	8.73	1.59	0.53	0	4.00	3.20	37.09
1892	1.40	2.80	3.15	3.35	14.20	3.82	3.59	3.01	1.87	3.88	2.60	5.90	51.57
1893	1.35	3.70	4.25	7.65	11.11	3.75	2.40	1.88	5.92	0.97	3.14	1.10	47.22
1894	2.42	8.31	10.10	5.93	1.91	T.	1.28	6.70	4.58	0.63	2.00	3.97	47.83
1895	3.73	0.73	5.47	1.39	4.09	3.15	7.35	2.03	2.42	1.68	4.54	5.82	42.40
1896	3.99	3.00	5.85	1.68	4.52	1.11	1.30	0.92	4.37	3.32	3.15	1.78	34.99
1897	4.04	1.58	9.07	6.12	1.08	6.12	3.55	2.43	0.74	0.44	1.71	6.35	43.23
1898	4.52	1.70	8.09	5.80	8.91	5.49	6.00	4.29	7.71	7.29	2.19	1.73	63.72
1899	5.05	2.30	2.39	4.15	9.80	1.31	6.20	0.12	1.64	2.85	2.15	4.76	42.72
1900	2.80	5.80	4.03	5.53	5.07	6.32	5.85	3.14	2.60	5.22	3.77	3.41	53.54
Mean	3.48	3.16	5.49	4.42	6.44	3.39	4.62	2.81	3.23	2.62	2.92	3.80	46.42

Hot Springs, Garland County, Arkansas
Elevation 600 feet

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1891	7.00	4.29	7.91	3.32	5.37	5.16	12.86	3.09	0.82	0.50	6.02	6.75	63.09
1892	3.06	3.65	4.12	7.54	12.45	3.04	3.70	5.96	1.63	5.80	7.75	7.84	66.54
1893	2.56	4.78	4.90	7.61	10.10	5.60	6.82	3.26	2.05	1.65	4.48	2.05	55.86
1894	3.51	9.92	10.40	8.45	4.20	1.25	4.03	3.65	2.40	1.90	1.50	3.20	54.41
1895	6.25	0.70	5.82	2.22	7.20	5.30	9.52	3.40	0.66	1.02	6.08	4.00	52.17
1896	5.85	3.30	7.17	1.73	2.79	1.65	1.20	1.73	4.40	4.50	6.65	0.64	41.61
1897	7.25	2.80	12.58	5.03	2.22	4.43	4.70	3.36	1.32	2.65	5.29	5.87	57.50
1898	6.97	1.02	1.58	2.52	8.63	5.23	4.11	3.45	5.05	5.84	3.44	1.65	49.49
1899	7.19	1.45	1.87	4.01	5.04	4.02	3.10	1.55	3.00	1.55	2.01	4.59	39.38
1900	4.00	6.01	1.62	5.75	4.48	5.10	6.55	3.75	5.74	5.74	5.43	4.18	58.34
Mean	5.36	3.79	5.79	4.81	6.24	4.07	5.65	3.32	2.70	3.11	4.86	4.07	53.83

From the foregoing averages and again averaging the mean precipitation at Hot Springs, Mount Nebo, and Spielerville for periods of ten years each, we have reasonably good basis for estimating the

Normal Precipitation
for the
La Fourche Project

Month	Inches
January	4.12
February	3.30
March	5.01
April	4.32
May	6.42
June	4.00
July	4.73
August	3.41
September	2.97
October	2.79
November	3.81
December	3.53
Annual	47.40

Precipitation

The characteristic irregularity in monthly precipitation in different seasons is indicated clearly by the following extremes from the United States Weather Bureau Reports:

P r e c i p i t a t i o n

Place of observation	Month	Year	Maximum	Year	Minimum
Mena	April	1903	13.76	1908	1.06
Hot Springs	"	1890	12.95	1888	0.48
Dardanelle	"	1890	15.00	1896	1.03
Mount Nebo	"	1908	7.78	1895	1.39
Mena	May	1898	14.28	1894	1.04
Hot Springs	"	1890	9.72	1896	1.65
Dardanelle	"	1893	13.25	1901	0.43
Mount Nebo	"	1892	14.20	1897	1.08
Mena	June	1902	7.22	1903	1.25
Hot Springs	"	1891	12.86	1907	1.42
Dardanelle	"	1904	8.28	1903	0.60
Mount Nebo	"	1904	9.95	1903	0.97
Mena	July	1895	10.38	1896	1.90
Hot Springs	"	1891	12.86	1907	1.42
Dardanelle	"	1889	9.04	1907	0.16
Mount Nebo	"	1891	8.73	1907	0.82

Mena	August	1906	9.38	1895	1.20
Hot Springs	"	1892	5.96	1901	1.22
Dardanelle	"	1888	7.02	1899	1.01
Mount Nebo	"	1894	6.70	1889	0.12

Mena	Sept.	1902	6.24	1897	1.40
Hot Springs	"	1890	12.62	1895	0.66
Dardanelle	"	1908	7.84	1897	0.40
Mount Nebo	"	1898	7.71	1901	0.35

Comparative Data for Arkansas
Average number of days with .01 inch or more of precipitation

Station	Number of years	January	February	March	April	May	June	July
Dardanelle	12	5	6	6	7	8	6	5
Hot Springs	7	9	6	8	9	9	9	8
Little Rock	30	10	9	11	10	10	11	10
Mount Nebo	12	5	5	7	8	9	7	8

Station	Number of years	August	September	October	November	December	Annual
Dardanelle	12	5	5	4	5	5	67
Hot Springs	7	5	7	5	7	7	89
Little Rock	30	9	7	6	8	9	110
Mount Nebo	12	5	4	4	4	5	71

Highest temperature—Degrees Fahrenheit

Station	Number of years	January	February	March	April	May	June	July
Hot Springs	16	76	80	88	94	95	106	107
Mount Nebo	19	73	76	87	86	90	94	95

Station	Number of years	August	September	October	November	December	Annual
Hot Springs	16	108	105	98	87	81	108
Mount Nebo	19	97	95	86	75	71	97

Lowest temperature—Degrees Fahrenheit

Station	Number of years	January	February	March	April	May	June	July
Hot Springs	16	-1	12	9	26	36	45	51
Mount Nebo	19	-4	20	11	24	34	47	52

Station	Number of years	August	September	October	November	December	Annual
Hot Springs	16	43	37	29	14	0	-12
Mount Nebo	19	49	40	29	12	-2	-20

MONTHLY AND ANNUAL PRECIPITATION
WITH DEPARTURES FROM NORMAL

1909				
	Hot Springs		Dardanelle	
	Precipitation	Departure	Precipitation	Departure
January	1.44	..	3.26	+0.37
February	5.57	..	5.57	+2.33
March	3.37	..	4.20	+0.67
April	4.32	..	4.08	+0.36
May	4.12	..	6.90	+1.19
June	4.46	..	2.04	-1.86
July	3.59	..	1.14	-3.08
August	2.05	..	1.22	-2.05
September	4.23	..	1.46	-1.61
October	2.90	..	3.38	+1.08
November	3.14	..	5.58	+2.06
December	7.19	..	4.44	+1.31
Annual	46.38	..	43.27	-0.57
1910				
	Precipitation	Departure	Precipitation	Departure
January	2.50	..	1.50	-1.39
February	3.70	..	1.76	-1.48
March	1.59	..	0.92	-3.95
April	5.11	..	5.03	+1.31
May	10.07	..	6.99	+1.28
June	8.54	..	5.79	+1.89
July	6.31	..	5.94	+1.72
August	5.53	..	2.68	-0.59
September	1.53	..	1.79	-1.28
October	3.53	..	5.34	+3.04
November	0.53	..	0.78	-2.74
December	5.39	..	2.62	-0.51
Annual	54.33	..	41.14	-2.70

1911				
	Hot Springs		Dardanelle	
	Precipitation	Departure	Precipitation	Departure
January	0.51	..	0.72	-2.17
February	4.77	..	4.56	+1.32
March	1.65	..	2.46	-2.41
April	14.68	..	7.64	+3.92
May	1.10	..	1.54	-4.17
June	3.80	..	1.38	-2.52
July	6.20	..	2.92	-1.30
August	5.20	..	7.38	+4.11
September	4.30	..	5.67	+2.60
October	0.72	..	2.47	+0.17
November	1.99	..	3.27	-0.25
December	..	..	5.21	+2.08
Annual	..	..	45.22	+1.38

1912

(U.S. Weather Bureau)

	Precipitation	Departure	Precipitation	Departure
January	2.81	-2.00	3.40	+0.51
February	2.33	-1.64	2.28	-0.96
March	11.79	+6.79	6.44	+1.57
April	11.86	+6.44	6.55	+2.83
May	1.70	-4.54	2.33	-3.38
June	7.09	+2.08	5.69	+1.79
July	1.46	-3.66	1.39	-2.83
August	2.94	-0.25	2.24	-1.03
September	1.95	-1.65	2.90	-0.17
October	5.10	+2.48	3.30	+1.00
November	0.00	-4.66	3.42	-0.10
December	3.76	-0.62	0.68	-2.45
Annual	52.88	-1.23	40.62	-3.22

MONTHLY AND ANNUAL MEAN TEMPERATURES
WITH DEPARTURES FROM NORMAL

1909				
	Hot Springs		Dardanelle	
	Temperature	Departure	Temperature	Departure
January	44.9	..	..	..
February	47.2	..	..	..
March	53.1	..	..	..
April	60.1	..	..	..
May	64.0	..	..	..
June	76.1	..	..	..
July	82.0	..	..	..
August	80.6	..	84.1	..
September	..	..	75.8	..
October	61.2	..	62.4	..
November	57.6	..	58.4	..
December	35.6	..	33.8	..
Annual	..	..	..	..

1910				
	Temperature	Departure	Temperature	Departure
January	41.4	..	40.8	..
February	32.9	..	37.8	..
March	58.2	..	60.4	..
April	58.8	..	59.4	..
May	66.0	..	65.5	..
June	73.2	..	74.6	..
July	78.7	..	79.6	..
August	78.8	..	78.8	..
September	75.7	..	76.8	..
October	64.5	..	62.0	..
November	51.8	..	51.0	..
December	42.6	..	40.3	..
Annual	60.8	..	60.6	..

1911

	Hot Springs		Dardanelle	
	Temperature	Departure	Temperature	Departure
January	47.8	..	46.2	..
February	51.8	..	48.4	..
March	57.0	..	55.2	..
April	63.0	..	59.6	..
May	70.6	..	70.8	..
June	81.0	..	81.2	..
July	79.2	..	79.4	..
August	78.8	..	76.8	..
September	80.2	..	78.9	..
October	64.8	..	62.2	..
November	49.4	..	45.6	..
December	..	..	41.4	..
Annual	..	..	62.1	..

1912

	Hot Springs		Dardanelle	
	Temperature	Departure	Temperature	Departure
January	38.7	-4.1	33.4	..
February	41.4	-4.7	37.6	..
March	47.8	-6.0	45.7	..
April	63.0	+0.5	61.4	..
May	71.1	+2.1	70.0	..
June	75.2	-1.5	73.8	..
July	83.0	+2.6	81.4	..
August	80.6	+1.3	78.2	..
September	77.1	+2.4	73.9	..
October	67.4	+4.2	62.4	..
November	53.9	+2.6	50.3	..
December	44.0	-0.4	40.8	..
Annual	61.9	-0.1	59.1	..

MONTHLY MAXIMUM AND MINIMUM TEMPERATURES

1909

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Hot Springs												
Maximum	74	76	78	83	87	93	101	108	101	92	83	80
Minimum	10	15	24	27	31	52	60	56	..	30	24	5
Dardanelle												
Maximum	..	..	..	..	..	..	..	110	104	96	88	75
Minimum	..	..	..	..	..	..	..	58	38	34	27	11
Mount Nebo												
Maximum	68	69	71	80	..	..	..	..	..	87	77	70
Minimum	5	12	25	34	34	..	..	..	..	34	26	04

1910

Hot Springs												
Maximum	74	66	86	86	89	94	97	98	95	92	82	67
Minimum	2	-11	27	29	39	48	57	60	51	24	23	16
Dardanelle												
Maximum	76	64	89	89	91	92	98	99	97	95	81	64
Minimum	1	-10	32	30	40	33	60	57	52	23	25	15
Mount Nebo												
Maximum	69	62	88	87	84	..	..	..	..	..	..	..
Minimum	-3	5	30	22	35	..	..	..	..	..	..	..

1911

Hot Springs												
Maximum	79	82	93	89	97	104	101	105	100	97	82	..
Minimum	4	18	25	41	38	54	53	52	58	33	20	..
Dardanelle												
Maximum	80	87	91	86	95	102	102	99	98	92	82	69
Minimum	5	19	26	41	40	55	55	53	56	34	15	16

1912

Hot Springs

Maximum	79	65	80	90	92	93	101	98	101	96	78	65
Minimum	-2	7	29	37	44	57	59	59	46	42	25	22

Dardanelle

Maximum	67	67	81	92	93	96	100	97	100	91	78	74
Minimum	-1	7	25	36	44	56	64	52	41	35	20	17

Note.—The La Fourche Project occupies a position midway between Hot Springs and Dardanelle, the two nearest observation stations. The figures, however, are slightly high since the area within the project is from one hundred to fifteen hundred *ft* higher than either station.

KILLING FROSTS

Last in spring and first in fall

<u>1909</u>		<u>1910</u>		<u>1911</u>		<u>1912</u>	
Hot Springs							
*May 1	Oct. 13	Apr. 26	Oct. 28	*Mar. 28	*Nov. 12	*Mar. 25	*Nov. 2
Dardanelle							
*May 1	Oct. 13	Apr. 26	Oct. 22	*Mar. 17	Nov. 2	*Mar. 25	*Nov. 2
Mount Nebo							
*Mar. 15	Nov. 17	Apr. 25	..	..	..	..	..
Spielerville							
Mar. 30	Nov. 17	..	..	..	..	..	..
Little Rock							
*Mar. 15	Nov. 18	Apr. 26	Oct. 29	Mar. 16	*Nov. 2	Mar. 25	Nov. 3

*Freezing temperature, no frost recorded

AVERAGE HOURLY WIND MOVEMENT

(In miles)

No. of years	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Fort Smith													
27	8	8	9	8	7	6	5	4	6	6	7	7	7
Little Rock													
30	7	8	8	8	6	6	5	5	5	6	6	7	6

MEAN RELATIVE HUMIDITY

(Per cent)

Fort Smith													
21	72	70	68	86	72	72	72	72	73	70	68	71	70
Little Rock													
21	74	71	69	67	72	73	74	75	75	71	70	73	72

FROST DATA

Station	No. of yrs.	Average date of first killing frost in autumn		Average date of last killing frost in spring		Earliest date of killing frost in autumn		Latest date of killing frost in spring	
Hot Springs	5	October	26	April	1	October	10	April	30
Little Rock	30	November	11	March	19	October	22	April	14
Mount Nebo	11	November	7	March	30	October	24	April	13
Spielerville	12	November	2	March	23	October	10	May	1

3. SOIL

As stated earlier in this report, the agricultural soils of this Forest are divided into three classes as follows:

Class 1.—Alluvial bottomland along the principal streams where the current has been slow enough to allow soil precipitation and settlements from back water. The symbol for this class of land for use on the map sheets will be AB. All of this class of soil passed to patent many years ago and it was only in small parcels that any of this land was found during the intensive examination of lands of this Forest. This class of soil is usually planted to corn after the spring rises, which overflow the greater part of the land containing this soil.

Class 2.—Second bottom, creek bottom, or bench, lands, as a rule formed through erosion of adjacent slopes. This land does not produce corn to more than half the extent of the Class 1 soil. It is usually planted to corn, cotton, peas, sorghum for molasses, and hay, wheat, oats, rye, different species of grass and clovers. On a great portion of this class of land there is found considerable loose surface rock. This rock in a sense is helpful to this soil instead of being a detriment. Where the rock is found the soil is usually porous and retains moisture to a greater degree than the same soil which has no rock content, and withstands the long dry days of summer. Where no rock is found in this class of soil it "packs" easily and has to be plowed very early after a rain if best results are obtained. The symbol for this class of soil is FSL.

Class 3.—It is this class of soil that plays the most prominent part in the land classification of this Forest, as it is the best grade now found on the vacant lands to any extent. This will include the rolling, coarse sandy or gravelly loam found upon the undulating ridges and upon the flattened tops of same. The agricultural producing qualities of this class of soil are very meager. This is amply vouched for on numerous tracts on any portion of the Forest where attempts have been made to cultivate it. Fifteen bushels of corn is a good average for it to produce per acre. In ordinary years it will produce from 1/8 to 1/6 of a bale of cotton per acre, other crops in proportion. It is only under the most favorable circumstances that it pays to cultivate this land. The symbol for this class of land will be SL when noted on the map sheets.

This Class 3 land produces an excellent stand of shortleaf pine timber and on the higher mountains it is usually found on the south slopes. This is accounted for by the southern slopes drying out much faster than those to the north and will burn over several times during one season. This burning impoverishes the soil to such an extent that it almost precludes the growing of hardwoods on them. The tops of the higher ridges and mountains where the wind and fire have full sway is extremely thin and poor, oft times there being none at all with the exception of small parcels lodged in rock crevices. This affords a foothold for such scrubby timber as black jack oaks and the like.

Much of the northern slopes have soil as good as Class 2. This soil produces a splendid grade of white and red oak, hickory, wild cherry, etc. The lower slopes of the north produce with the above hardwoods, ash, gums, linn, beech, etc. The mountain slopes produce good summer grazing of sedge grass. The narrow creek valleys produce a good winter grass for stock, but this is almost wholly confined to the southwestern portion of the Forest. The bottomlands produce practically all the timber classes common to this Forest. Greenbriars grow in abundance. That portion of the Forest where the underlayer

of slate is near the surface produces a very poor grade of timber; hawthorn bushes, cedar, and other scrubby growth designates this land.

4. AGRICULTURAL VALUE

It is not the purpose of the writer to decry the agricultural possibilities of the part of the State in which the Arkansas National Forest is situated—far from it. It was former Secretary of Agriculture James Wilson, I believe, who said that “Arkansas is one State that you could build a wall around and she could live within herself,” and this region compares favorably with any other portion of the State. This is exemplified by the fact that three of the largest cities, and the three best markets in the State, are located within a short distance of the exterior boundary, i.e., Fort Smith, 30 miles; Little Rock, less than 30 miles; Hot Springs, 10 miles; the ten railroads that pass through and skirt its borders; Waldron, Mena, Womble, Mt. Ida, Hatfield, Mansfield, Booneville, Danville, Plainview, Ola, Perryville, Benton, Caddo Gap, Glenwood, Murfreeboro, Nashville, Grannis, Wickes, Vandervoort, Cove, and others, are all towns with from 1,000 to 5,000 inhabitants, situated within the twelve counties in which the Arkansas National Forest is located, and which derive their support from the lands within and immediately surrounding this Forest; numerous small towns and villages, such as Cedar Glades, Buckville, Crystal Springs, Bear, Big Fork, Nunley, Board Camp, Washita, Bates, Oliver, Coaldale, Cauthron, Hon, Oden, Sims, Gibbs, Waters, and many others, with hotels and from three or more general stores, are scattered throughout the Forest and must in consequence derive their support from the lands.

The Arkansas National Forest lies within ninety Jeffersonian, or Government, townships. There is a post office, sometimes two or three, in seventy-five out of these ninety units. The same can be said of schools and schoolhouses. (See Photos. Nos. 19 and 20.)

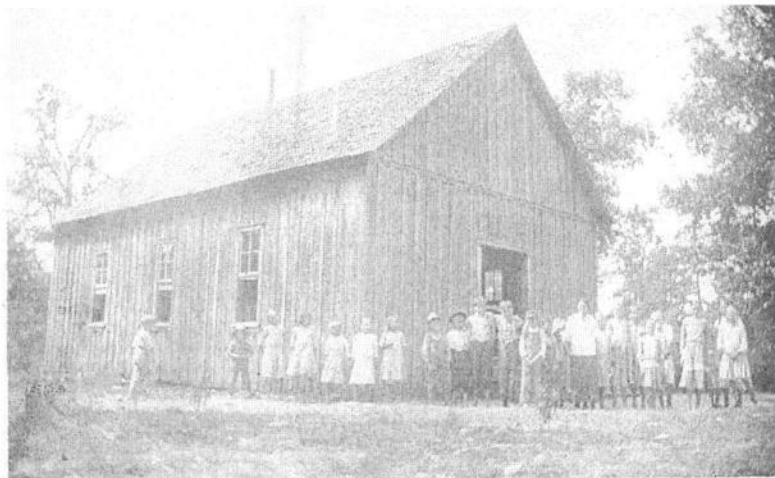
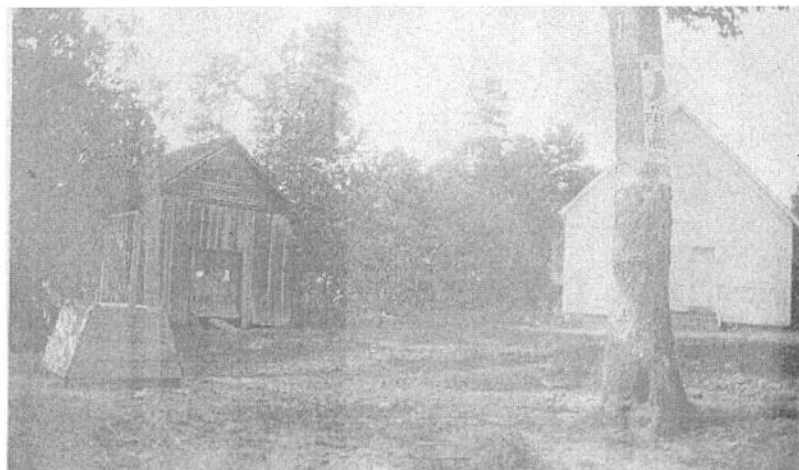


Photo No. 19 – Type of rural school and schoolhouse

Photo No. 20 – Showing school and church.



Much of the region lying adjacent to the exterior boundary of the Forest is rich in agricultural value at the present time, and is becoming more so with each succeeding year. Diversified farming is being practiced now much more extensively than in the past. Cover crops for the winter to be turned under in the spring, and many other systems are being used tending toward the building up each year of the land in cultivation instead of following the old practice of tilling a piece of land, taking off all and putting nothing back, until worn out, then clearing another field and turning the worn out one back to the public range. There are several reasons that account for this. Chief among them is that those who follow agriculture as a business realize that all the lands of agricultural value which were once in the public domain have passed under the plow—with the exception of some held by large timber companies. Eighteen or twenty years ago these companies were attracted to this part of the State, and much land that would now be in farms had it remained in Government possession until the creation of the Arkansas National Forest, when it would have been eligible for listing under the Act of June 11, 1906, was secured by these companies under the Timber and Stone Act and Lieu Selections. These companies were looking for the best timber—which, of course, is found on the more fertile lands—in as compact bodies as possible, and easy logging grounds, and with a future view to selling the lands after it had been cut over to agriculturists. Especially is this so in Yell, Scott, and Montgomery counties. The people of these counties, once bitter against everything connected with the Forest Service, have come to understand the intentions of the Government in establishing its National Forests, and finding that agricultural lands belonging to these companies can not be bought at any price at this time, are nearly all of one accord that the Arkansas National Forest should have been established twenty years before it was, and before so much land passed into the ownership of timber companies.

The rich agricultural lands referred to are the valleys of Poteau from Waldron to the Oklahoma line; Fourche La Fave from Buck Knob to Perryville; Jones Creek from Blackfork to Waldron; Ouachita with its North, South, and Irons forks from Acorn via Cherry Hill, Oden, Mt. Ida, Buckville, Cedar Glades, Hawes, Hot Springs, to Arkadelphia in Clark County; Big Fork Valley from Big Fork to Cherry Hill; Caddo Valley from Slatington, via Black Springs, Womble, Caddo Gap, Glenwood, Amity, and on to Arkadelphia; Polk Creek valley from Barnett to Black Springs; the South Fork of Caddo River valley above Fancy Hill to a few miles south of Caddo gap; Collier Creek valley from near the old Plata post office, in Township 3 south, Range 24, to Caddo Gap; the Big and Little Mazarn valleys from Township 3 south, Range 24, to the Ouachita River, near Hot Springs, and many others, such as Sugar Creek Valley, Dutch Creek valley, Graham, Dry Fork, and South Fork of Fourche valleys. These valleys are extensively farmed and thickly settled and will grow any of the State's grain or forage crops with the exception of rice. They are all located within or directly connected with the Arkansas National Forest as the settlers living within the Forest do their marketing in the towns situated in these valleys.

The settlements in the smaller valleys are few and far between. This necessitates large areas in school districts in order to secure sufficient enrollment to operate a three or four months school each year, and the ruggedness of the country makes it often times impossible for more than half the number enrolled to attend this short session. In covering the Forest for this report it has been with a view, where possible, to enlarge these small settlements, and any lands bordering on them where there was the slightest chance of probable agricultural values have been subjected to an intensive field examination, even though it was known before making the examination that only a small acreage would be found, not enough to compensate a man for making an entry on it but which in years to come could be added to some near-by farm, under entry, special use permit, or other method of procedure, and thereby increase the agricultural value of that particular community. These special cases will be found taken up separately in the discussion of the units in which they are situated.

In the more rugged mountain sections, where a settlement of any size is out of the question, thereby denying the isolated settler the companionship of society, schools, churches, and other surroundings that all good citizens should desire for themselves and families, a more rigid rule has been adhered to and larger units demanded before they were left for intensive classification. That this is logical has been proven many times by entrymen who have settled upon these out-of-the-way places. Many left before obtaining patent. Those who remained long enough to make final proof and secure patent as a rule

leave out and either sell to timber companies or land speculators, or rent to whomever they can. The renters who commonly inhabit these out-of-the-way places are known as “drifters” or “birds-of-passage.” One year they make a crop in Arkansas, the next one in Oklahoma, and the next in Texas, and then go the round again and again. Having little to recommend them they are “passed up” by the owners of larger and more fertile farms. It is this class of people, rather than the permanent settlers of the Forest, which constitute one of our largest fire dangers. Having no stock to fatten on the public range, and seeming to resent the ownership of hoofs by others, they care nothing for its protection but seemingly glory in its destruction. Close observation during the past few years has shown that the majority of fires were in a community inhabited by this class of people. An example of one of these tracts is shown by the tract listed under Application No. 242 (List No. 3-588). This tract was entered several times before the creation of the Forest and 35 acres were cleared and cultivated. After the creation of the Forest it was relinquished and applied for under the Act of June 11, 1906. Seventy acres were listed under this Act. Since its first filing under this listing it has been relinquished and filed upon five different times, each entryman becoming dissatisfied with the ruggedness of the country, or its isolation from schools, churches, etc., though this is one of the best tracts that has been listed on this Forest. Other instances of this is Application No. 638 (List 3-2085) and Application No. 680 (List 3-2575). I made both of these examinations myself, in 1912, and the applicants were at that time very anxious for the land to be listed so that it might be filed upon by them. Up to this date nothing has even been done with either of these listings other than a filing and the erection of a small pole cabin on Application No. 639. No attempt has been made to cultivate. These are only a very few of many of the tracts that have been listed under the Act of June 11, 1906, that have been open for entry for years and which have not been taken up by homeseekers. The Forest is a “graveyard” where hundreds and hundreds of deserted 160-acre tracts, filed upon or passed to patent before the creation of the National Forest, stand as monuments to the nonagricultural character of thousands and thousands of acres of lands within the exterior boundaries of the Arkansas National Forest. (See Photos. No. 22004A and 22003A.)



Photo No. 22004A – Showing type of land entered under the Agricultural Land Laws



Photo No. 22003A – Another Agricultural Entry made for the timber value of the land

I do not think it necessary in this report to go into land values or values of crops produced upon these lands; we have these data galore, gathered from other sources. Land values are more to be determined by their earning capacity. If a laborer hires himself at the lowest wage scale of \$1.50 per day, works six days in the week for \$9 per week and fifty-two weeks in the year, he earns \$468. If a farmer gets his subsistence, clothes, etc., from a small 30-acre farm it is worth \$468 a year to him, and more, because of his owning the farm at the end of the year; whereas the laborer is still paying rent. Every effort has been made to seek out and find tracts for the man of small means that he might have the added capital over his toil at the end of the year of his home, where lands promised enough future agricultural value to guarantee this.

When it is taken into consideration that many of the numerous valleys mentioned were settled and tilled from sixty to seventy years ago and many of the near-by towns have been in existence since then, that the sons of the early settlers and the steady stream of newcomers have from year to year taken the valley lands and then gone to the ridge lands as each succeeding entryman was forced back toward the mountains as long as there was a prospect of a farm to be secured, and then drifted from one valley to another, is substantial evidence that the settlers themselves have practically classified the remaining lands as nonagricultural.

5. LAND CLASSIFICATION

835,347.16 acres within the National Forest
 296,524.47 “ alienated within Forest
 538,822.69 “ National Forest area, classified as follows:
 451,457.67 acres nonagricultural timberlands
 31,420.13 “ more valuable for water-power purposes
 55,944.89 “ left for intensive classification.

Practically all of the legal subdivisions where a goodly portion of the slope was believed not too steep for cultivation was left for intensive field examination, as also were all lands that had a June 11, 1906, application on them at the beginning of the classification project and those which have been applied for since. It will be noted that a large acreage was left for intensive examination, more perhaps than should have been, but my idea has been to make this classification as thorough as it was possible to make it. Error in topography, and the fact that fifty-foot interval contour maps were used to select a large part of this land, are responsible for the holding of a great deal which field investigation proved to be absolutely nonagricultural, as the fifty-foot interval was not in enough detail to correctly judge the land without a field inspection. However, I feel that in the long run the holding of this large acreage was the correct policy to pursue because of the fact that we can now feel that every tract where there was the least agricultural possibility (as agriculture is now carried on in this State) has been submitted to a special examination. Much of the land visited was found to be absolutely worthless for agricultural purposes and those tracts which had a semblance of Class 3 land were mapped and are shown on the intensive classification maps.

The tops of the mountains are almost useless at the present time for their timber stand, as they are always subject to high winds and when fire passes over them it is with such force and heat as to practically consume every vestige of accumulated debris, thereby denuding these portions of any soil foundation.

On the northern mountain slopes, where fires burn more slowly, the soil is far better than on the slopes with southern exposure. This soil in many instances is as good as Class 2, and on some of the benches higher up on the mountain side, like those on Raspberry Mountain, Blackfork, Fourche, and Roch mountains, the soil is extremely good and will compare favorably with Class 1 soil. These benches range in narrow strips from five to ten chains wide and contain from fifteen to twenty-five acres each. They would grow anything that is grown in this climate and would bear fruit every year, but their inaccessibility renders them out of the question for agriculture or horticulture. Road building to them would be an engineering problem and the cost prohibitive, making the land in cultivation cost per acre far more than the most accessible and best bottomlands of the State.

The southern slopes and the low ridge lands are the pine growing portions of the Forest, the timber stand growing inferior in quality and less in quantity the higher the altitude. Our best pine is grown on the undulating ridges of Class 3 land. One of the main reasons for this is that though they are often burned over by forest fires the fire passes over them at such a slow rate of speed that only the top coat of fallen leaves and other accumulation is destroyed, leaving the major part to rot and create growing soil for the timber stand. As forest fires are becoming less numerous with each succeeding year, we can expect magnificent stands from the young growth covering these lands. Pictures Nos. 22 and 23 show a sapling and pole stand on a former homestead that reverted to the Government, which was cut over between fifteen and eighteen years ago. These pictures were taken in the NE $\frac{1}{4}$ of Section 26, Township 3 south, Range 31 west, near the western boundary of the Forest, on the top of a flat, narrow ridge. They are like unto many portions of the Forest, and show what may be expected of our cut-over lands when we are able to control the fire situation. These pictures were taken in a portion of the Forest which is repeatedly burned almost every year and it stands to reason that much better stands could be expected were the area kept from burning over. This is verified at a great many places on private holdings that are entirely surrounded by cultivated fields and that have not been burned over for twenty years, where the stand of saplings and poles is so dense that it is next to impossible to ride a horse through them. While these undulating lands grow extra fine timber for this region, it would seem that this is their special usefulness in this world, for when the ground cover is removed and agriculture attempted on them, erosion sets up to such an extent that they soon lose their productiveness along that line and only come into their own again when freed from the plow, when they produce in a few years a heavy stand of pine saplings.

Mention was made earlier in this section regarding the bench lands of the higher altitudes growing fruit each year. This is a substantiated fact, because of a much lower temperature on them than on the lower lands, thereby causing the trees to hold their buds until warm spring weather is a certainty and all danger of frost is passed, whereas on the lower lands a week of warm bright weather in the latter

part of February or the earlier part of March causes the buds to swell and often bloom, only to be killed by frosts in March or April. That this prevents the profitable growing of fruit is shown by the disastrous financial results of many large orchards in this part of the State. The Wickes Farm & Orchard Company, of Wickes, Ark., some twenty-five miles south of Mena, on the Kansas City Southern Railroad, where there are 840 acres in orchards, has never paid a dollar on the investment. The Highland Orchard, at Highland, Ark., on the Prescott & Northwestern Railroad, with thousands of acres in orchard, their own canning factories, icing plants, and every facility for taking care of the pickers during the fruit season, has never been a paying proposition. The cause of this is plain. It is only about once every five years, sometimes longer, when the fruit is not killed by frost. When a good fruit year comes every farmer has more than he can take care of and anyone can go to these farmers' orchards and get the finest of Elberta peaches at from 25 cents per bushel up. The warm weather comes with a rush in this section of the State and causes nearly all of the fruit to ripen at once, and the crop must be handled in a few weeks, often in less than a month. This causes the markets to be flooded and the prices, in consequence, to be very low. At this time during the fruit years thousands of bushels of peaches are fed to hogs because of the growers' inability to get them to market, or the low price of fruit. The unreliable seasons prevent permanent organization for the handling of the crop when it does come, and climatic conditions will have to change a great deal before this portion of the State ever becomes a successful fruit-growing area. Mr. W.D. Jones, of Womble, Ark., and Mr. S.P. Bashaw of Silver City, Ark., both experimented with fruit farms on the higher altitudes, and while they succeeded in getting a crop each year, the cost of keeping up mountain roads in such a condition that they might get their fruit to market in other than a pulp shape, and the long haul to the markets, proved so unprofitable that they abandoned the undertaking and the trees are now taking care of themselves on the mountain tops.

6. TITLE TO LANDS

The Arkansas National Forest was created by Presidential proclamation December 18, 1907, the first withdrawal having been made May 10, 1907. Further withdrawals were made June 17, 1907, and November 23, 1908, giving a total acreage of 1,663,300 acres.

At the time these withdrawals were made several large eastern and northern timber companies had a score or more of agents in this portion of the State securing vacant Government lands in numerous different ways. The most common one was to import parties to take up agricultural homestead entries with an adjoining timber and stone entry, the companies seeing that the entryman survived the life of his entry, and purchasing the land from him when final certificate was secured. The indiscriminate homesteading of lands for speculative purposes was checked only upon the withdrawal of extensive areas for National Forest purposes, the policy being to eliminate from such withdrawals, upon a thorough field investigation, all lands showing agricultural possibilities.

That this policy was early put in force is shown by the elimination of September 26, 1910, when 400,910 acres were eliminated from the exterior boundary of the Forest. Subsequent eliminations, in carrying out this policy, were made on April 21, 1914, and February 23, 1916, reducing the total acreage within the Forest boundary to 622,002.55 acres of Government land and 330,233.95 acres of alienated lands, or a total of 952,236.50 acres now within the Arkansas National Forest.

These alienated lands passed from the possession of the Government under the following different patents:

165,938.59	acres	Agricultural Homestead Entries
11,176.88	"	" Entries under Act of June 11, 1906
32,765.00	"	Cash Entries
34,338.48	"	Timber and Stone Entries
23,840.00	"	School Selections
62,050.00	"	Lieu Selections
80.00	"	Railroad Grant

The swamp school selection acreage is practically all in cultivation. Where sections 16 (School Selection) were located in agricultural belts they have passed into the ownership of farmers of from 40-

acre tracts to whole sections, and the greater part of them are in cultivation. On the other hand, where these Sections 16 were located in the rough portions of the Forest they have passed into the ownership of timber companies or land speculators at nearly always the minimum price to the State of \$1.25 per acre.

Twenty per cent, or 33,189 acres, of the 165, 938 acres patented under agricultural entries, is a large estimate for the land under plow in the Forest. This leaves 132,748 acres of nonagricultural lands alienated under this Act.

Below is given a portion of the holdings of timber companies and non-resident land speculators in some of the counties in which the Arkansas National Forest is located:

In Montgomery County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Graham Lumber Company	9,500	16,920	26,420
F.H. Drummond	12,540	..	12,540
Choctaw Investment Company	80	1,560	1,640
State	2,080	..	2,080
Hudgins & Williams	120	1,160	1,280
Badger Lumber Company	..	800	800
Werner Sawmill Company	700	2,960	3,660
Grasonia-Nashville Lumber Company	..	1,880	1,880
Ozark Timber Company	280	840	1,120
A.L. Clark Lumber Company	600	19,600	20,200
Kasposka Lumber Company	400	120	520
Valley Planing Mill Company	240	280	520
M.C. Trumbull	320	1,320	1,640
Black Springs Lumber Company	920	9,480	10,400
E.M. Roberts	..	2,400	2,400
Bear State Lumber Company	1,280	3,080	4,360
U.L. Clark	80	9,080	9,160
W.C. Fordyce	960	320	1,280
Red Slate Mining Company	840	120	960
Southwestern Slate Company	1,480	..	1,480
Gap Lumber & Stave Company	160	3,980	4,140
Dierks Lumber Company	640	..	640
Miscellaneous	6,840	14,520	21,360
Total	40,060	90,420	130,480

The last line, "Miscellaneous," covers small concerns owning from 500 to less than 1,000 acres. Most of these companies have large holdings in other counties bordering the Forest. Montgomery County is a fair sample of the other ten counties in which this Forest is located. Polk County probably has the smallest acreage of lands held by speculators than any of the others. The acreage is only 36,670 acres held by nonresidents and timber companies.

In Scott County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
C.E. Forrester	4,650	16,573	21,223
Hill & Forrester	120	840	960
Forrester & Goolsby	200	..	200
Self & Forrester	520	1,120	1,640
L.O. Day	160	1,560	1,720
R.P. Harris	160	1,120	1,280
R.A. Castleberry	1,120	1,680	22,800
Frank Bates	240	3,696	3,936
German National Bank	..	1,040	1,040
F.H. Drummond	7,690	200	7,890
R.A. Crutchfield	..	1,560	1,560
Williams, Watrous & Matson	12,960	1,680	14,640
Kelly Trust Company	..	9,360	9,360
Rogam-Bates Lumber Company	1,378	80	1,458
Kansas Wholesale Lumber Company	160	8,800	8,960
Waldron Timber & Coal Company	80	1,320	1,400
W.L. Leamens	..	1,320	1,320
W.M. Cravens	..	1,960	1,960
Fort Smith Lumber Company	3,116	1,584	4,700
J.K. Monroe	840	200	1,040
State	1,480	1,120	2,600
Miscellaneous	6,980	27,900	34,880
Total	41,854	84,713	126,567

Polk County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Polk County and Cox Investment Co.	1,800	4,480	6,280
Watkins Lumber Company	1,280	2,080	3,360
State	240	1,120	1,360
H.A. King	80	680	760
Hogan & Coyle	..	2,200	2,200
Nesbett & Mellon	80	2,560	2,640
F.M. Cecil	..	1,080	1,080
A.K. Fritts	80	1,240	1,320
Hudgins Estate	240	1,440	1,680
E.F. Hoffman	..	960	960
H. F. Gann	..	1,000	1,000
M.R. Reagan	..	1,280	1,280
R.P. Harris	800	560	1,360
A.M. Harrah	640	760	1,400
W.A. Ragland	120	1,360	1,480
Jefferson Trust Co.	..	920	920
Dierks Lumber Company	760	5,760	6,520
Arnstein & Arenstein	1,440	160	1,600
Slate Companies	1,200	2,220	3,420
A. Rothenberg	..	1,280	1,280
Miscellaneous	5,560	11,600	17,160
Total	14,320	44,740	59,060

Pike County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Dierks Lumber Company	..	20,040	20,040
Ozan Lumber Co. (this includes their holdings in Caddo River Lumber Co. and Graysonia-Nashville Lumber Co.)	..	80,800	80,800
Total	..	100,840	100,840
Howard County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Dierks Lumber Company	..	89,400	89,400
Richester Land Company	..	1,400	1,400
Total	..	90,800	90,800
Garland County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Iron Mountain Railroad Company	..	10,200	10,200
Arkansas Land & Lumber Company	..	2,960	2,960
Detroit Land & Lumber Company	..	13,320	13,320
Clark Lumber Company	..	2,400	2,400
Malvern Lumber Company	..	15,400	15,400
Pike Manufacturing Company	..	1,520	1,520
Total	..	45,800	45,800
Yell County	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Fort Smith Lumber Company	9,740	18,120	27,860
Paul D. Rust Company	40,595	12,831	53,416
E.S. Holland	2,060	..	2,060
Butler Bros.	1,680	2,080	3,760
Meysenberg Company	..	11,520	11,520
C. W. Phillips	240	1,480	1,720
Ayer & Lord Tie Company	..	1,080	1,080
Total	55,310	47,111	102,421
Perry Company	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Fourche River Lumber Company	5,145	6,705	11,850
Paul D. Rust Company	18,624	5,185	23,809
Fort Smith Lumber Company	1,120	440	1,560
Total	24,289	12,320	37,209

It will be noted that the big holdings are given in only eight of the twelve counties in which the Forest is located, and only in Polk, Montgomery, and Scott counties, where the majority of applications to enter are received, has an attempt been made to show the small holdings of nonresident speculators. A recapitulation shows the following amounts for the counties held by nonresidents:

	In Forest (Acres)	Out Forest (Acres)	Total (Acres)
Montgomery County	249,640	96,520	346,160
Scott County	41,854	84,713	126,567
Polk County	14,320	44,740	59,060
Pike County	..	100,840	100,840
Howard County	..	90,800	90,800
Garland County	..	45,800	45,800
Yell County	55,310	47,111	102,421
Perry County	24,289	12,320	37,209
Total	385,413	521,844	907,257

The larger holdings are the property of the following companies:

	Acres
Paul D. Rust Company	97,855
Graham Lumber Company	26,420
A.L. Clark Lumber Company	22,600
Dierks Lumber Company	116,500
C.E. Forrester and Associates	24,023
Fort Smith Lumber Company	34,120
Ozan Lumber Company	82,680
Total	404,198

Outside of the National Forests of this State there are vacant lands subject to any of the public land laws; at the Camden Land Office, 31,855 acres; at the Harrison Land Office, 213,240 acres; at the Little Rock Land Office, 95,411 acres; making a total of vacant lands in the State subject to entry of 340,506 acres. In the eleven counties in which the Arkansas National Forest is located there are 49,996 acres of public land, which is subject to any of the public land laws, distributed in the different counties as follows:

	Acres
Yell County	4,920
Montgomery County	6,495
Perry County	920
Garland County	5,903
Polk County	7,322
Pike County	1,511
Howard County	3,396
Sebastian County	2,240
Logan County	9,120
Saline County	2,009
Scott County	6,160
Total	49,996

7. FOREST VALUE

The main business of this Forest, up to the present time, has been its timber sales, the first of any consequences being made in 1909, and from that date, with the decreasing supply of timber and the increasing price of same, this business has steadily grown until it now taxes the Forest force to its utmost capacity to keep abreast of the applications for sales and the administration of those made. This business will steadily increase because of the fact that all of the small holdings on private lands have been cut over, and when cutting commences on the larger holdings the Forest timber will be in greater demand, as logging roads, trams, etc., will already have been built to secure the private timber, and this expense will be figured off the cost from the timber purchased from the Government. The mountain timberlands have a merchantable timber stand ranging from 2,000 to 10,000 board feet per acre, the average stand being from 3,000 to 5,000 board feet per acre. The short-leaf pine of this forest grows very quickly, especially on cut-over lands where excessive thinning has taken place. Much land that was cut over fifteen or twenty years ago has yielded a second cutting of pine saw logs, some within ten years after the first cut was made.

Twenty-five or thirty years ago these mountains produced larger herds of cattle than now. Old settlers inform me that at that time every farmer had a large bunch of cattle, because of the fact that they were raised without any expense whatever and were practically clear profit to their owners, for no stock was winter fed except that at labor. At that time the woods were open and grass plentiful, but when it became the custom to burn the woods the brush began to come and crowd out the grass and it was necessary that they feed during the winter months. It was then that the farmers began to decrease their herds, until of late years there is only a small amount of cattle within the Forest boundary. With the high price of cattle in the last year or so, interest in this class of stock and range for them has been greatly revived and numerous requests have been made to me by local stockmen, and many from other States, to recommend them to a place that would make a good ranch proposition with plenty of open grazing land around it. As an officer on this Forest for nearly eight years, my work has been such as to place me in a position to become acquainted with the most likely places where some agricultural land might be opened up under the Act of June 11, 1906, for a cattle-ranch proposition, and during the past two years I can safely assert that I have piloted to, or instructed how to reach, these places more than fifty men who wished to engage in cattle or hog raising in connection with farming, and they have with one accord rejected them because of the fact that they did not have enough agricultural land on them to furnish subsistence and forage for their families and the necessary saddle horses that they would of necessity be required to keep were they to handle the stock to any extent, leaving no land to produce winter feed for the cattle. It has been asserted and contended for that this Forest is ideal for cattle and hog raising. This I concede. The range is open, with the payment of a small grazing fee, and will furnish all that is necessary to keep this class of stock from nine to ten months in the year, but cattle must be fed from two to three months during the winter and hogs as a rule sixty days during the summer, though wild hogs live and fatten all the year round without any food other than that obtained from the woods. The mountain sides during the summer are covered with huckleberries, blackberries, wild grapes, and other fruits. It is very seldom that the white oak mast misses in the fall of the year, and this, followed by the red oak or "bitter" mast, puts hogs in fine condition for the fattening and finishing pen during the winter. Those living in the Caddo-Missouri unit of the Forest are doubly blessed regarding their hogs. The Caddo River and the Little Missouri River and their tributaries are lined with beech trees, and the mast from these trees, added to the oak mast of that section, goes a long way to help make much of the "Beech Nut Brand" of bacon. For nine months in the year there is wild forage enough on the Forest to furnish subsistence for thousands and thousands more cattle than are here, but to keep these cattle alive during the winter months help must be given by the adjacent agricultural valleys already in cultivation. In nearly all the counties in this portion of the State dipping vats have been erected in every community and before long this Forest will be above the quarantine line. This will tend to enhance the grade and value of native cattle, will create more interest universally in the growing of them, and will help to bring the National Forest acres into the work for which they are best fitted, i.e., the growing of trees and livestock, thereby enhancing the value of adjacent agricultural lands.

Mining.—Many mining “booms” and a great deal of excitement have been created at different times on different portions of the Forest by the finding of pockets of many of the higher class of minerals. Some twenty years ago the towns of Bear, Silver City, and Crystal Springs were mining towns that counted their inhabitants by the hundreds. The country around them is honeycombed with drifts, tunnels, and shafts ranging from ten to two hundred feet deep. For many years Slatington, now alive in name only, was a thriving little town of 150 workmen. Slatington is located in Section 33, Township 3 south, Range 27 west. The same may be said of Slate City, in Section 36, same township and range. The quarrying of slate was the business carried on here. In Township 3 south, Ranges 28 and 29 west, the Standard Slate Company, Kansas City Slate Company, Best Slate Company, Federal Slate Company, Gulf Slate Company, Bangor Slate Company, National Slate Company, North Wales Slate Company, and many others have quarried slate from both private and Government lands for many years, at great expense of time and money, with poor results, owing to the long haul to market for this heavy material. Little or no work is being done by these companies at the present time. Manganese and copper are the minerals most sought after at this date and nearly all of the Government lands in the western part of Montgomery County and the eastern part of Polk County are covered by some kind of a mineral claim. In Sections 10 and 16, Township 4 south, Range 27 west, extensive mining operations are now being carried on by Edgar & Company, a tunnel 8 feet x 12 feet x 500 feet having been driven in. The mineral sought at first was manganese, but a good vein of copper has been struck and the developing of this is now the principal object.

Coal has been mined from the Poteau Mountain in Scott and Sebastian counties for a number of years. Derricks have been erected and oil and gas are now being bored for in Scott County.

The Arkansas Whetstone is mined extensively near Hot Springs. This stone is considered the best in the world. This is the white novaculite which forms the base of many of the mountains of this Forest.

Garland, Montgomery, Scott, and Polk are the principal counties of the Forest where prospecting is carried on to any extent.

Water Power.—In many places on the Forest streams of considerable size would furnish good water power. The supply is constant, though in the lesser streams it may be small during the summer season. There is also danger of freshets and washouts in these streams. Many available sites on private lands are now being used for grist and small sawmills. As a rule more power could be developed at these sites than is now being used. There are many sites that could be put to use that are now idle. The largest river in this Forest, the Ouachita, would furnish power in many places, but at the present time is not being used. Several years ago it was used in a small way at Thornton’s dam and mill seven miles west of Hot Springs. At Caddo Gap the Caddo River has been used for a number of years to furnish power for a saw and grist mill and cotton gin combined. At Black Springs this river is also used with good results in furnishing power for a saw, grist, and flour mill and cotton gin combined. The Little Missouri River has several small sites that could be used for small plants; especially is this so in Section 32, Township 4 south, Range 27 west, where the river flows through the “Winding Stair” mountains. The “Little Missouri Falls” in Section 7, Township 4 south, Range 27 west, are only available for small power as the stream is too small at this point, but used in connection with the “Crooked Creek Falls,” in Section 8, same township and range, more than twice the power could be generated from this source. Several small sites could be found on the Cossatot River and Big Brushy fork of this river, also North, South, Big, and Walnut forks of the Ouachita River, and Alum and Middle forks of the Saline River.

The Garland Power & Development Company, of Little Rock and Hot Springs, has planned an extensive dam and power development on the Ouachita River, about ten miles northwest of Hot Springs. District Engineer T.W. Norcross made an intensive examination of this project in 1913, and the following is taken from pages 13 to 26 of his report on the project:

Location of Project

General Location

The proposed dam is located in the northwestern portion of Garland County, about sixty miles by river above Arkadelphia and about ten miles northwest of Hot Springs. The site is accessible by means of wagon road from Hot Springs, which at certain times of the year is in poor condition. It will probably be necessary to construct a railroad or some other means of conveyance from the railroad to the proposed dam. The location of the dam and its relation to neighboring points is shown on Plates 2 and 3 of Appendix D.

Although the drainage area above the dam is great, it is proper to describe the dam as being located in the upper part of the drainage.

The nearest point at which power would be used is Hot Springs, which would require a transmission line about ten miles in length. However, Malvern, Benton, Little Rock, and Pine Bluff are also large users of power. These would require a transmission line length of respectively 30, 45, 75, and 118 miles.

At present water-power developments in Arkansas are very few and there are none near the proposed reservoir. The other developments intended by the company and those planned by the Ouachita Power Company and the Interurban Railway and Power Company are below Reservoir No. 3.

Location of Structures

Dam No. 3 is shown as being located in the NE $\frac{1}{4}$ Section 2, Township 2 south, Range 21 west, 5th Principal Meridian. The north end of this dam is shown as bearing about 1,600 feet west of the northeast corner of Section 2.

Since practically all of the head will be obtained by means of the dam, the conduit will have comparatively no length. It is shown on the filing map as leaving the dam at the south end.

The power house is shown at the side or edge of the river and it is claimed that the site will need to be about 40 acres in extent.

Location of Other Projects of the Company

The report of Ford, Bacon and Davis was made upon the dam and reservoir included in the application to the Forest Service but covered that designated as the Burton Creek site. However, the dam and reservoir studied in this report are the same as those covered by the Army Engineers' report contained in Document 588.

Dam No. 2 as shown on the application map is located in Section 11, Township 3 south, Range 20 west. The elevation of the crest of this dam appears to be 420 feet above mean sea-level. Dam No. 1 is located in Section 25, Township 3 south, Range 19 west. Two elevations are shown for the crest of this dam, namely 350 and 420 feet. Neither Reservoir No. 1 nor No. 2 is as large as No. 3.

The Burton Creek site, which is covered in the report of Ford, Bacon and Davis, is in Section 27, Township 3 south, Range 19 west, and is about one mile above the mouth of Burton Creek and approximately three miles above Dam No. 1. According to the report, the dam is to be a combination of earth and rock-filled dam with a reinforced concrete face, with a crest elevation of 430 and a water depth of 140 feet. The length of the crest is stated as approximately 1,600 feet. The waste weir is to be 2,000 feet wide with crest at an elevation of 420. The reservoir at spillway level has an area of about 12,422 acres, a length of approximately 23 miles and a capacity with a 36-foot draft of 333,144 acre-feet.

Description of Drainage Basin

The following description excerpted from the U.S. Army Engineers' report is concise but comprehensive:

Topography.—Above Camden the Ouachita Basin is divided into three main watersheds, with a total watershed of 5,640 square miles, drained by two tributaries, in addition to the upper part of the Ouachita itself. The larger of the two is the Little Missouri River, which united with the Ouachita about

30 miles above Camden, entering from the west, and which drains an area of about 2,800 square miles. Its source is in Montgomery County, on the south slopes of the Ouachita Range of mountains, and with the exception of its branches on the mountain slopes, its course is considerably flatter than the Ouachita proper. Caddo Creek enters six miles above Arkadelphia from the west, with the drainage area of about 550 square miles. Its source is also in Montgomery County, and through the mountains in its upper course it bears a closer resemblance to the parent stream than the Little Missouri."

The upper Ouachita River has its source in Polk County, Ark., within six miles of the Arkansas-Oklahoma State line. Its source is in Eagle Gap, a crossing of the Fourche Range of the Ouachita Mountain system. The Geological Survey maps (Survey of 1887) give the elevation of the source as between 1,700 and 1,750 feet above mean sea level. The river flows almost due east through Polk and Montgomery counties. Its course is very crooked. It occupies and drains a basin entirely surrounded by mountains. The Fourche Range, in which it rises, extends almost parallel to the general course of the river on the north; and the Ouachita Range, branching off from the Fourche Range, extends, first, in a southeasterly direction, then in a general northeasterly direction along the south of the river along its upper course.

The principal tributaries entering from the north, all rising in the south slopes of the Fourche Range, are Irons Fork, Muddy Fork, North Fork, and Blakely Creek; and from the south, having their sources on the north slopes of the Ouachita Range, are Board Camp Creek, Big Fork, and South Fork. The slopes of the mountains are mostly heavily forested. The trees attain considerable size, shortleaf yellow pine predominating, much of which is merchantable. The valleys of the streams are rolling after leaving the mountain slopes. Lower down they are more nearly level, and near the stream banks more or less deposit and debris from freshets has made the land very fertile. In nearly all cases this land is settled and is being cultivated. Farther up the slopes the soil does not appear to yield much from cultivation. The principal crops raised in the stream bottoms are cotton and corn and orchards and some grass crops. There are no considerable towns or cities between Mena, at the extreme head of the basin, and Hot Springs, which is about three miles north of the river, in Garland County. There are several village post offices, which have from 25 to 150 inhabitants each, viz., Board Camp and Egger, in Polk County; Mount Ida, Buckville, and Cedar Glades, in Montgomery County; and Hawes and Mountain Valley, in Garland County. With the exception of about 20 miles of the Kansas City, Pittsburg & Gulf Railway, in Polk County, immediately at the source of the river, there are no railroads in the valley above Hot Springs.

Near the Montgomery-Garland County line, the river turns in a southeasterly direction through Garland County, cutting squarely across the Ouachita Range; the tops of the mountains rising on each side of the stream about 800 feet above the river bed. It emerges through the last gap with a low-water elevation of about 390 feet, mean sea level. The distance from the source to this point by river, as measured from the Geological Survey maps, is 115 miles, and the total fall is about 1,300 feet, or a little over 11 feet per mile. In an airline, the distance is about 60 miles, and the greater width about 25 miles. The drainage area in the watershed above the gaps is 1,190 square miles.

After intersecting the Crystal Mountains, the river flows through an undulating country, called the Mazarn Basin, lying between the Ouachita Range on the north, and Trapp Mountains on the south. Only minor branches empty into the main stream along this reach, Mazarn and Little Mazarn creeks being the most important, both of which enter from the south and west.

Passing out of the southeast corner of Garland County into Hot Springs County, the river cuts across the Trapp Mountains near Malvern, Ark. Here the river leaves the mountains and turns and flows in a southwesterly direction through Hot Springs County to Arkadelphia, receiving six miles above this point Caddo Creek from the west. The total drainage area above Arkadelphia is 2,330 square miles. The elevation of low water is about 165 feet above mean sea level. The distance from the Gaps in the Crystal Mountains to Arkadelphia is about 65 miles. The total fall is about 3.5 feet per mile.

From Arkadelphia to Camden the river flows a little east of south. About 30 miles above Camden the Little Missouri River enters from the west. Along this reach of the river, and extending about ten miles above Arkadelphia, at high stages the stream overflows its banks. Approximately 120,000 acres are subject to overflow. The total drainage area above Camden is about 5,640 square miles. The elevation of

low water is about 73 feet above mean sea level. The distance from Arkadelphia to Camden is about 80 miles, and the total fall is 95 feet, making a fall of a little over one foot per mile.

Geology.—The rocks of the upper Ouachita basin are all sedimentary, and the oldest recognized are the Ordovician (lower Silurian) system. Since the deposition of these rocks, which are of unknown age, and after a period of upheaval, when the rocks were eroded, most if not all of the area was plunged again below sea level and received the deposition of the rocks of the Carboniferous (Pennsylvanian) age. Geologists who have made a study of this area state that, since the elevation of the area succeeding the Carboniferous age, there has been a total erosion of from three to five miles deep, and that during the post-Carboniferous period, the present topographic and the surface geological features have been carved out. The theory of geological formation of the present Ouachita and its basin is fully described in Branner's Annual Report of the Arkansas Geological Survey for 1890, page 216, et seq.

The river, from its source to where it strikes the Ouachita Range, has not reached its base level, and it is now cutting in the rocks of the Carboniferous age. The base rocks are never far from the surface, and consist most commonly of black, gray, and yellow shales, also some lime and sandstones. The dip of the strata is not constant in any direction, but all appear to have been sharply jammed and folded at some period. In many places the strata are nearly vertical.

The surface rocks of the Ouachita Mountains are Ordovician (or lower Silurian). These mountains appear to be a series of anticlinal folds, with ridges extending southwest to northeast. The river cuts squarely across this range of mountains. Three successive spurs, locally called the Crystal Mountains, are cut through. The base rocks consist mainly of massive sandstones, alternating with shales and cherts. All the strata are sharply folded and tilted and show plainly the anticlinal formation. The main anticline crossing the river at this point and the minor anticlines on each side all have the same general direction—from southwest to northeast. The river has cut its way through this formation in a series of more or less narrow water gaps. Most of the proposed reservoir will have its bed in the rocks of the Lower Silurian Age. ***

After intersecting the Ouachita Range, the river again enters the rocks of the Carboniferous Age, which are the surface rocks of the Mazarn basin; thence finally cutting through the Trapp Mountains of the Ordovician Age, the river emerges onto the great tertiary plain of southern Arkansas and northern Louisiana, in which it flows throughout the balance of its course.

It is known that additional dam sites from smaller power developments may be found between the site of the proposed dam and the Trapp Mountains, and possibly some above the proposed reservoir, both on the parent stream and its tributaries. * * The locality selected for the proposed dam and reservoir is the only one where storage could be created of large enough capacity to influence floods or low-water flow.

Description of Proposed Works

General

As far as now can be seen by the company, the dams, etc., will be designed in the main as outlined in Army Engineers' report. The height may be increased and the dam may be changed in location a few hundred feet upstream or about a mile downstream. The final design can not be made until the location is definitely settled, and the proper location must be based on a series of borings and test pits.

The amount of draft and accordingly the head on the wheels will be changed in the company's project, since the Army Engineers intended this reservoir to be used primarily for equalizing the natural run-off and in aid of navigation by raising the level of the water at Camden.

Dam

A gravity type of cyclopean masonry dam is to be used with a radius for the upstream face of 1,000 feet. It is hoped that 40 per cent of boulders and large stones can be imbedded in the concrete, which will be proportioned 1:3:6.

The bottom of the excavation in the bed of the river is assumed at an elevation of 358 feet and the bed of the river at an elevation of 390 feet. At the former elevation, the width of the dam is given as 270 feet. At elevation 440, the width is given as 125.6 feet, at elevation 550, 30.2 feet, and from elevation

581.26 to the top of the parapet wall at elevation 604, the width is 16.58 feet. The flow line at flood level is at elevation 600 and the spillway crest 594 feet. The length of the dam crest is 1,120 feet and of the spillway 300 feet. The estimated contents of the dam are 375,000 cubic yards. The spillway will be constructed normal to the axis of the dam at the left abutment, formed by excavating the base of the mountain above the abutment. * * * * *

Reservoir

The approximate length of the reservoir is 25 miles and the maximum width is five miles. The area at crest of spillway, elevation 594, is 67.5 square miles, and at flood line, elevation 600, 71.5 square miles. The contents at the spillway level will be 115 billion cubic feet, or 2,612,500 acre feet. The area and capacities at various elevations and heights of dam are shown in Table 7, Appendix C.

Transmission Line

The representative of Ford, Bacon, and Davis believes that two separate lines will be constructed. Power will be transmitted at a high voltage, probably greater than 60,000 volts. This transmission line will probably extend to Little Rock and possibly to Pine Bluff.

Cost of Construction

While the proposed development of the Army Engineers will be changed by the company, it is interesting to note the estimated cost of construction given in Document 588. The total cost of the dam will be \$2,980,000 (the cyclopean masonry being figured at \$6 per yard), the lands and incidentals, \$1,170,000, and the power development, including power houses, machinery, and transmission lines, \$980,000, making a total cost of \$5,130,000. For a lower dam and using water for power development only, the cost is estimated as \$2,445,000, while for a power development with flood control works, the total is \$3,000,000.

During the past few months renewed interest has been taken in this project, resulting in several visits to the site of Major Harold C. Fiske, District Engineer, in charge of the Vicksburg, Miss., office, and the promoters and others are now almost certain that the dam will be built at an early day.

Recreation.—Many mineral springs of known medicinal qualities are located on or near the Forest. Chief among these is the world famous Hot Springs, in Garland County, within ten miles of the Forest boundary. Almost equally as well known is Mountain Valley, Ozark Lithia, Chewaulka, Potash, Sulphur, and Mud Springs, all near Hot Springs and the Forest boundary. These springs alone bring visitors in close touch with the Arkansas National Forest from every country and every climate, and the waters from them are shipped and sold in all the large cities. The above springs are visited by people from the north in the winter and the south in the summer.

During the summer months the Forest and vicinity are visited by thousands of health and pleasure seekers, or those seeking rest during the hot months, and others to get out of the malarial districts of the southern part of this State, Texas, and Louisiana, during their most sickly periods. Caddo Gap has quite a reputation among these people, and many citizens of Texarkana, Arkadelphia, and other points in this State and also from Louisiana and other southern State have summer homes there, and many others come with tents prepared to camp and spend a few weeks rustivating at the Vaught, Dale, and Buttermilk Springs near there.

Mena, another prominent point considered in connection with the Forest, welcomes hundreds of visitors each summer who enjoy the waters of Janseen Springs, or Bethesda Springs near Mena, where outings are held almost daily and numerous camping parties spend weeks during the warm season. (See Photos. Nos. 24 and 25)

Black Springs, two miles from Womble, and three miles from Forest boundary, also receives each year its quota of summer visitors.

Bog Springs, in Polk County, and Baker Springs, in Howard County, are two other prominent points for health and pleasure seekers during the summer.

Scattered within the Forest boundary, or very near it, are many springs of more than local reputation, among which are Big Chalybeate, near Hot Springs; Chalybeate, north of Buckville; Blacho, near Cedar Glades; Famous, near Hawes; Cold, Crystal, Mayberry, and Sulphur; the Sulphur Hot Spring, on Sulphur Mountain, in Township 4 south, Range 26; the hot spring in Section 8, Township 4 south, Range 27; Gillam Springs, in Section 22, Township 4 south, Range 30; and others too numerous to mention, which are visited in the summer by outing and camping parties and by hunting parties during the fall and winter.

The mountains abound in wild turkey, deer, quail, raccoon, opossum, fox, wolf, bob-cat, skunk, squirrel, rabbit, and quite a few bear. (See Photo. No. 26) During the State open season for the killing or trapping of these animals, the smaller streams and mountains are lined with hunting and trapping parties. (See Photo. No. 27) All the largest streams are full of the finest of fish that are usually found in these swift running mountain waters, and this sport annually brings thousands of visitors within the boundary of the Forest. (See Photo. No. 28)

Taking the Arkansas National Forest as a whole, and my personal acquaintance with the portion of the State in which it is located, of more than twenty years as a sawmill operator, timber buyer, hunter, and Forest officer, I feel safe in asserting that there is not a foot of it that has not been gone over time and again for years and years by men of average, and more than average intelligence, and men who know valuable agricultural land, and were such land here bottled up, as some seem to think, it would have passed to patent long before the creation of the Arkansas National Forest. I repeat-The people have classified this land.

Respectfully submitted: December 10, 1917

William E. Wootten
National Forest Examiner

Approved: Feb 9 1918

R. G. Huey
Forest Supervisor

Approved: May 28, 1918

William L. Hall
District Forester

Approved: _____

H.S. Graves
Forester

Approved: June 27, 1918

Carl Vrooman Acting
Secretary of Agriculture

Photo No. 24 – Janseen Spring, Mena, Ark.





Photo. No. 25 – Bethesda Springs



Photo. No. 26 – Bob-cat Hunter and hounds

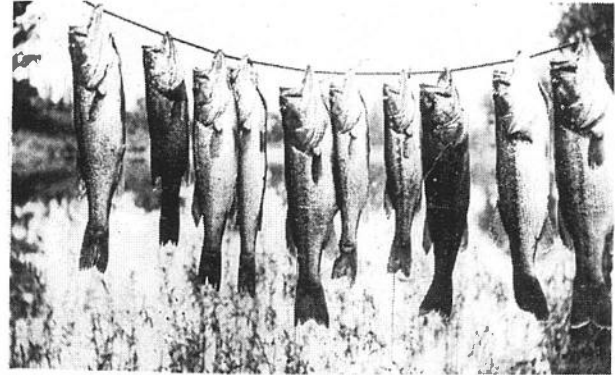
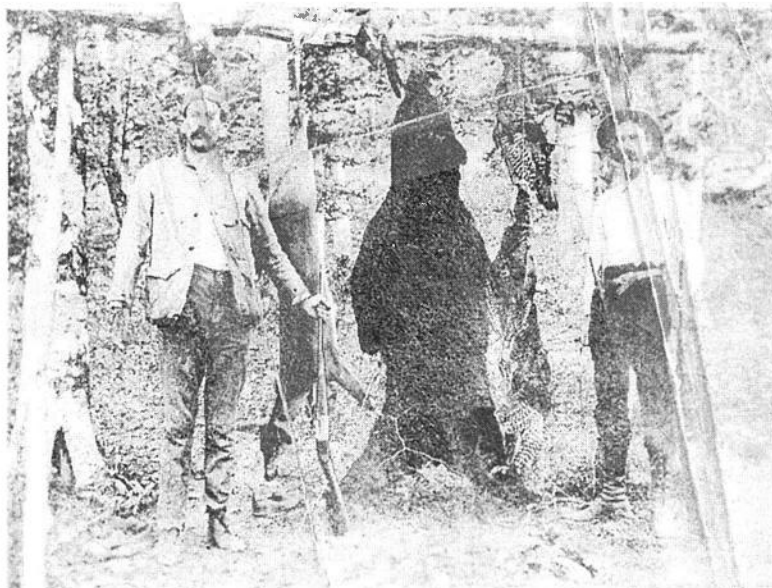


Photo. No. 28 – A few hours sport

Photo. No. 27 – A day's game bag on Rich Mountain



SUPPLEMENTAL-LAND CLASSIFICATION REPORT

Arkansas National Forest

By

W. L. Hall, District Forester

Before approving the Classification report of the Arkansas National Forest I find it necessary to take exception to the recommendations of the Examiner as to certain of the lands recommended for listing. These exceptions are taken after a careful review of the report upon my return from a tour of inspection of the Forest. While on the Forest I had opportunity to consider with the Supervisor the difficulties which might arise through listing certain areas which once in private hands would be likely to jeopardize the successful administration of the Forest.

Certain tracts, if listed, would give the settler absolute control of rights of way for logging routes that are essential to the removal of large bodies of Government timber in future sales.

A question which was not considered by the Examiner in his recommendations is the policy of solidifying the National Forest of Arkansas through acquisition under the Weeks law, which has been put into effect since the field work was done.

Where small tracts of doubtful agricultural land are recommended for listing for the sole reason of helping out a former small area listing, and where the combined area does not equal the minimum farm unit required for the class of lands involved, it is considered for the best interests of the Forest administration not to list the land. The absolute impossibility of the settler being able to derive a living for his family from the products of the soil of these small tracts has been fully demonstrated as a result of many trails. Many of these tracts have already been offered to the Government for purchase under the Weeks law at prices fixed for nonagricultural lands.

It is decidedly the better policy to retain all areas needed for administrative or other public purposes than to list them and later have to buy them back. For these reasons I disapprove of the listing of the following described tracts, making a total acreage of 940 acres.

Township 3 S., R. 30 W., Sec. 30

N ½ SE ¼ NW ¼ SW ¼, SW ¼ NW ¼ SW ¼, W ½ NW ¼ SW ¼ SW ¼

This small area of 30.37 acres was recommended for listing by the examining officer to help out a former listing of 40 acres made in 1912. The history of the claim is as follows: The SW ¼ of Section 30 was formerly covered by a homestead entry, which entry was canceled prior to 1911. The land was applied for under the Act of June 11, 1906, by T.A. Jordan on Dec. 2, 1911, and upon examination the entire area was rejected as not being chiefly valuable for agricultural purposes. From this decision Mr. Jordan appealed for a review in the case under date of April 8, 1912, and a reexamination was made by a different examiner, resulting in the listing of 40 acres. The remainder of the SW ¼ was again rejected. The listed portion was restored to entry under date of March 17, 1913, and applicant made entry of the land March 20, 1913, where he has since maintained a home with his family. On December 11, 1913, Mr. Jordan again made application for the SW ¼ Sec. 30, and was reinstated for the portion rejected upon his application of December 2, 1911. Final action upon his last application has been deferred pending decision in the matter of withholding permanently from settlement certain portions of the Arkansas Forest. A new field examination was made, however, and the portion described as listable land in this report was recommended for listing.

The map shows that the listed area is a small parcel of land in the center of a solid body of Government land located in a rough, mountainous region. It lies on the top of a hill at an elevation of 1350 feet and is reached only by a very poor road or trail. The fact that the original homestead entry covering the land was canceled, and subsequent applications under the Act of June 11, 1906, were rejected as nonlistable places the agricultural possibilities of the entire SW ¼ in a very doubtful state.

From the location of this tract and its relation to the surrounding country it now appears that a mistake was made in listing this small area which, in itself or with the proposed addition, is insufficient as a farm unit to provide even a moderate living for a family. The listing was done at the time when it was

thought best to list all pieces of land susceptible of growing a crop regardless of size, if covered by an application. The fallacy of this policy has been fully demonstrated, and it would now even be a greater mistake to attempt to remedy the error by listing adjoining small tracts of land of doubtful agricultural character.

Township 4 S., R 30 W., Sec. 27

N ½ NE ¼

The Examiner's report and map of this tract shows the Class 3 land to lie in the three separate and detached patches, and to be extremely poor in quality. The chief reason for classifying the land as listable rests in the fact that the 160 acres is an isolated tract of Government land surrounded by patented land, and contains a percentage of possible Class 3 land to come within the listing rules. The entire area is covered with a valuable stand of merchantable pine and oak timber, the value of which is greatly in excess of any agricultural crop the thin soil would produce. As the map shows, this tract is separated from a considerable body of Forest land on the north by ¼ to ½ mile, and on the south from the National Forest boundary by ¼ mile, or one tier of forties. The surrounding patented land is rough in character and low in agricultural value, and probably will soon be offered the Government for purchase under the Weeks law at the price of nonagricultural land, and should this tract be listed there is no doubt in regard to its also being offered for purchase as soon as final receipt is issued. For these reasons, the present listing of this tract, and the future listing of the adjoining eighty acres held for timber values, is disapproved.

Supplemental-Land Classification Report
Arkansas National Forest—2

Township 4 S., R. 29 W., Sec 12

NE ¼ SE ¼ NE ¼, N ½ NW ¼ SE ¼ NE ¼, N ½ N ½ SW ¼ NE ¼

Exception is taken to the Examiner's recommendations to the extent of reserving a right of way for a logging road amounting to 25 acres, as described above. This strip is traversed by a mountain stream and secondary road which will eventually be required for logging a large area of Government timber. For this reason it is considered of greater value for public than for agricultural use and should not be listed.

Township 1 S., R. 28 W., Secs. 24 and 25

Sec. 24: NE ¼ NW ¼ SE ¼ NW ¼, N ½ NE ¼ SE ¼ SW ¼, E ½ W ½ SW ¼ SE ¼
NW ¼ NW ¼ SW ¼ SE ¼-----20 acres

Sec. 25: E ½ W ½ NW ¼ NE ¼-----10 “

Exception is taken to the Examiner's recommendation for listing the above described portion of a 40-acre tract described in Sections 24 and 25, ostensibly as adjoining land to a former small area listing. With the exception of possibly a 10-acre strip 5 chains wide by 20 chains long in Section 25, the map or report does not indicate sufficient land of Class 3 grade to justify listing at this time. The acquisition of land under the Weeks law is now reasonably certain, and there is good reason to believe that all small listed areas of this kind will be offered to the Government for purchase as soon as patent thereto shall have been issued. The isolation, character of land, and apparent inability of the settler to derive a living from the soil alone offers no exception to this tract. The land lies in the midst of a large area of solid Government land of nonlistable character, except as it joins the National Forest boundary on the south. The land was examined under a former application and classified as nonlistable because of its rough nature, not being suitable for agriculture. The listing of the W ½ W ½ NW ¼ NE ¼ Sec. 25, is approved for the reason that it has been ascertained through recent surveys that the settler upon whose application the adjoining land was listed erroneously put his improvements upon this tract of Government land instead of the land which he entered.

Township 4 S., R. 28 W., Secs. 1 and 2

Sec. 1: SW ¼ NE ¼ NW ¼, N ½ NW ¼ SE ¼ NW ¼, N ½ NE ¼ SW ¼ NW ¼, S ½
SW ¼ NW ¼, S ½ S ½ SE ¼ NW ¼, SW ¼ SW ¼ SW ¼ NE ¼
Sec2: E ½ SE ¼ SE ¼ NE ¼ -----A total of 57.50 acres.

The Examiner's recommendations for listing the above described tract are disapproved for the reason that it does not appear advisable in this locality to help out a former listing of a small tract by adding acreage once rejected as nonagricultural. This tract is located in a large body of Government land very desirable for permanent National purposes owing to its location, character, and relation to streamflow.

Township 1 N., R. 27 W., Sec. 31

NW ¼ SW ¼, SW ¼ NE ¼ SW ¼, N ½ SW ¼ SW ¼ ----- 69.80 acres

Township 1 N., R. 28 W., Sec. 36

NE ¼ SE ¼, E ½ NW ¼ SE ¼ ----- 60.00 "

Exception is taken to the listing of this tract of land, amounting to 129.80 acres, showing a difference in altitude of 100 to 140 feet in one-fourth mile—over 50 per cent of the area recommended. This slope reduces the area available for practical cultivation below the minimum farm unit for this class of soil. In consideration of its location in the midst of a large unit of National Forest land which is to be completely consolidated by purchase, its long distance from the nearest market (about 30 miles) and the further fact that the future logging of approximately fifteen thousand acres of National Forest timberland will be affected by rights of way over these tracts there can be no question that this land is of greater value for Forest purposes than for agriculture.

Township 1 S., R. 27 W., Secs. 14 and 23

Sec. 14: E ½ SE ¼, SW ¼ ----- 20 acres
Sec. 23: E ½ NE ¼ NW ¼, NE ¼ SE ¼ NW ¼, NW ¼ SW ¼ NE ¼ ----- 40 "

Exception is taken to the listing of the above described tract amounting to 60 acres.

The area described in Section 14 controls the right of way upon which the logging of more than 800 acres of National Forest timber to the north and west of this area depends, and it is therefore very desirable that this land be permanently retained in the National Forest.

While soil on this tract is of the same class as found on the June 11 listing adjoining, it is nevertheless very stony and can only be tilled with difficulty in patches too small for profitable farming. It lies at the end of a mountain which rises steeply to the east and, like all lands similarly located, bed rock is found near the surface, causing the land to readily become subject to erosion. The land was examined upon application No. 803 in 1913, and was rejected as being nonagricultural. All of the land in Sec. 23 considered as having agricultural possibilities at the time of examination was listed, and under the present policy of solidifying the National Forest land through acquisition, it would seem to be the worst kind of a mistake now to list small areas of doubtful agricultural character located as the above described tract is to the surrounding territory.

This land should therefore be classified as nonlistable.

Township 4 S., R. 27 W., Sec. 24

NE ¼ SE ¼, E ½ NW ¼ SE ¼, NW ¼ NW ¼ SE ¼, N ½ NE ¼ SW ¼, NE ¼ NW ¼
SW ¼----- 100 acres

The above described tract is a parcel of land which although under the listing rules comes within Class 3, to list it would nevertheless be very prejudicial to the National Forest. It lies in an almost compact body of mountainous National Forest land adjacent to the Fancy Hill region which will no doubt soon become solidified through acquisition. Should this tract be listed now there is every reason to believe that it will remain an isolated parcel of unentered and unused land, or if patented would be offered to the Government for purchase. It is therefore clearly more valuable for Forest purposes than for agriculture and should not be listed.

Township 4 N., R. 26 W., Secs. 23, 24, 25, 26.

This piece of land, comprising an area of 120 acres, is located at the foot of Petit Jean Mountain to the north and just at the mouth of a gap in a smaller mountain to the south. It is traversed by the only feasible roadway to a considerable area of Forest land to the northeast, as a reference to the map will show, it would completely cut off a body of several hundred acres of Government land from the main body of the Forest. To protect future logging operations and to avoid cutting the Forest in two it is essential that this land be permanently retained. The land is cut by numerous rocky draws or ravines in such a manner as to make the fencing of the agricultural portion expensive and almost prohibitive for successful farming. The topography of the entire area recommended makes it doubtful Class 3 land and barely passed the Examiner's classification. Should this area be listed and patent issued thereto it would probably be offered to the Government for sale under the Weeks law at a price fixed for the purchase of nonagricultural lands.

Township 4 S., R. 26 W., Sec 29

S ½ NW ¼ NW ¼, NW ¼ NW ¼ NW ¼, S ½ NE ¼ NW ¼ NW ¼ ----- -35 acres

Exception is taken to the listing of this tract for the reason that the map shows the Class 3 land to cover less than 50 per cent of the area recommended, and consists of a narrow strip crossing diagonally through the area. This strip of Class 3 land is traversed by a good public road well located and which should not be changed to the hillside land to the south, as the map shows to have been done on the adjoining ground formerly listed. The land was recommended for listing by the Examiner to help out a former listing of a 35-acre tract adjoining this area on the east. The circumstances do not seem to justify the recommendation considering the small amount of Class 3 land found on the tract, and the listing is therefore disapproved.

Township 3 N., R. 24 W., Sec. 19

W ½ NE ¼ SE ¼ NE ¼, W ½ SE ¼ NE ¼ NE ¼, SW ¼ NE ¼ NE ¼ NE ¼ ---- -12.50 acres

This small tract of 12.50 acres does not show on the map to possess any agricultural land whatever, and was recommended for listing by the Examiner for the evident reason of helping out a former listing of a 47-acre tract in order to give the entryman the benefit of a woodlot. The error of listing small areas of hillside land of this nature under the minimum farm unit size has been demonstrated long ago. The location of this tract in the midst of a considerable body of Forest land makes it clearly more valuable for National Forest purposes than for agriculture, and the recommendation for listing is therefore disapproved. The listed land adjoining this tract will undoubtedly be offered to the Government for purchase under the Weeks law, since it has been proven an absolute impossibility for an entryman to make a living for a family by farming this class of land.

Township 1 N., R. 22 W., Sec. 10

S ½ NE ¼ ----- -80 acres

While possibly 50 per cent of the area of this 80-acre tract in Class 3 land and susceptible of cultivation, the reasons for retaining the land permanently in the Forest so clearly outweigh the reasons for listing, that the recommendations of the Examiner are disapproved and the area classified as most valuable for Forest purposes.

In the first place this piece of land is located in a township entirely within the National Forest boundary, and which there is every reason to believe will soon become solid Government land through purchase under the Weeks law now being worked out. This decision is based upon the fact of its being in the region of slate formation where the surface soil is shallow and readily erodes to bare slate bedrock. The fields now in cultivation throughout this township are small and scattered. Stock raising is the chief industry and occupation of the farmer in this region today. The whole of this township bears an important relation to the streamflow, as many branch heads have their origin in the different mountain ranges, forming the drainage system of the forks of the Ouachita River both on the north and south. All the Government lands in the townships south of this one have been classified and held as most valuable of

water power purposes. The erection of an extensive dam and power development plant is being contemplated in T. 2 S., R. 21 W. It is highly important that the many streams rising in this region be protected, since they form a material influence upon the stream flow of two important forks of the Ouachita River.

The above-described 80-acre tract is bisected by a tributary of the North Fork which flows through a deep rocky gulch or canyon. The Class 3 land suitable for cultivation lies in two noncontiguous areas on the south side of the branch and is entirely separated by a steep ravine. The small narrow strip of Class 3 land shown on the north side of the branch should not be considered, as it is not of sufficient worth to warrant fencing. The physical drawbacks to successful farming even on the best portions of the tract are so evident owing to the rough nature of the surface, that it is extremely doubtful if a crop could ever be raised, the value of which would equal the cost of production.

The same general objections to listing apply to the following other tracts recommended in this township as well as for the one just described:

Section 11: SW ¼ NE ¼, W ½ SE ¼ NE ¼, N ½ NW ¼ SE ¼, SE ¼ NW ¼ SE ¼,
 NW ¼ NE ¼ SE ¼, ----- -100 acres

The greater portion of this area is shown on the map to be Class 3 land, but it is in reality very thing poor soil and with a slaty clay subsoil which would produce but scanty crops at best. The corrugated nature of the surface would cause erosion to be very active after a few seasons of cultivation, leaving the land wholly unfit for agriculture. It lies contiguous to a large body of non-agricultural land. A former application for the listing of this particular tract was withdrawn by the applicant.

Section 14: NE ¼ NE ¼, ----- -40 acres

By listing this 40-acre tract it would alienate a 20-acre strip of Government land except as it joins on the west end. The tillable land falls below the minimum farm unit for this class of land, and the Examiner's recommendation for exception to be made after considering all other factors entering into the case, hardly seem to have sufficient weight to warrant listing. The land has not been applied for.

Section 21: E ½ E ½ SW ¼ SE ¼, SW ¼ SE ¼ SE ¼- ----- -20 acres

Section 28: N ½ NE ¼ NE ¼ ----- -20 acres

The Examiner's recommendation for listing this 40-acre tract were based on the desire to increase the acreage of former listing of a tract of small area. With the exception of a 10-acre strip on the west side the land has not been applied for and this strip was rejected as nonagricultural under a former examination. To list this small area now would be prejudicial to the National Forest by leaving isolated tracts of 30 acres on the north and 20 acres on the south. For this reason and for the general reasons stated above, it would be a mistake to list any of this area.

With the above exceptions the Arkansas Classification report as submitted by the Examiner is approved.

LAND CLASSIFICATION
Arkansas National Forest
Supplemental

Subsequent to completion of the work done by the land examiners of the Arkansas classification party and prior to the final approval of this report submitted by Mr. Wm. E. Wootten, a general review of the field work was made by Mr. W. F. Hill, of the District Office, Washington, D.C. The different areas recommended for listing were personally inspected and checked on the ground against the reports and maps herein submitted, and a general inspection made of other features of the field work. Full concurrence with the recommendations as herein set forth by Mr. Wootten is given by Mr. Hill, as well as a general approval of the methods used in prosecuting the work and in obtaining data given in the report.

Mr. Hill has been a member of the Forest Service since January, 1901. During the early years of his life he lived on a farm in the State of Vermont, and at the age of 17 years moved to South Dakota, where he acquired considerable experience in actual farming and stock raising in the Black Hills region of South Dakota and Wyoming.

Mr. Hill was appointed Forest Ranger on the Black Hills National Forest in 1901, and with the exception of one year's detail to Land Examination work on the National Forests of Colorado, remained on the Black Hills Forest until 1908, when he was appointed Deputy Forest Supervisor on the Arkansas National Forests in the State of Arkansas. Mr. Hill assisted in placing under administration both the Arkansas and the Ozark Forests and did general administrative work, both office and field, and had extensive experience in cruising and estimating standing timber and in the examination of homestead, timber and stone claims and claims initiated under the act of June 11, 1906. He was later transferred to the Florida National Forests to assist in organization of both the Choctawhatchee and the Ocala National Forests, where he remained as Deputy Supervisor until he was transferred to the District Office, Washington, D.C., in 1916. While on the Florida Forests Mr. Hill's time was primarily devoted to field work, the major part of which during the first years of the Forest administration consisted in examinations of homestead claims and other Lands work connected with the Forest administration, and later he had full charge of and completed the Land Classification work on both divisions of the Florida National Forest.

Mr. Hill is a careful and efficient surveyor and has a thorough knowledge of the public land laws and regulations.

EXTENSIVE LAND CLASSIFICATION
Township 4 North, Ranges 30, 31, and 32 West
Parts of Township 3 North, Ranges 31 and 32 West
Township 3 North, Range 33 West

Arkansas National Forest
By
Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. The north and south slopes of Poteau Mountain form the main portion of the area. Elevations run from 750 to 2,500 feet. The southern slopes drain into Poteau River, the northern slopes drain into the Arkansas River.

2. CLIMATE

The climate on the Arkansas National Forest is uniform. All local crops are planted, grown and gathered between the occurrence of killing frosts.

3. SOIL

Owing to the extreme roughness of the country and the area comprising the rugged north and south slopes of Poteau Mountain, there is little opportunity for soil lodgment and no soil of any consequence was found better than Class 3.

4. AGRICULTURAL VALUE

On the Government lands the area showing any indication of having any agricultural value was left for intensive classification and the most likely places mapped. The intensive map shows that this area has practically no value for agricultural purposes. Of the 5,004.40 acres of privately owned lands in this unit, not more than 100 acres are in cultivation.

5. LAND CLASSIFICATION

18,975 acres within the National Forest
3,179 " alienated within the National Forest
15,796 " National Forest land, of which
15,479 acres are classified as nonagricultural forest land, and
320 " are held for intensive classification

The merchantable timber stand will average 3,500 feet b.m. per acre, 70 per cent of which is shortleaf pine, the balance being of mixed hardwoods.

6. TITLE TO LANDS

Within this unit there are 15,796 acres of National Forest lands. This area was withdrawn from entry May 10, 1907. The lands were surveyed in 1842.

There are 3,179 acres of privately owned lands within the unit. This land passed from Government possession under the various Timber and Stone, Cash Entry, and Homestead acts.

7. FOREST VALUE

The public lands and unfenced private lands have been used as a public range for the grazing of cattle and hogs. No Forest Service timber sales of any importance have been operated on this unit. The topographic features of this unit are such that it is of far more value for forest than for agricultural purposes.

INTENSIVE LAND CLASSIFICATION

Township 4 North, Range 30, 31 and 32 West
Parts of Township 3 North, Ranges 31 and 32 West
Township 3 North, Range 33 West

Arkansas National Forest
By Wm. E. Wootten

Three hundred and twenty (320) acres held for intensive classification, described as the -

E ½ NE ¼, SE ¼	Section 3
N ½ NE ¼	“ 9

Township 3 north, Range 32 west

As shown on the intensive map, some twenty acres of Class 3 land is found in Section 3, also some 11 acres in Section 9, but not enough in either section to consider as a farm unit.

No lands recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION

Township 2 and 3 North, Ranges 31, 32, and 33 West, 5th P.M.
By
Wm. E. Wootten

1. TOPOGRAPHY

Elevations range from 700 to 1,750 feet, reaching its higher elevation near the eastern side, falling away to its lowest elevations on the western edge, of State line. The western portion is cut by many deep gulches and streams which flow into the Poteau River, while the southern drainage is into Jones Creek, a tributary of the Poteau River, which drains the whole area. The whole area is a series of sharp, precipitous ridges running in a northeast-southwest direction. The slopes in the main are very steep and rock ledges show prominently one after another from bottom to top. The foregoing is for that portion comprising the northern portion of this unit.

That part in the south half of Township 2 north, Range 31 west, lies on Henry Mountain and is a succession of ridges reaching a maximum elevation of 1,250 feet. The slopes of this portion are not near

so steep as those to the north on Walker Mountain. This area is drained on the north by Jones Creek, to the south by Black Fork Creek, both tributaries of the Poteau River.

The rock formation is sandstone, quartzites, and shales, and is regarded by geologists as belonging to the Lower Carboniferous Age.

Very little farming is carried on within the boundary of this unit, the topography prohibiting. Of the 127 forty-acre sub-divisions in the unit, 46 are owned by timber companies.

Owing to the steep slopes and the general topography of the country there is little opportunity for soil lodgment.

The area is accessible, there being numerous county, settlement, and timber roads traversing it.

2. CLIMATE

The climate of the Arkansas National Forest is uniform and will permit of the growing of any local crops.

3. SOIL

This area is in a country where the first burns over the surface every year. On this account erosion has taken place to a great extent, leaving a great deal of the surface strewn with loose rock and tight rock ledges. The soil is very thin and poor. Shortleaf pine is about the only timber that will grow to merchantable size with the necessary quality. To the south and north, outside the Forest, the Jones Creek and Poteau River valleys are extensively farmed and the soil is deep and rich and produces good crops. On the small areas that are being farmed in this unit the soil is very thin and produces poorly. Every field shows piles of stones from the size of a baseball to that of a football which have been picked up from the cultivated area. Many use these stones for fences.

4. AGRICULTURAL VALUE

All lands where the topography showed the least possible chance that agriculture might be attempted, have been left for intensive classification, even though the area that might be found would be small. This was on account of its nearness to the railroad and the agricultural valleys to the north and south. That area in the south half of Township 2 North, Range 31 west, has all been left for intensive field examination, owing to its being in segregated lots. In this there are approximately 1,720 acres, not over. Between 200 and 300 acres of this amount will be found to have any agricultural value whatever. This south half of 2-31 lies in the Henry Mountain country and on ridges having from very steep to gentle slopes. The valleys north and south of the boundary have been in cultivation for numbers of years and are thickly settled, and were the area within the boundary susceptible to cultivation it would have been entered and gone to patent years ago. The majority of the homestead entries made were primarily for the stand of timber in its virgin state. By far the greater portion of this area is too rough to even consider it for pasture or fruit growing.

5. LAND CLASSIFICATION

17,781.98 acres within National Forest

5,201.56 " alienated within Forest

12,580.42 " National Forest land

10,020.42 acres are classed as nonagricultural timberlands, which produce an average timber stand of from 3,000 to 7,000 board feet per acre.

2,560 acres have been left for intensive classification, 2,400 acres being in Township 2 north, Range 31 west. This land is held more because of its being in small segregated areas, and this course was thought advisable to determine beyond question whether it were advisable to hold these areas for forest uses or eliminate them. This unit was an addition to the Arkansas National Forest in 1909, and since that date there have been 57.50 acres listed under the Act of June 11, 1906.

Shortleaf pine composes 90 per cent of the timber stand, the remainder being gums, black jack oak, hickory, oak, and other species common to the Forest, but of poor grade owing to successive burnings each year.

6. TITLE OF LANDS

Of the 5,201.56 acres of alienated land within the Forest, 1,760 acres are owned by lumber and land companies. Outside the Forest boundary, but immediately adjacent thereto, these companies own 13,000 acres of timberlands in the townships in which this unit is located. The majority of these holdings were secured from homesteaders who, after making proof, sold their claims for the timber value. This area is extremely thinly settled and always will be, as the topography is such that agriculture will always be impossible.

7. FOREST VALUE

The pine timber has been cut over the greater portion and that left is under contract to be cut. There are no power sites on this unit. Much timber was cut in trespass before the creation of the Forest. On this area the timber-growing value will always be far in excess of its agricultural values.

INTENSIVE LAND CLASSIFICATION

Townships 2 and 3 North, Ranges 31, 32, and 33 West, 5th P.M.

By

Wm. E. Wootten

There are 2,560 acres left for intensive field examination, as follows:

T. 2 N., R. 32 W.	Section
SE ¼ NE ¼, S ½ SW ¼	29
S ½ SE ¼	30
T. 3 N., R. 31 W.	
SE ¼ NW ¼, NE ¼ SW ¼	32
T. 2 N., R. 31 W.	
N ½ NW ¼, SW ¼ NW ¼	6
S ½ NE ¼, N ½ SE ¼, SE ¼ SE ¼, NW ¼ SW ¼	20
W ½ SW ¼, NE ¼ SW ¼, SW ¼ NW ¼	21
NE ¼, E ½ NW ¼, SW ¼ NW ¼, NW ¼ SW ¼	22
NE ¼ NE ¼, S ½ NE ¼, NW ¼, S ½	23
SE ¼ NE ¼, NW ¼ SE ¼, S ½ NW ¼, SW ¼	24
SE ¼ SE ¼ SW ¼, NW ¼ SW ¼ SW ¼, N ½ NE ¼	
SW ¼ SW ¼, N ½ SW ¼ SW ¼ SW ¼	26
NW ¼ SE ¼	29
W ½ SW ¼	31
NE ¼ NE ¼	32
E ½ E ½ W ½ SW ¼, NW ¼ NE ¼ NW ¼ SW ¼, SW ¼ NE ¼, NW ¼ NW ¼ SW ¼, W ½ E ½ SW ¼ SW ¼, E ½ SW ¼ SW ¼ SW ¼	330
NE ¼ SW ¼, SW ¼ SE ¼	34
NW ¼ NE ¼	35
SE ¼ NE ¼, NW ¼ SE ¼, SE ¼ SE ¼	36

Township 3 North, Ranges 32 and 33

All vacant lands classified as nonagricultural, and none is recommended for listing.

Township 2 North, Range 33

All vacant lands in this township classified as nonagricultural, and none is recommended for listing.

Township 2 North, Range 32

Section 29.—The SE $\frac{1}{4}$ NE $\frac{1}{4}$ shows to have approximately 25 acres of Class 3 land, the remainder being stony, sandy loam, of Class 4 land. As this is not of sufficient acreage to comply with the Listing Rules, no land is recommended for listing on this tract.

The S $\frac{1}{2}$ SW $\frac{1}{4}$, upon field investigation, did not show enough land as good as Class 3 to justify the reproducing of the field map in this report. No land is recommended for listing in this section.

Section 30.—The land held for intensive field investigation did not show enough land as good as Class 3 to justify the reproduction of the field map in this report. No land is recommended for listing in this section.

Township 3 North, Range 31

Section 32.—Eighty acres held for intensive field examination in this section. The accompanying map shows that it is topographically unsuited for agriculture and has not enough land as good Class 3 to comply with the Listing Rules. No land recommended for listing in this township.

Township 2 North, Range 31

This unit will be discussed in the unit embracing Townships 1 and 2 North, Range 31 West, with the exception of Section 6.

Section 6.—The accompanying map shows the extreme limit of the Class 3 land, which is not enough acreage to comply with the Listing Rules, and therefore no land is recommended for listing in this section.

No land recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION

Townships 1 North and 1 South, Ranges 32 and 33 West

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system, and is composed of Blackfork Mountain, Pine Mountain, and Rich Mountain and the narrow valley of Big Creek, between Blackfork and Rich mountains. Elevations range from 850 to 2,650 feet, reaching the highest point at the Blackfork Lookout Station, in Section 36, Township 1 north, Range 32. The northern slope of Blackfork Mountain drains into Blackfork Creek, a tributary of the Poteau River; the southern drainage of Rich Mountain and Pine Mountain is into Mountain Fork of Little River; the southern slopes of Blackfork Mountain and the northern slopes of Rich Mountain drain into Big Creek, a tributary of Kiamita River, in Oklahoma. The accompanying topographic map shows the land embraced in this area as it is, i.e., a very rough and rugged unit. The Kansas City Southern Railroad, running from Kansas City, Mo., to Port Arthur, Texas, enters the unit in Section 36, Township 1 north, Range 33, and leaves same in Section 1, Township 1 south, Range 32, running through the Big Creek Valley. Rich Mountain Railroad Station, on the K.C.S. Railroad, is in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 7, Township 1 south, Range 31, one-quarter mile east of where the railroad leaves this unit.

2. CLIMATE

The climate on the Arkansas National Forest is uniform.

3. SOIL

As this is the head of drainage for several big streams, the fall is very great and opportunity for soil lodgment is very limited. No soil better than Class 3 is to be found on this unit. The areas that are in

cultivation are extremely rocky and the patches under plow are very small. On the lands where the per cent of slope allows plowing, numerous tight rock outcrops and boulders are found.

4. AGRICULTURAL VALUE

The Kansas City Southern Railroad was built through this unit in 1895. In 1897 the Hotel Wilhelmina was built on Mount Mena, in Section 11, Township 1 south, Range 32 west, as a summer resort. For several years this hotel did a good business, but since 1909 it has not been operated. The building of this hotel caused a small colony to settle on the mountain top and make homestead entries and raise garden truck, etc., to supply the needs of the hotel and the occupants of the numerous cottages the hotel company owned, as the hotel company had built a good road, and as long as the hotel was operated and the road kept up these small truck growers held down their homes; but the abandonment of the hotel enterprise caused them also to abandon their mountain homes, so at this date there is practically no one living on the alienated land on Rich Mountain in Sections 8, 9, 10, 11, 12. There is no farming in Sections 3, 4, 5 and 6; Section 16 is still State land; near the railroad in Sections 1 and 2 only small patches are cultivated as the rocky nature of the land will not permit of farming in large fields on an extensive scale; on Rock Creek, in Sections 14, 15, 23, 24, and 25 there are several farms with from 20 to 40 acres under plow; the same can be said of the alienated land in the extreme southwest corner of the unit and Township 1 south. Along the Big Creek valley, in Township 1 north, farming is carried on a very meagre scale. This valley is very narrow and rough and strewn with loose rock and rock outcrops. Fields are very small, being from three to ten acres in extent. Practically the entire unit could be classed as a nonagricultural one and no attempt at farming would ordinarily be made upon such land as the Big Creek valley contains, and this would not be tended at all were it not for the railroad passing through it and the nearby stations, which make it easily accessible for truck growers. Practically none of the land held for intensive classification will be recommended for listing.

5. LAND CLASSIFICATION

26,758.91 acres within the National Forest

7,379.09 " alienated within the Forest

19,379.82 " National Forest area, classified as being 15,185.79 acres of nonagricultural land

4,194.03 " held for intensive classification

The southern slopes have a merchantable stand of 2,500 feet b.m. of shortleaf yellow pine timber per acre and a scattering of other growth. The northern slopes have some excellent white oak, red oak, hickory, basswood, and yellow pine, and the timber stand will average 3,000 board feet per acre on lands not cut over.

6. TITLE TO LANDS

There are 19,379.12 acres of vacant public lands. These lands were surveyed in 1841 and 1845 and withdrawn from entry May 10, 1907.

There are 7,379.09 acres of alienated lands within the Forest boundary. These lands passed to patent under the following entries:

2,499.09 A. Agricultural Homestead entries

640.00 " School Selection

240.00 " Timber and Stone entries

3,379.09 " total entries

The above land is now held as follows:

2,200.00 A. nonresident owners

640.00 " State school land

539.09 " by resident owners

3,379.09

Practically all the alienated land was entered for its timber or values other than for agriculture, and is not being used for agriculture today.

Ts. 1 N and 1 S., Rs. 32 and 33 W.

7. FOREST VALUE

A large amount of the area, especially that adjacent to the railroad, has been used as resorts and for pleasure in hunting and fishing. Rich Mountain and Blackfork Mountain, owing to their extreme rugged nature, are the hiding places for all kinds of game, and annually many hunters and trappers cover them in search of game and furs. Many cattle and hogs are ranged on the unfenced lands. The area is accessible by numerous roads through the valleys and Government and stock trails across the mountains.

The character of the topography makes this unit far more valuable for National Forest purposes than for agriculture.

INTENSIVE LAND CLASSIFICATION

Townships 1 North and 1 South, Ranges 32 and 33 West

Arkansas National Forest

By

Wm. E. Wootten

There are 4,194.03 acres held for intensive classification, described as follows:

Township 1 north, Range 32 west

	Section
NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$	19
S $\frac{1}{2}$, S $\frac{1}{2}$ N $\frac{1}{2}$	20
N $\frac{1}{2}$ SE $\frac{1}{4}$, W $\frac{1}{2}$	21
N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$	23
E $\frac{1}{2}$ E $\frac{1}{2}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$	24
SW $\frac{1}{4}$	27
SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	28
S $\frac{1}{2}$ SW $\frac{1}{4}$	36

Township 1 south, Range 32 west

E $\frac{1}{4}$ SE $\frac{1}{4}$	13
S $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$	14
NE $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$, N $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	15
W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	19
(W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ E $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{2}$,) (E $\frac{1}{2}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$)	20
SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$	21
SE $\frac{1}{4}$	22
N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$	24
W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$	26
N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{2}$ NW $\frac{1}{4}$,	28
W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$	29

Township 1 north, Range 33 west

NE $\frac{1}{4}$ SE $\frac{1}{4}$	24
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These are discussed in the following paragraphs:

Township 1 North, Range 32

Section 19.—The small field shown on the map is cultivated in grass. The small patch of Class 3 land surrounding this field is good, strong soil. The other Class 3 area has a large amount of tight rock on it which would reduce its agricultural value considerably. The remainder of the land is poor, thin soil with an abundance of tight and loose rock. The small field should be handled under special use permit. No land recommended for entry in this section.

Section 20.—The only possible Class 3 land that would be possible for tilling lies along the creek. It is not in a continuous body, as it is broken by large patches of rock masses. A fairly good piece of Class 3 land occurs near the old sawmill site but only a few acres in extent. This is in the northwest corner of the SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$. The flats back from the creek come within the per cent of slope, but the predominance of surface and tight rock makes it impossible to cultivate. The soil is thin, light, and gravelly in nature. John C. Holt, of Heavener, Okla., has applied for the SE $\frac{1}{4}$ of this section. His application is No. 1352. No land recommended for entry in this section.

Section 21.—The accompanying map shows the character of this land and it is like that in Section 20, absolutely a nonagricultural proposition. Mr. Minard Pope, of Van Buren, Ark., has applied for the NW $\frac{1}{4}$, application No. 1353. No land recommended for listing.

Section 23.—The entire area is a mass of boulders and unfit for cultivation. This land was mapped in the field but not considered worth reproducing on the intensive map. No land recommended for listing.

Section 24.—The part along the south line of this section lies well enough in the per cent of slope allowable but is unfit for cultivation, owing to its being covered with a mass of boulders and tight rock. No land recommended for listing in this section, and none mapped.

Sections 27 and 28.—The land held in these sections was upon the request of Mr. Sam S. Little, who has a home in Sections 26 and 35 of this township. Mr. Little lives on his land and has resided on same since making entry a good many years ago, though he is the only resident on the top of Blackfork Mountain, where the land held for intensive classification lies. Mr. Little has always been an especial friend of the Forest Service, and owing to his home location has rendered valuable assistance in the prevention and suppression of forest fires on Blackfork Mountain and its vicinity. Mr. Little has a son and son-in-law whom he would like to have settle on the mountain along side of him. Were we positive that a permanent settler or so could be secured for the narrow stretch of Class 3 land on the mountain top, they would be of very great value in fire suppression, but I believe a mistake would be made to recommend this isolated land for listing and would establish a precedent that might be hard to get away from, though I believe it would be a good idea to allow the clearing up, fencing, and cultivating of the Class 3 land on this mountain for a term of years to some good citizen who would agree to assist in fire suppression each year to cover the amount of the rent of the land. No land recommended for listing in these sections.

Section 36.—The S $\frac{1}{2}$ SW $\frac{1}{4}$ was applied for by Hyatus Johnson, of Rich Mountain, Ark. The field sketch shows the land not worthy of listing, owing to the nonagricultural character of the land. There are about 18 acres within the per cent of slope allowable, but this area is extremely rocky with a great deal of tight rock. The remainder of the area is Class 4 land or worse, being a mass of large loose and tight boulders and smaller rock. No land recommended for listing, and none mapped in this section.

Township 1 South, Range 32

Section 13.—No land recommended for entry. The accompanying map shows it to be nonagricultural.

Section 14.—Nonagricultural land. None recommended for listing.

Section 15.—A field investigation showed that the area held for intensive classification did not justify the expense of reproducing the intensive map. There is a small enclosure on the land and a small house and barn. No attempt is being made to cultivate the land in the enclosure and the improvements are

used mostly by campers and transients. There is a little land suitable for cultivation along the creek bottom but it is broken and very rocky and the creek meanders through the tract in such a way as to make what little land there is unfit for cultivation. No land recommended for listing.

Section 19.—One hundred and sixty (160) acres held for intensive classification. A field investigation showed same to be absolutely nonagricultural in character. No land recommended for listing, and none mapped in this section.

Section 20.—One hundred acres held for intensive classification. A field investigation showed same to be nonagricultural. The S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ applied for by E.P. Salisbury. No land recommended for listing and none mapped in this section.

Ts. 1 N. and 1 S., Rs. 32 and 33 W.

Section 21.—A field examination showed that there was not Class 3 land enough to justify listing. Absolutely nonagricultural. The SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ has been applied for by John W. Manley. No land recommended for listing, and none was mapped in this section.

Section 22.—The S $\frac{1}{2}$ SE $\frac{1}{4}$ has been applied for under the Act of June 11, 1906, by a sawmill employee who has since left the country. The accompanying map shows the limits of the Class 3 land. No land recommended for listing.

Section 24.—One hundred and twenty (120) acres held for intensive classification. The NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ is covered by Application No. 1172. The accompanying map shows the limits of the Class 3 land. No land recommended for listing.

Section 26.—Two hundred (200) acres held for intensive classification. The N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ is covered by Application No. 1343. The accompanying map shows the character of this land. What it does not show is that this area is a series of alternate branches and drains which were not of enough consequence to show in the topography but which would interfere seriously with cultivation, giving the whole area a very choppy appearance. Along the creek the land is a dark loam and swampy to a certain extent, and containing many patches of stony, sandy loam which is unfit for cultivation. No land recommended for listing in this section. The applicant, or someone else, has erected a house on the SE $\frac{1}{4}$ NW $\frac{1}{4}$, but this should not be considered as grounds for the listing of a nonagricultural piece of ground.

Section 28.—The N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ has been applied for by John W. Manley, Application No. 1302. The accompanying map shows this to be strictly nonagricultural land and none is recommended for listing.

Section 29.—No land recommended for listing.

Township 1 North, Range 33 West

Section 24.—No land recommended for listing and none mapped in this section.
No land recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION Townships 1 and 2 North, Range 31 West Arkansas National Forest

By
Wm. E. Wootten

1. TOPOGRAPHY

This area is in the Fourche Mountain system. Elevations range from 1,000 to 2,600 feet. The accompanying map is a good reproduction of the area. Clear Fork Creek drains the southern township and North Fork Creek (locally called Blackfork) drains the northern township.

2. CLIMATE

The climate on the Arkansas National Forest is uniform.

3. SOIL

Along Clear Fork Creek, upon the alienated land, there is some exceptionally good Class 1 soil under the plow, but all the Class 1 and 2 soil passed to patent many years ago, together with a large percentage of Class 3 soil. No soil better than Class 3 was found upon any of the vacant lands.

4. AGRICULTURAL VALUE

The accompanying map shows that practically all the valley land of any width has been eliminated from the Forest, or is alienated. These alienated lands are intensively farmed and produce excellent crops such as are common to this part of the State. The Government lands contain no soil better than Class 3, and this will be found only in small bodies. It will be an exceptional case where land of this quality will be of large enough acreage to constitute a farm unit.

5. LAND CLASSIFICATION

21,056.89 acres within the National Forest

6,636.77 " alienated within the Forest

14,420.12 " of National Forest land, classified as follows:

11,260.12 acres of nonagricultural forest land with a merchantable timber stand
averaging 3,500 board feet per acre.

3,160.00 acres left for intensive field examination.

One of the causes of so much land being left for intensive field work was on account of its isolation, and it was thought best to make a thorough examination of this land to see whether its forest growth would justify its retention within the boundaries of the Forest. With but a small exception we found this to be the case; these exceptional cases will be discussed further along in the report on this unit. Eight-five (85) per cent of the forest growth is shortleaf pine of excellent quality. A goodly per cent has been cut over in Forest Service timber sales, but the remaining stand of seedlings, saplings, and poles is excellent and will produce another cutting in a few years. This land should by all means be retained within the National Forest boundary.

6. TITLE TO LANDS

Alienated land within the Forest, 6,636.77 acres. Practically all of this land was secured under agricultural homestead entries, and about one-sixth of it is in cultivation. The lands that are in cultivation lie along the valleys of the streams and little or no ridge land is under plow.

Townships were surveyed in 1842-5 and withdrawn from entry in 1909.

7. FOREST VALUE

The area is easily accessible by numerous roads and trails. The alienated lands in the valleys have been farmed for numbers of years. The woodlands have been used as public range for cattle and hogs principally.

Seven-eighths of this unit is far more valuable for its timber growth and grazing than for agriculture.

INTENSIVE LAND CLASSIFICATION

Townships 1 and 2 North, Range 31 West

Arkansas National Forest

By

Wm. E. Wootten

Held for intensive classification, 3,160 acres, described as follows:

Township 1 North, Range 31 West

	Section
N ½	1
NE ¼	2
W ½ E ½, S ½ SW ¼	10
NW ¼ NW ¼	11
SE ¼ SW ¼	13
N ½ NE ¼	25
W ½ SE ¼, E ½ SW ¼	29
S ½ SE ¼	35
S ½ SW ¼	36

Township 2 North, Range 31 West

All National Forest land

Township 1 North

Sections 1 and 2.—As there is not enough Class 3 land to constitute a farm unit, no land is recommended for listing.

Section 10.—The Class 3 land in this section is in a good neighborhood and close to a school, four miles from Eagleton and the Kansas City Southern Railroad. In accordance with the Listing Rules I would recommend that the SE ¼ NW ¼ NW ¼ SE ¼, S ½ NE ¼ NW ¼ SE ¼, SE ¼ NW ¼ SE ¼, E ½ SW ¼ NW ¼ SE ¼, E ½ SW ¼ NW ¼ SE ¼, NE ¼ SW ¼ SE ¼, E ¼ NW ¼ SW ¼ SE ¼, SW ¼ NW ¼ SW ¼ SE ¼, S ½ SW ¼ SE ¼, S ½ N ½ SE ¼ SW ¼, S ½ SE ¼ SW ¼, S ½ N ½ SW ¼ SW ¼, S ½ SW ¼ SW ¼, aggregating 120 acres, be listed for entry and the remainder of the Government land in this section be classified as nonagricultural. One hundred and twenty (120) acres recommended for listing.

Section 11.—No land recommended for listing.

Section 13.—No land recommended for listing.

Section 25.—Not enough Class 3 land was found to justify mapping. No land recommended for listing.

Section 29.—The accompanying map shows the limits of the Class 3 land. No land recommended for listing.

Section 35.—No land recommended for listing.

Section 36.—No land recommended for listing.

Township 2 North

The land intensively examined in this township lies in Sections 20, 21, 22, 23, 24, 26, 29, 31, 32, 33, 34, 35, and 36. This land was held for field inspection, not on account of its agricultural value but to see if such isolated tracts should be permanently retained within the National Forest boundary. Sections 20, 21, 22, 23, 24, and 31 are absolutely natural forest land without any agricultural possibilities whatever and should be segregated and classified as nonagricultural. They will not be discussed further in this report. Those sections having even a small amount of Class 3 land are shown on the accompanying map and discussed in the following paragraphs.

Section 26.—As all the land that should have been included in the June 11 listing in this section was not recommended and should be added to same, I would recommend that the SE ¼ SE ¼ SW ¼, NW ¼ SW ¼ SW ¼, N ½ NE ¼ SW ¼ SW ¼, N ½ SW ¼ SW ¼ SW ¼, be listed for entry. Thirty acres listed for entry in this section.

Section 29.—As this forty, the NW ¼ SE ¼, is isolated and more than half Class 3 land, I would recommend that it be listed for entry.

Section 32.—No land recommended for listing.

Section 33.—I do not think it advisable to list the Class 3 land on the SW ¼ NW ¼ unless all of this land is eliminated from the Forest. It could not be made to join the June 11 entry to the south of it without including a goodly portion of rough land, and it does not constitute a farm unit in itself. No land recommended for listing.

Section 34.—Not enough Class 3 land to constitute a farm unit and therefore none is recommended for listing.

Section 35.—No land recommended for listing.

Section 36.—Not enough Class 3 land for a farm unit and none recommended for listing.

One hundred and ninety (190) acres recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION

Township 1 South, Range 31 West

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system, and is composed of the western part of Fourche Mountain, in Sections 1, 2, 3, 10, 11, 12, 13, and the northern portion of 14; the eastern end of Blackfork Mountain, in Sections 4 and 5, northern part of 8, northern part of 9, ending at Eagle Gap, which is between Sections 3 and 4 and Sections 9 and 10. Eagleton, a small station on the Kansas City Southern Railroad, is on the eastern extremity of Blackfork Mountain, in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 9. The remainder of the area is composed of Rich Mountain. Elevations range from 1,150 to 2,550 feet, reaching the highest point on Rich Mountain, in Section 23. The Ouachita River heads in Section 5 and drains the northern and northeastern part of the area. Mountain Fork of Little River drains the southern slope of Rich Mountain.

2. CLIMATE

The climate of the Arkansas National Forest is uniform.

3. SOIL

As this unit is the head of three big rivers, i.e., Ouachita River, Little River, Fourche La Pave River, the elevations are high and the general slope steep, with small opportunity for soil lodgment. No soil better than Class 3 is to be found on the area.

4. AGRICULTURAL VALUE

While the northern portion of the unit shows a large amount of alienated land, very little of this land is in cultivation. No one lives in Sections 3, 4, 10, 11, 13, 14, 15, 16, 17, or 24; no farming is done in Sections 9 or 10; Sections 6, 7, 8 have residents who live near Rich Mountain and Eagleton Stations and tend small truck patches. In the southwestern part of the area there are several farms of from 25 to 40 acres in cultivation along Powell Creek. The lands held for intensive classification in this unit were not on account of the estimated agricultural possibilities but because of June 11, 1906, applications on them. These applications were made for the greater part by sawmill employees who were stationed for awhile on this area. This is the history of a great many June 11, 1906, applications: A sawmill will move into a logging unit to cut Government timber, and it is nearly always the case that several of the "hands," thinking they would like to quit following public works and enjoy the peaceful life of a farmer, and seeing a few acres of rolling land, get the "big eye" and think that there is a 100-acre farm awaiting them just for the asking. They see the Ranger when he comes to scale and ask for application blanks and make application for a 160-acre tract regardless of the topography of the major portion of it. One application usually gives others the "fever" and in a short time all the land near the sawmill site that a mule can stand up on is generally applied for. After making these applications many seem to think nothing more of them, and often the letter notifying them that their application has been received at the District Office is returned because the applicant has moved away in the meantime and his whereabouts are unknown. It is

seldom that the examiner finds these applicants when he visits the tract to make his examination. This was the case of all applications in the southern part of this unit. These applications will be further discussed in the intensive classification report. The Government lands of this area are far more valuable for their timber growth and public uses than for agriculture.

5. LAND CLASSIFICATION

22,123.26 acres within the National Forest
6,832.46 " alienated within the Forest
15,290.80 " National Forest area, classified as being
12,790.37 acres of nonagricultural forest land
2,500.43 " held for intensive classification

The southern slopes are practically all of yellow pine stand, running about 80 per cent of this variety. The northern slope of Rich Mountain has a quantity of good oak, hickory, basswood, and other hardwood species, with a scattering yellow pine.

6. TITLE TO LANDS

There are 15,290.80 acres of Government land within the Forest boundary. This land was surveyed in 1842 and 1847. Withdrawn from entry May 10, 1907.

6,832.46 acres of alienated land within the Forest boundary. This land passed from possession of the Government under the following entries:

5,723.31 acres Agricultural Homestead entries
160.00 " Timber and Stone entry
640.00 " School selection
390.15 " listed under the Act of June 11, 1906
6,832.46

Of the 6,832.46 acres patented or listed under the agricultural land laws, timber companies or land speculators own 2,506.63 acres, the timber and other concerns' holdings in this township amounting to 3,706.63 acres. Residents of the township own 3,525.83 acres. These latter holdings are all around Eagleton, Rich Mountain, where little or no farming is in progress, and in the southwestern part of the township, where there are several farms with from 40 to 65 acres under plow. The remainder of these alienated lands are not now being used, as they were entered primarily for their timber stand and have been put to but little use since the timber was cut.

7. FOREST VALUE

The public lands and the unfenced alienated lands are used extensively for cattle and hog grazing. Black, Fourche, and Rich abound in wild turkey, deer, a good many bears, wolves, and other varmints. A number of small and several large Forest Service timber sales have been operated on this unit and more are now being cruised under applications. The Kansas City Southern Railroad, running from Kansas City, Mo., to Port Arthur, Texas, enters this township about the center of the west line of Section 6 and leaves same near the northeast corner of Section 24. There are numerous wagon roads and trails that make this area thoroughly accessible.

The Kansas City Southern Railroad has been in operation for twenty years and it stands to reason that were this land agricultural it would not be left untilld so close to a large railroad that would put its products into the best markets in a few hours.

INTENSIVE LAND CLASSIFICATION

Township 1 South, Range 31 West

By

Wm. E. Wootten

There are 2,500.43 acres left for intensive classification, described as follows:

	Section
SW ½ SW ¼	1
E ½ (fractional)	2
SE ¼ SW ¼	5
SW ¼ SE ¼	7
NW ¼ NE ¼, N ½ NW ¼	8
W ½ SW ¼	20
E ½ SE ¼	21
W ½ SW ¼	22
S ½ N ½	24
NE ¼, N ½ NW ¼, E ½ SE ¼, SE ¼ SW ¼, W ½	27
SW ¼	
SE ¼, NE ¼ NE ¼	28
S ½ SW ¼, SW ¼ NW ¼	29
N ½ N ½, SE ¼ NE ¼, NE ¼ SW ¼	32
E ½ SW ¼, SE ¼	33
N ½, SE ¼, NW ¼ SW ¼, E ½ SW ¼	34

These are discussed separately in the following paragraphs:

Sections 1 and 2

The land held for intensive classification in these two sections, amounting to 179.87 acres, with the exception of the S ½ S ½ Section 2 (40.10 acres), was applied for by Martin E. Diden, Application No. 1310. A thorough field examination and a field map of the area showed only small areas of Class 3 land on the tops of several flattened ridges and those widely separated, so they could not be listed without including entirely too much nonagricultural land. This area was so poor an agricultural proposition that it was not thought it would justify the expense of reproducing on the map. Also it would break into a body of natural forest land. No land recommended for listing.

Sections 5 and 8

This area was formerly the Rich Mountain Ranger Station, but is now released. A Mr. Kellogg has applied for the land held for intensive classification. The Kansas City Southern Railroad runs through his tract and also has a "Wye" on same. The accompanying field map shows the broken character of this land. The entire surface is covered with either loose rock or tight boulders outside the limits of the Class 3 land shown. Even within its limits loose rock predominates to a great extent. This tract is absolutely a nonagricultural area though a few acres has been cultivated on same. Its future value for public uses is far in excess of its value along any agricultural or horticultural line. Should the enclosures be wanted they should be handled under special use permit. No land recommended for listing.

Section 7

Absolutely nonagricultural. No land recommended for listing.

Sections 21 and 22

Not a foot of Class 3 land on the area held for intensive classification in these sections. No land recommended for listing. This land was held upon the request of a party who wanted it but was asked to withhold his application until examination. No land recommended for listing. This area was mapped in the field but not reproduced, as it would not justify it.

Section 24

The area held for intensive classification in this section was applied for by W.A. Ragland, of Mena, Ark. Mr. Ragland owns 560 acres adjoining this area on the east, north, and south, and has several other large holdings in Polk County. Mr. Ragland's application is No. 1196. In conversation with Mr. Ragland regarding his application he said he wanted the land opened up so it could be homesteaded and added to his other adjoining holding; that he owned land on three sides of it and wanted to get his land all in as near a solid block as possible; said he would be willing to pay \$2.50 per acre for it under the Timber and Stone Act; said it was not worth \$2.50 per acre to anyone but himself and he would not give that much per acre for it, only that it would increase his holdings and put them in a solid body and enhance their value in that way; said that if I did not recommend the land to be open to entry he would have it eliminated from the Forest by seeing his Congressman. The accompanying map is an exact topographic picture of the area. About three acres has been cleared on the tract by some former entryman. This area is absolutely a nonagricultural one. Should the Weeks law become effective on the Arkansas National Forest the Government will have offered to it for purchase thousands and thousands of acres of land with far more agricultural value to them than this tract. No land recommended for listing.

Section 27

The accompanying map shows this section to a nicety. Practically all the isolated Class 3 land lies on rolling ridges which would be subject to terrific erosion were the ground cover removed. Not enough Class 3 land could be secured within the homestead limits to make a farm unit without listing a larger portion on nonagricultural land. No land recommended for listing in this section.

Section 28

Not enough Class 3 land to justify the expense of reproducing the field map. No Class 3 land in the SE $\frac{1}{4}$. About 15 acres of Class 3 land on the NE $\frac{1}{4}$ NE $\frac{1}{4}$. No land recommended for listing.

Section 29

No land as good as Class 3. No land recommended for listing.

Section 32

The land held in the north-half did not show up on the field investigation to be of a character that should be listed, and therefore was not reproduced on the intensive map. The three eastern forties are extremely rough, while the two western forties are from steep to rolling slopes, becoming more gradual toward the west. A portion of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ has been in cultivation in the past but is now grown up in saplings. The soil is very thin except on about five acres in the extreme northwest corner of the NW $\frac{1}{4}$ NW $\frac{1}{4}$.

The NE $\frac{1}{4}$ SW $\frac{1}{4}$ is the ridge type of land, which is not farmed on this Forest only in rare cases. There are about 22 acres that come within the per cent of slope, but there is a large amount of loose rock scattered over the entire area. No land recommended for listing in this section.

Section 33

The land held for intensive classification in this section upon field investigation was found to be absolutely nonagricultural and the field map was not reproduced. No land recommended for listing.

Section 34

The accompanying map shows the best of the land in this section and what has been applied for under the Act of June 11, 1906. No agricultural land and none recommended for listing.

No land recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION
Townships 1 South and 2 North, Range 30 West, 5th P.M.
Arkansas National Forest, Arkansas

By
William E. Wootten

1. TOPOGRAPHY

Elevations range from 900 to 2,600 feet, reaching the higher elevations near the southwest portion. The southern portion is composed of some of the highest points of the Fourche Mountains, excepting that portion which lies in Sections 30 and 31, Township 1 south. This part of the unit is on the extreme eastern end of Rich Mountain. The remainder of the unit is made up of a series of sharp, precipitous ridges with a general east-west trend. That portion lying in Township 1 north is drained by Johnson Creek, Cedar Creek, and Clear Fork of Fourche River. The main Foran Gap road, between Waldron and Mena, runs through the Johnson Creek valley, and although this road has been used for more than fifty years, very few settlers are to be found in this valley, which is very narrow. The surface of this valley is covered with loose rock and small boulders and a great amount of tight rock. Only a small amount of the alienated land in this valley is under plow, owing to the above named causes. In the Cedar Creek valley conditions are practically the same as those on Johnson Creek; in Sections 17, 18, 20, and 21, on the streams draining the Clear Fork, more level land and better soil are found than anywhere else on this unit, though in these sections two-thirds of the land is unfit for cultivation. In Sections 3, 13, 14, 19, 20, 25, 26, 27, 28, and 34 the topography is such that there is a possible chance of small farms being cleared. Such lands in these sections have been left for intensive field examination and classification.

The area composing Township 2 north is in small isolated tract for this reason it also will be looked over by the intensive classification part. This area lies on and among the foothills of what is locally known as Henry Mountain, and is a succession of ridges with slopes ranging from 10 to 40 per cent. It is exceedingly well timbered, especially in shortleaf pine. Blackfork and other smaller tributaries of the Fourche River drain this area. In this township and surrounding these small forest areas timber and lumber companies own 7,640 acres, or a little over one-third of the area. That owned by resident farmer is not over one-fifth in cultivation, the topography and slope being prohibitive.

The rock formation is quartz and white quartzite rock and flint boulders. Owing to the steep slopes there is small opportunity for soil lodgment on any of the National Forest land.

The area is accessible. Several public and numerous settlement, or secondary, roads traverse it. Road building is comparatively easy over the greater portion.

Except on those areas held for intensive classification the topography precludes agricultural pursuits.

2. CLIMATE

The climate of this unit is uniform with that of other portions of this Forest.

3. SOIL

The soil is the result of the disintegration of the rock formation. It is thin and poor in humus. There is from 20 to 60 per cent of loose and tight rock in the first eight inches of soil. As it has been impossible to protect this portion from fire it is part of an area that has burned over every year, and in consequence the slopes of the mountains and ridges have eroded to a great extent.

4. AGRICULTURAL VALUE

The elimination of September 26, 1910, excluded from the Forest boundary the greater portion of the agricultural land lying on Black Fork of Fourche River, in Township 1 north, and the Ouachita Valley around Acorn, in Township 1 south. The elimination of February 23, 1916, excluded the greater portion of the Henry Mountain country and the ridge land lying between it and Winfield. This leaves a small

settlement on Johnson Creek, Heath Creek, and a few other scattering places within the unit. But a small per cent of the land left for intensive field classification will be recommended for listing. The crops grown are corn, cotton, sorghum, cow peas, kaffir corn, and maize. Fruit growing is out of the question, owing to the long haul to market over rough mountain roads. Practically no attention is paid to fruit raising other than for home consumption. Considerable attention is paid to stock raising in this unit and on this account more land is utilized than would ordinarily be if it were like a great deal of the Forest where only grain crops are grown. There is only a very limited amount of idle land that can be put to the future growing of crops, the topography prohibiting.

5. LAND CLASSIFICATION

27,328.99 acres within Forest
 5,808.95 " alienated within Forest
 21,520.04 " National Forest land
 16,743.29 acres of nonagricultural land, with an average timber stand of 4,000 board feet per acre
 4,776.75 " left for intensive classification

The reason of so much being held for intensive classification in this unit is that it was thought best to look over carefully the small areas in Township 2 north to see whether it was advisable to hold them for Forest purposes or recommend their elimination on account of their being segregated. Even isolated as are the areas in this township there is no doubt but that it will be found that they are far more valuable for forest purposes than for agriculture. The whole unit is especially adapted to the growing of shortleaf pine, which comprises more than 75 per cent of the timber stand. The oaks of this region seem to be of an inferior grade and badly insect-infested, rendering them almost wholly unfit for stave material.

Ts. 1 S., and 1 and 2 N., R. 30 W.

Waldron and Mena, from 15 to 20 miles distant by wagon road, are the nearest railroad and market points.

6. TITLE TO LANDS

27,328.99 acres within Forest
 21,520.04 " National Forest land
 5,808.95 " alienated within Forest

Of the alienated land within the Forest, 4,000 acres is State land and 600 acres is owned by lumber companies and land speculators. In the three townships in which this unit lies the land situation is as follows:

National Forest land.	21,520.04
Vacant Government land outside Forest.	2,600.00
Lumber companies, etc. in Forest.	600.00
" " " out of Forest.	10,440.00
State lands in Forest.	400.00
" " out of Forest.	<u>540.00</u>

Total 36,100.04

Approximate acreage in three townships 69,120.00

" " " " "

owned by resident farmers 33,020.04

Though the Ouachita River and the Fourche River run through these townships, not 5,000 acres, less than one-sixth, of the land owned by farmers is in cultivation. This leaves approximately 28,000 acres in the ownership of resident farmers from which they are deriving at present no revenue.

7. FOREST VALUE

This unit has been used extensively in the past for cattle grazing. The woods are open and the grass grows abundantly, as do also all kinds of wild berries and fruits. Two Forest Service timber sales for shortleaf pine are now in operation.

Taking the three townships as a whole, both in and out of the Forest, the topography is such that at least two-thirds of the area is far more valuable for forest purposes and timber growing than for agriculture.

INTENSIVE LAND CLASSIFICATION

Townships 1 South and 1 and 2 North, Range 30 West, 5th P.M.
Arkansas National Forest, Arkansas

By

William E. Wootten

Township 1 South, Range 30

Section 14.—The SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, amounting to 240 acres, held for intensive field classification. The accompanying map shows the extent of the Class 3 land. This Class 3 land lies within two and one-half miles of the town of Acorn and the Kansas City Southern Railroad, seven and one-half miles from Mena; the community south and west of the tract is thickly settled. I would recommend that the SE $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, aggregating 80 acres, be listed for entry under the Act of June 11, 1906, and the remainder of the Government land in this section be classified as nonagricultural. Eighty (80) acres recommended for entry in this section.

Section 15.—The SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, amounting to 240 acres, was held for intensive field classification. The SW $\frac{1}{4}$ SW $\frac{1}{4}$ was mapped in addition to the land held for field inspection, as the field men were working under instructions to map all lands found that had an agricultural possibility that they encountered in the field, whether they had been held for intensive inspection or not. The accompanying map shows the extent of the Class 3 land. This land is exceptionally strong for its grade and will produce well. It is one and one-half miles from the town of Acorn and the Kansas City Southern Railroad; six and one-half miles from Mena; neighborhood thickly settled, with excellent schools and churches. I would recommend that the S $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, aggregating 160 acres, be listed for entry under the Act of June 11, 1906, and would further recommend that the remaining Government lands in this section be classified as nonagricultural. One hundred and sixty (160) acres recommended for listing.

Section 18.—The accompanying map shows that the Class 3 land is of such limited acreage that it would in no way comply with the Listing Rules. No land recommended for listing. The SW $\frac{1}{4}$ NW $\frac{1}{4}$ and the SW $\frac{1}{4}$ NE $\frac{1}{4}$ held for intensive classification. Two hundred (200) acres mapped.

Section 30.—The S $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ held for intensive classification; 160 acres mapped; the S $\frac{1}{2}$ NW $\frac{1}{4}$ has been applied for under the Act of June 11, 1906. The accompanying map shows the extreme limits of the Class 3 land. It is not enough acreage to constitute a farm unit and no land is recommended for listing in this section.

Two hundred and forty (240) acres recommended for listing in this township.

Township 1 North, Range 30

Section 3.—As this land is an isolated section all vacant Government land in it was held for intensive classification. This land is as follows: W $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$

NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$. The remainder of the land in this section is included in a June 11, 1906, entry. A thorough field examination developed the fact that there was not enough land as good as Class 3 to justify mapping same. No land recommended for listing in this section.

Sections 13 and 14.—The SW $\frac{1}{4}$ Section 13 and the SE $\frac{1}{4}$ Section 14 was held for intensive field examination. After a careful field investigation it was found that there was not enough Class 3 land to justify mapping. No land recommended for listing.

Section 19.—One hundred and sixty (160) acres described as the NE $\frac{1}{4}$ held for intensive field examination. A field investigation developed the fact that there was not enough land as good as Class 3 to justify mapping. No land recommended for listing.

Section 20.—The S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ was held for intensive field examination. A field investigation showed there was not enough land as good as Class 3 to justify mapping. No land recommended for listing.

Sections 25 and 26.—Two hundred (200) acres, described as the S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 25, and the SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 26 held for intensive classification. This land has been applied for under the Act of June 11, 1906, by Charlie Tephantaylor (#1341) and W. E. Thompson (#1001), both of Chant, Ark. Three hundred and twenty (320) acres mapped. The accompanying map shows the limits of the agricultural land. This land embraces approximately twenty acres of Class 2 land and eighty acres of Class 3 land, and while there is considerable surface rock in places, it is practically free from tight rock. Mena and Waldron, both approximately twenty miles distant, are the nearest market points. In accordance with the Classification Rules I would recommend that the SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 25, and the SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 26, be listed for entry. One hundred and forty five (145) acres recommended for entry in these two sections.

Section 27.—the SE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, aggregating 160 acres, was held for intensive classification. The accompanying map shows there is a good farm unit upon the land held for intensive classification, especially when the adjoining land in Section 28 is considered as a part of it. In accordance with the Listing Rules I would recommend that the NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ be listed for entry and the remaining Government land in this section be classified as nonagricultural. Sixty (60) acres recommended for listing in this section.

Section 28.—The SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, aggregating 180 acres, held for intensive classification. Eighty (80) acres mapped, 40 acres of which was not held for intensive examination. The other lands held for intensive classification after field investigation did not show enough Class 3 land to justify mapping. The accompanying map shows that practically all the NE $\frac{1}{4}$ SE $\frac{1}{4}$ to be Class 2 and Class 3 land. I would therefore recommend that this 40-acre tract be listed for entry, as, joined with the land recommended in Section 27, it would make a good farm unit. Forty (40) acres recommended for listing in this section.

Section 34.—The NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, amounting to 120 acres, was held for intensive classification. The accompanying map shows there is not enough land as good as Class 3 to make a farm unit, and therefore no land is recommended for listing.

Two hundred and forty-five (245) acres recommended for listing in this township.

Township 2 North, Range 30 West

Section 19.—The S $\frac{1}{2}$ N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$, amounting to 320 acres, held for intensive classification. The only Class 3 land in this section was found upon the top of rolling ridges, and such land is not being cultivated at this date on this Forest, and it is not enough acreage to constitute a farm unit. No land recommended for listing. Accompanying map shows the topography of this land.

Section 20.—The E $\frac{1}{2}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, amounting to 320 acres, held for intensive classification. As there is not enough land as good as Class 3 to constitute a farm unit under the Listing Rules, I would recommend that no land be listed.

Section 27.—The E $\frac{1}{2}$ E $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, amounting to 320 acres, was held for intensive classification. The accompanying map shows there is not enough Class 3 land to constitute a farm unit under the Listing Rules. It also shows this land to be about the extreme per cent of

slope, and such land, as a rule, is not farmed in this part of the State. It is just the class of land that the Government would have offered to it were it purchasing lands in this Forest. It would also leave an isolated small parcel of National Forest land. For the above reasons I would recommend that no land be listed in this section.

Section 28.—The S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$, amounting to 240 acres, was held for intensive classification. The Class 3 land lies in such small parcels that a farm unit could not be secured without the listing of a greater amount of acreage which would be unfit for the plow. What Class 3 land there is in the section is badly broken by ravines and contains a large amount of surface and tight rock. No land recommended for listing.

Section 29.—The S $\frac{1}{2}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, amounting to 400 acres, held for intensive classification. A later investigation developed the fact that the W $\frac{1}{2}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, has been listed to and filed on by Zora W. Elden. There is a small amount of Class 3 land lying adjacent to the east line of this listing, but as the 160 acres was included in the recommendation for listing, no more could be added to it, and there is not enough Class 3 land to be of any consequence as a farm unit, and to list any would leave small isolated bodies of National Forest land which is in no sense agricultural. No land recommended for entry in this section.

Section 30.—The W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, were held for intensive classification. The accompanying map shows the topography of this section. No land recommended for listing.

Section 31.—SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, were held for intensive classification. No land recommended for listing.

Section 32.—N $\frac{1}{2}$ N $\frac{1}{2}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, were held for intensive classification. Not enough land as good as Class 3 to constitute a farm unit and none recommended for listing.

Section 33.—N $\frac{1}{2}$ N $\frac{1}{2}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, amounting to 200 acres, held for intensive classification. The SE $\frac{1}{4}$ SE $\frac{1}{4}$ did not show enough acreage of Class 3 land to justify mapping. While there is not enough acreage of Class land to constitute a farm unit under the Listing Rules, with the exception of the stretch which runs through the NW $\frac{1}{4}$ NE $\frac{1}{4}$, it is a very poor grade of this class of land. That portion in the NW $\frac{1}{4}$ NE $\frac{1}{4}$ is good land but the county road breaks it in such a manner that were it put into cultivation it would only be a small, narrow strip on each side of the road. The other Class 3 land is badly broken by ridges and hollows and small drains. Such land as this is not cultivated in this part of the State at the present time. No land recommended for listing.

Section 34.—The E $\frac{1}{2}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, were held for intensive classification. None of this land, with the exception of the NE $\frac{1}{4}$ NW $\frac{1}{4}$, showed enough land as good as Class 3 to justify mapping. The accompanying map shows the limits of the Class 3 land on this 40-acre tract. No land recommended for listing.

No land recommended for listing in this township.

Four hundred and eighty-five acres recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION
Townships 2 and 3 South, Ranges 30 and 31 West
Arkansas National Forest

By
William E. Wootten

1. TOPOGRAPHY

The extreme northern portion of Township 30 is drained by Carter Creek, Board Camp Creek, and Prairie Creek, all tributaries of the Ouachita River. Two-Mile Creek heads in Section 14, Twp. 3 S., R. 30 West, and runs northwest, leaving this area about the center of the west line of Section 11, Twp. 3 S., R. 31 W.; another prong of Two-Mile Creek drains the extreme northwest portion. Little Brushy Creek, Big Brushy Creek, and the main Cossatot River have their source on this unit and drain the remainder. Bethesda Mountain, in the northwest corner, in Sections 5, 6, 7, and 8, is a very rugged and

peculiar piece of topography. Its elevation is about 1,900 feet. Little Brushy Creek drains it on the south and Prairie Creek on the north. South of Two-Mile Creek, commencing in Section 2, Twp. 3 S., R. 31 W., and running southeast to the southeast corner of this unit, is a range of mountains very rugged in character. This range contains prominent peaks named Bee Mountain, Smoke Rock Mountain, Baker Mountain, Bald Knob, Sugar Tree Mountain, and Fodder Stack Mountain. The Fodder Stack is a remarkable peak and is almost as high as a Bald Eagle. Its slopes are very uniform, of from 30° to 40° angle. Its top is a sharp point not more than twenty feet across. In Twp. 3 S., R. 31 W., in Sections 1, 2, 11, and 12, is what is known as Blowed-Out Mountain. On the eastern end of this mountain the slopes are very steep, gradually falling toward its western end. This range is cut by Little Brushy Creek, Big Brushy Creek, and the Cossatot River, all flowing south.

The accompanying map is a splendid reproduction of the topography of this area. This map shows conclusively that the area is not an agricultural one, and that all land permissible of agriculture along the streams has passed to patent. It also shows that all ridge lands where there was any possibility of the slopes being gentle enough to permit of tillage have been left for intensive field examination. Photograph No. 21997A, looking northwest from Section 31, Twp. 3 S., R. 29 W., gives a good idea of the topography of this area. None of the mountains and few of the ridges have flat tops. The area is accessible. There are numerous public and private roads and trails following the creeks and low ridges built by the Forest Service, the county, settlers, miners, and mill men. These roads are very rough, but one is able to get over the principal part of the area on horseback or in a wagon.

2. CLIMATE

The climate of the Arkansas National Forest is uniform. All the local crops can be grown and gathered between the occurrence of the killing frosts.

3. SOIL

The rock formation of this area is white quartz, slate, shale, novaculite, and sandstone, and the soil is the result of the disintegration of this formation. Very little soil better than Class 2 is found on this area. Where land is in cultivation the soil shows to be from three inches to eight inches in depth and is productive on a ratio of from one-quarter to one-half as much as the stronger bottomlands on the Forest or on the ridge lands of the Ouachita Valley.

4. AGRICULTURAL VALUE

Farming in this area is carried on in a very crude way, one-horse plows being used to break and cultivate the land. Though the northern portion is only from five to six miles from Mena, no modern machinery is used on any of the farms, the field areas being, as a rule, too small for its use. The principal crops are corn and cotton, the land in cultivation producing from 10 to 30 bushels of corn and from one-eighth to one-quarter bale of cotton. Some sorghum is raised for syrup and fodder. A small amount of hay, as a rule pea hay, is raised. With the exception of Section 24, Twp. 3 S., R. 30 W., there are no farms of much consequence in this area. Only a small acreage of the alienated land is being farmed. In 1912 I examined a 160-acre tract in Section 27 and an 80-acre tract in Section 28 which had been applied for under the Act of June 11, 1906. Both parties at the time of examinations were quite anxious that the land should be listed as they were wanting to settle upon these tracts as homes. I recommended 55 acres and 20 acres, respectively, which recommendations were afterwards listed. The tract in Section 27 has been traded upon several times and a small cabin erected upon it, but no attempt has been made to farm it. The 20-acre tract has never been filed upon. Also in 1912 I recommended 40 acres for listing in Section 30. Though the applicant established residence and has lived upon the land since the time of its listing, not so much as ten acres has ever been put in cultivation, though the entryman's family consists of an even dozen. Although 8,032.81 acres are alienated, only twenty-three families attempt farming on this unit. An average of thirty acres to the family would cover all the land in cultivation. As shown by the map this area is topographically almost wholly unsuited to agriculture.

5. LAND CLASSIFICATION

27,565.05 acres within the National Forest
8,032.81 " alienated within the Forest
19,532.24 " National Forest land, classified as follows:
15,208.09 acres of nonagricultural land
4,324.15 " held for intensive classification

The land classified as nonagricultural is such without the shadow of a doubt. The land held for intensive field examination is that where there is a possibility of securing a small area which could be tilled. Where this occurred the lines were broadly drawn so that the field party could examine any land where the slope would permit of agriculture. Not more than 500 acres will be found suitable for agriculture out of the amount held for field investigation.

The cover consists of 75 per cent shortleaf pine, and the remainder is white, red, and black oak, gums, hickory, holly, basswood or linn, haw, maple, and scrubby black jack oak on and near the tops of mountains.

6. TITLE TO LANDS

27,565.05 acres within National Forest
19,532.24 " National Forest land
8,032.81 " alienated within the Forest, divided as follows:
4,700.00 acres owned by nonresidents and held for speculation
160.00 " State land
690.00 " under plow
2,482.81 " natural forest land held by resident farmers

Settlement in this unit was made before the Civil War. Old Dallas, not one mile north of the northern boundary of this unit, was once the most prominent trading point between Fort Smith and Hot Springs. That was before Mena was built, and the Merchants from Dallas moved to Mena and on the railroad. The Kansas City Southern Railroad was built some nineteen years ago and it runs within from four to six miles of the western boundary of this unit. This would seem to be *prima facie* evidence that homes can not be maintained with any degree of comfort else land so close to a prominent R.R. system would have passed to home builders years ago. After the building of the railroad much of this land was entered by homesteaders, who cut the timber and left, letting the land return to Government ownership. These lands were surveyed in 1842 to 1848 and withdrawn from entry in 1907.

7. FOREST VALUE

It is acknowledged by inhabitants that the area is far more valuable for its forest growth than for agriculture. It has been used in the past as public range. Much trespass has occurred upon invalid homestead entries before the creation of the Forest. Mining has been carried on to a great extent in a few places and the whole unit has been prospected. Many tunnels, drifts, and shafts are yet to be found. Much machinery was installed at Camp Wilder, in Section 24, Township 3 south, Range 31 west, on Little Brushy Creek. This claim has been worked spasmodically for a number of years.

The white oak timber has nearly all been sold under Government sales. There are several shortleaf pine sales, under Forest Service regulations, now in operation.

INTENSIVE LAND CLASSIFICATION
Townships 2 and 3 South, Range 30 and 31 West
Arkansas National Forest
By
William E. Wootten

Township 2 South, Range 31

Sections 35 and 36.—All vacant lands in this township have been classed as nonagricultural.

Township 3 South, Range 30

Section 5.—NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ held for intensive classification. The accompanying map shows all the arable land found in this section. This was an old worn-out field of approximately four acres of Class 3 land. No land recommended for listing in this section.

Section 8.—E $\frac{1}{2}$ SW $\frac{1}{4}$, 80 acres, held for intensive classification. The accompanying map shows approximately 20 acres of Class 3 land in this section. As this does not conform in volume to the Listing Rules I would recommend that no land be listed in this section.

Sections 9 and 10.—NE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$ Section 9, and the N $\frac{1}{2}$ N $\frac{1}{2}$ Section 10 held for intensive classification. A thorough field examination showed that there were only a few small patches, amounting to not over twenty acres of Class 3 land in these two sections.

Section 12.—NE $\frac{1}{4}$ held for intensive classification. While there is possibly twenty-five acres of Class 3 land in this section its area is entirely too small to conform to the Classification Listing Rules, and as the land of similar character lying adjacent to it is not being farmed the listing of it would in no way help out this alienated land, therefore I would recommend that no land be listed in this section.

Sections 14 and 15.—N $\frac{1}{2}$ SW $\frac{1}{4}$, Section 14, and NE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 15, held for intensive classification. While there are a few small areas of Class 3 land lying on Two-Mile Creek, the combined acreage would not amount to twenty-five acres which could be put under the plow. As this would not make a listing unit under the Classification Listing Rules, I would recommend that no land be listed in these sections. Also, if same should be listed the fields would of necessity be in small patches on account of the numerous small drains, the road right-of-way, and creek bed.

Section 23.—NE $\frac{1}{4}$ SE $\frac{1}{4}$ held for intensive classification. A field investigation showed no Class 1 and 2 lands at all and not enough Class 3 to justify mapping. No land recommended for listing in this section.

Section 24.—W $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ held for intensive classification. Investigation showed only approximately three acres of Class 1 land under fence and in cultivation. This land is being tilled by Mr. J. W. Lawrence, of Shady, Ark. As this marks the limit of agricultural land in this section, I would recommend that this land be handled under Special Use permit and not listed.

Section 25.—N $\frac{1}{2}$ and N $\frac{1}{2}$ SW $\frac{1}{4}$ held for intensive classification. No Class 1 or Class 2 land in this section. The Class 3 land is not of enough acreage to conform to the Classification Listing Rules. No land should be listed in this section.

Section 26.—The N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ were held for intensive classification. A portion of the Class 3 land in this section was squatted upon some years before the creation of the National Forest and cultivated. The old houses are now in a bad state of decay, the fences gone, and the fields grown up in briars and other growth. The acreage of Class 3 land is not of enough volume to consider listing under the Classification Rules.

Section 29.—The S $\frac{1}{2}$ of this section was held for intensive classification. Forty acres of this area was mapped, which shows not over ten acres of Class 3 land, and this land does not lie so that it could be made a farm unit in connection with adjacent lands. No land recommended for listing.

Section 30.—The NE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ were held for intensive classification. As shown by the map there is a June 11 entry in the SW $\frac{1}{4}$ of this section. Forty acres was listed under the application of T. A. Jordan September 20, 1912, List No. 3-2089. Mr. Jordan subsequently made another application for the

remaining land in this quarter-section, and examination and report were made by Ranger Boyes March 19, 1914. Recent field investigation shows that all the Class 3 land lying adjacent to this entry was recommended for listing, and therefore I would recommend the following lands be listed for entry:

N ½ SE ¼ NW ¼ SW ¼	5.00 acres	
SW ¼ NW ¼ SW ¼	15.24 "	<i>Disapproved W.L.H. See page No. 40</i>
W ½ NW ¼ SW ¼ SW ¼	10.13 "	

All in fractional Section 30, T. 3 S., R. 30 W.

While it is not necessary in this recommendation to include some land too rough to cultivate, it was deemed advisable both to the interest of the entryman and the Government to square the lines and save expensive surveying in the future. The remainder of the Class 3 land adjacent to the entry lies in too small patches to be included in this recommendation. In the southeast quarter there would seem to be a considerable acreage of Class 3 land, but to get enough for a farm unit it would be necessary to include that lying in Sections 29 and 31 and also to include more nonagricultural land than is allowable under the Listing Rules. This Class 3 land has been examined several times under June 11 applications and repeatedly turned down. This land was formerly included in a homestead entry and the entryman built a good frame dwelling and his other improvements were of a substantial character and agriculture was attempted on a broader scale than is usually found upon the average homestead, as the entryman was a man of means, a hard worker, and one who understood farming; but owing to the shallow soil and its scant producing qualities he made a failure and left the place with all improvements and never attempted final proof. This would seem to be, if for no other reason, cause why this land should not be listed. The June 11 entry in this section was examined during a period when an extremely broad policy was in vogue and to give the entryman as much as is allowable is the excuse offered for any recommendations for listing of this land, which is a poor grade of Class 3.

Section 31.—The NW ¼, N ½ SW ¼ SW ¼ SW ¼, N ½ NE ¼, SW ¼ NE ¼, SE ¼ SE ¼ was held for intensive classification. The accompanying map shows that there is not enough Class 3 land to conform to the Listing Rules, and therefore none is recommended for listing.

Section 32.—The N ½ N ½, S ½ NE ¼, W ½ SW ¼, SE ¼ SW ¼ was held for intensive classification. An intensive field map was made of this land, but as it did not show Class 3 land enough to make it worth while as an agricultural proposition the field sketch was not reproduced in this report. No land recommended for listing.

Section 36.—NE ¼ was held for intensive classification. Not enough Class 3 land to conform to the Listing Rules, and none is recommended for listing.

Township 3 South, Range 31 West

Section 1.—The SW ¼ NE ¼, SE ¼ NW ¼, and all vacant land in W ½ W ½ was held for intensive classification. Fifty acres was listed under the Act of June 11, 1906, in May, 1912. Mr. H. E. Pettit, of Mena, Ark., entered this fifty acres and applied for the examination and listing of the W ½ SW ¼ NE ¼, SW ¼ NW ¼, SE ¼ NW ¼, NW ¼ SW ¼, N ½ SW ¼ SW ¼, lying adjoining his entry in this section. This application is No. 1149. The accompanying map shows the June 11 listing, also the topography of the surrounding land which has been applied for by Mr. Pettit. It also shows that the Class 3 land not included in the recommendation for listing to be of such small acreage as not to be worthy of another recommendation for listing. All lands having any commercial agricultural value have been listed. No land recommended for listing in this section.

Section 23.—The S ½ N ½, N ½ SW ¼, and all vacant land in the N ½ SE ¼ was held for intensive classification. A field investigation showed that there was not enough land as good as Class 3 to justify the reproduction of the field sketches. No land recommended for listing.

Section 24.—The S ½ SW ¼ was held for intensive field classification. A thorough inspection showed that there was not enough land as good as Class 3 to make it in any way an agricultural proposition. No land recommended for listing.

Section 25.—The N ½ NW ¼, SW ¼ NW ¼ was held for intensive classification. A field investigation developed the fact that there was not land enough as good as Class 3 to make an agricultural unit. No land recommended for listing.

Section 26.—NE ¼ NE ¼ was held for intensive field classification. Not enough land as good as Class 3 was found to make it of any consequence as an agricultural proposition. No land recommended for listing.

30.37 acres recommended for listing in this unit.

Disapproved

EXTENSIVE LAND CLASSIFICATION
Township 4 South, Range 30 and 31 West, 5th P.M.
Arkansas National Forest
By
William E. Wootten

1. TOPOGRAPHY

This unit is in the Cossatot Range of mountains. The Hanna Mountain, which is broken by the Cossatot River near the eastern boundary-forming East and West Hanna mountains—is responsible for the ruggedness of this area. Elevations are from 800 to 2,070 feet. The principal peaks are West Hanna Mountain and Dog Mountain. The principal streams are the Cossatot River, Big Brushy Creek, Little Brushy Creek, Rock Creek, Holly Creek, Short Creek, Caney Creek, and Long Branch. The accompanying map is a good reproduction of this unit. The central portion of the mountains is composed of novaculite and the slopes of shale. The northeast portion is extremely rough and the slopes exceedingly steep. Road building is difficult and expensive.

2. CLIMATE

The climate on the Arkansas Forest is uniform.

3. SOIL

Sections 14 and 15 have some good Class 1 soil that is under the plow. On all the other farms of this unit Class 2 and Class 3 soil is the quality that is being cultivated. Sections 6 and 7 have some good Class 2 soil. This soil shows to produce well and ranges from 6 inches to one foot in depth, underlaid with good clay subsoil. The soil on the greater slopes is very thin. There is small opportunity for soil lodgment.

4. AGRICULTURAL VALUE

Except on those area left for intensive classification none of this land has an agricultural value according to the customs now in use. No area of ten acres with a slope amenable to cultivation has been passed over. There is no question as to the nonagricultural character of this land. This is admitted by the settlers themselves on account of the rough topography and number and size of rocks in the surface composition. There are a few areas where if the soil is favorable to agriculture the topography is the reverse and vice versa. The Cossatot River valley, though narrow, is the principal farming portion of this unit. The main farming is found near the southern boundary of the Forest. Big Brushy Creek has two or three farms which range in agricultural acreage from 40 to 65 acres. The farms on the Cossatot have a tilling acreage of from 30 to 75 acres. The soil in cultivation on these farms is quite fertile, but all of that ranked as Class 1 soil has passed to patent many years ago, and Class 2 soil also. Little Brushy Creek valley has only one farm that is being tilled, likewise Holly Creek, though this latter has a small fertile farm at its mouth. Rock Creek has only two small farms under tillage. Long Branch has five farms that are being cultivated, in acreage ranging from 20 acres to 40 acres. Only on the extreme southern edge is upland attempted to be cultivated to any extent. In this region the ridges are small and the slopes are from

rolling to gentle. As in the other portions of the Forest the agriculture follows the drainage. This is especially noticeable west of the Forest boundary going toward the Kansas City Southern Railroad. Practically all the farming is in the valleys of Two-Mile and Six-Mile creeks, though all the ridge land is privately owned.

5. LAND CLASSIFICATION

17,769.58 acres within the National Forest
 5,371.41 " alienated within the forest
 12,398.14 " National Forest land, classified as follows:
 10,012.67 acres nonagricultural land
 2,385.47 " left for intensive classification

The forest cover is mostly shortleaf pine on the ridges and mountains. On the northern slopes near the foot of the gulches some good white oak is found. The creeks have a mingling of holly, haw, green briars, etc., peculiar to the Forest. The tops of the mountains are covered with black jack and other scrub species.

6. TITLE TO LANDS

17,769.58 acres within Forest
 12,398.14 " National Forest land
 5,371.41 " alienated within the Forest. This land passed from the Government as follows:
 640 acres School selection
 360 " Timber entries
 560 " Cash entries
 3,811.41 " Agricultural Homestead entries

Nonresident speculators now own 3,440 acres of this land, leaving 1,931.41 acres in the hands of resident farmers. Of this latter amount only 630 acres are in cultivation. Withdrawn for National Forest purposes in 1907-9. Surveyed in 1842-3.

7. FOREST VALUE

The open land has been used in the past as a public range. Many cattle from the western boundary of the State have been driven in and grazed for years past. The region has been extensively prospected in years past for minerals of different kinds, gold and copper being the principal minerals sought. Lately, however, numerous mining claims have been located and filed upon for manganese, exposures of this mineral, as well as iron ores, having been found on West Hanna and Dog mountains.

INTENSIVE LAND CLASSIFICATION

Township 4 South, Ranges 30 and 31 West

By
 Wm. E. Wootten

In these townships 2,385.47 acres are held for Intensive Field Classification, as follows:

<u>Township 4 South, Range 30 West</u>	<u>Section</u>
N ½ N ½ SW ¼ NE ¼, NE ¼ NE ¼ NW ¼, NE ¼ SE ¼ NE ¼ NW ¼, NW ¼ NW ¼, SE ¼ SW ¼, W ½ SE ¼	5
N ½ NE ¼, NW ¼ NW ¼	6
W ½ NE ¼, SE ¼ NW ¼, NE ¼ SW ¼, SE ¼ SE ¼	7
W ½ E ½, SE ¼ NE ¼, NE ¼ SE ¼, W ½	8
S ½ N ½, N ½ N ½ SE ¼	9

SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	10
S $\frac{1}{2}$ SW $\frac{1}{4}$	11
E $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	15
S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$	21
N $\frac{1}{2}$ N $\frac{1}{2}$	27
W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$	28
<u>Township 4 South, Range 31 West</u>	
S $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	12
SE $\frac{1}{4}$ SE $\frac{1}{4}$	13
N $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$	24

These are discussed in the following paragraphs.

Township 4 South, Range 30 West

Section 5.—The land held for intensive classification in this section was to enlarge the June 11 entry if possible, but after a thorough field investigation it was found that all the agricultural land had been included in the area listed. No land recommended for listing in this section. A portion of the land formerly embraced in the Brushy Creek Ranger Station has some agricultural land upon it; this is the W $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, and the E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 6. This land is not enough to constitute a farm unit under the listing rules and should again be withdrawn for administrative uses. No area mapped in this section.

Section 6.—The only land that has any agricultural value in this section is the E $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, which was formerly included in the Brushy Creek Ranger Station, and together with that of Section 5, should again be withdrawn for administrative purposes.

The other lands in this section which were held for intensive classification were found upon close field investigation to be absolutely void of agricultural values, and no area was mapped.

No land should be recommended for listing in this section.

Section 7.—The accompanying map shows the extent of the Class 2 and Class 3 land found in this section upon the area held for intensive classification. The land in cultivation on the NE $\frac{1}{4}$ NW $\frac{1}{4}$ is being farmed by Mr. Jack Hicks and should be handled under a special use permit. No land should be recommended for listing in this section.

Section 8.—The accompanying map shows that there is not enough Class 3 land to conform to the listing rules. No land recommended for listing in this section.

Section 9.—The accompanying map shows the extreme limits of the Class 3 land in this section. This land is not of enough acreage to comply with the listing rules. No land is recommended for listing in this section.

Section 10.—The accompanying map shows that there is not enough Class 3 land to consider with a recommendation for listing. No land recommended for listing in this section.

Section 11.—A field investigation developed the fact that there was not enough Class 3 land in this section to justify mapping the land held for intensive classification. No land recommended for listing in this section.

Section 15.—The land held for intensive classification was sketched in the field but the Class 3 land was of such a small acreage and in patches it was not thought to justify the expense of reproducing it in this report. No land recommended for listing in this section.

Section 21.—The land held for intensive field examination in this section was applied for May 23, 1912, by Benjamin F. Corbin, Application No. 652. This land was examined and a report submitted to the District Forester August 29, 1912. This report rejected the land as being more valuable for forest purposes than for agriculture. Later the applicant was allowed to go upon the land under special use permit and more land was cleared and put in cultivation, and reexamination was made by the Classification party to find the extent of the later improvements and to check the former examination. The accompanying map shows the extreme limit of the Class 2 and Class 3 land. This land is not of

enough volume to conform to the listing rules, and the remainder of the area being extremely rough I would recommend that no land be listed in this section.

Section 27.—The N $\frac{1}{2}$ N $\frac{1}{2}$ of this section, and the land held for intensive field classification, were applied for February 5, 1916, by John Atchley, of Hartley, Ark. (Application No. 1382). When the examination of this tract was made January 14, 1916, the applicant was building a house on the area, which is shown. There was also a very small portion of the tract fenced in the extreme northwest corner. The enclosure was being used as a pasture. No attempt had been made at the date of examination to build an enclosure around the house, though it is presumed that one was built and the ground cultivated, as Mr. Jonathan Hatfield informed me in October, 1916, that Mr. Atchley had made a crop on the land, the crop being cotton, but that he had deserted the place after picking out the cotton crop and no one was living on the place at that time. While this tract is an extremely poor piece of Class 3 soil, I am of the opinion that the N $\frac{1}{2}$ NE $\frac{1}{4}$ should be listed at the present time and the N $\frac{1}{2}$ NW $\frac{1}{4}$ be held for temporary higher value. The best land is on the N $\frac{1}{2}$ NW $\frac{1}{4}$ but its timber value at the present time is greatly in excess of its agricultural value. When the pine timber is cut from this area it should then be listed for entry to make a farm unit in connection with N $\frac{1}{2}$ NE $\frac{1}{4}$. This tract is isolated, being entirely surrounded by alienated land and near the Forest boundary. Were this tract in an unsettled community and in a large unit of National Forest land I would not recommend its listing on account of the general poor character of the soil, but situated as it is I think it would be best to list now the two east forties and list the two west forties when the pine timber is cut.

Disapproved W.L.H. See page 40.

Eighty acres recommended for listing in this section.

Section 28.—The Class 3 land on the area held for intensive classification is an extremely poor grade of this class of soil. The accompanying map shows it to be of the rolling ridge type, which is cultivated only in very rare cases. Were every acre of the Class 3 land on the area held for intensive examination put under the plow, the allotted amount of eighty acres could hardly be secured. I would recommend that no land be listed in this section.

Eighty acres recommended for listing in this township.

Eighty acres recommended to be held for temporary higher values.

Township 4 South, Range 31 West

Four hundred acres held for intensive field examination in this township.

A thorough field examination was made, and where the land was intensively mapped, in Sections 12 and 13, so little Class 3 land was found that it did not justify reproducing in the intensive report and therefore no land is recommended for listing in these sections.

Section 24.—The N $\frac{1}{2}$ NE $\frac{1}{4}$ was examined and intensively mapped in the field, but as it showed no land as good as Class 3, only on one small ridge near the northwest corner, it was not considered worth while reproducing it in this report. This land was applied for by Claud Walden, of Vandervoot, Ark. (Application No. 1348).

The S $\frac{1}{2}$ SE $\frac{1}{4}$ has approximately forty acres of a very thin grade of Class 3 land. As shown by the map this area is extremely broken and it would be next to impossible to get half of this acreage under the plow for intensive cultivation. Also there is not enough Class 3 land to conform to the Listing Rules. No land is recommended for listing in this section.

Eighty acres recommended for listing in this unit.

The buildings and enclosures shown in Sections 8 and 9, Township 4 south, Range 30 west, were cabins erected during a Forest Service timber sale and had not been torn down at the time the field examination was made.

EXTENSIVE LAND CLASSIFICATION
Township 1 North, Range 29 West, 5th P.M.
Arkansas National Forest, Arkansas

By
William E. Wootten

1. TOPOGRAPHY

Elevations reach from 800 to 2,500 feet, the higher points being along the south line. The entire area is drained by the Fourche La Fave River, fed by Johnson Creek, Mill Creek, and other smaller drainage. The area is a succession of steep ridges and high mountains, with the possible exceptions of the narrow valleys which form the channels of the river and the two creeks mentioned. Even in these valleys, except immediately on the streams, no cultivation of any great amount is carried on. The Johnson Creek valley is rendered a poor agricultural unit on account of the great amount of surface rock, tight boulders, and the great percentage of rock in the soil. That portion along the immediate banks of the Fourche La Fave River is fairly free from rock and produces well, but the soil becomes very rough and stony a short distance from the river. Seven-eighths of the area will never be utilized for agriculture, the topography precluding such a possibility.

The rock formation is sandstone, quartzite, and shale, and this rock shows prominently over the unit in the form of loose and tight rock, massive boulders, and rocky ledges. Owing to the narrowness of the valleys and the steep slopes, there is little opportunity for soil lodgment.

The area is accessible, as there are numerous roads traversing it in nearly all directions. The old Tan-A-Hill trail, connecting the Ouachita River with the Fourche la Fave River over Fourche Mountain, crosses this unit. This is one of the oldest trails in this part of the country.

2. CLIMATE

The climate in this part of the country is uniform with that all over the Forest.

3. SOIL

In Sections 28 and 29 there is probably a small amount of Class 2 land. However, this can only be determined by intensive field inspection and this land has been left for such. The slopes do not contain any soil better than Class 3, and very little of that. The majority of the soil on the slopes is Class 4. The soil contains from 25 to 75 per cent of rock as a rule.

4. AGRICULTURAL VALUE

That portion of the township more valuable for agriculture was nearly all eliminated on September 26, 1910, and February 23, 1916. There are a few small spots where it might be possible that agriculture can be made to pay, and these lands have been left for intensive classification. Though the alienated land in this unit about doubles that of the National Forest land, it is nearly all owned by lumber companies and is natural forest land. Mena and Waldron are the markets for this section and the nearest railroad points. The crops grown are the usual ones of corn, cotton, sorghum, etc.

5. LAND CLASSIFICATION

15,565.67 acres within National Forest
10,082.69 " alienated within the Forest
5,482.98 " National Forest land

Of the Forest land, 4,882.98 acres are classified as nonagricultural timberlands, producing from 2,000 to 10,000 board feet per acre of timber, 75 per cent of which is shortleaf pine. This unit will always be far more valuable for its timber production than for agriculture. It has been settled along the Fourche La Fave River and other smaller valleys since long before the Civil War and all lands adapted to

agriculture were sought out and entered long ago. The more recent entries were more for the timber value of the land than for their agricultural value.

Six hundred (600) acres are held for intensive classification.

6. TITLE TO LANDS

Alienated land within the Forest, 10,082.69 acres. This land passed to patent in the following manner:

920 acres State selections, approved
720 " Timber and Stone entries
4,840 " Cash entries
90 " Listed under the Act of June 11, 1906
3,512.69 " Agricultural Homestead entries

Of this alienated land, 7,520 acres belong to Charles E. Forrester, the Williams, Watrous & Matson Lumber Company, and other land and timber company speculators. These companies also own in the township outside, but immediately adjacent to, the Forest boundary, 2,880 acres, and the State 320 acres. There are 200 acres of vacant Government land outside the Forest boundary in this township. Taking the township as a whole with an approximate area of 23,040 acres, 10,400 acres belong to the timber and land companies, 320 acres are State land, 5,682.98 acres vacant Government land, 6,638 acres in the ownership of resident farmers, not over one-third of which is cultivation; and this township having a portion of the fertile Fourche Valley running through it, the Government had ceded to the State 2,240 acres as swamp, or low bottom lands.

7. FOREST VALUES

The vacant lands in this unit have been used in the past as public range. A goodly portion of the alienated land has been used for the production of lumber and staves. In the northern half of the township practically all the merchantable timber has been cut from the private lands, while that on private lands in the southern portion is being held for high market prices. With but a very small possible exception, all the vacant lands and the greater portion of the private lands are far more valuable for Forest purposes than for agriculture.

INTENSIVE LAND CLASSIFICATION
Township 1 North, Range 29 West, 5th P.M.
Arkansas National Forest, Arkansas
By
William E. Wootten

30. Six hundred (600) acres held for intensive classification in this unit, in Sections 22, 28, 29, and

Section 22

The land held for intensive field work, same being the E ½ SW ¼ and W ½ SE ¼, was applied for under the Act of June 11, 1906, by D.E. Cox, of Chant, Ark. Mr. Cox built the house shown and moved onto the land in February, 1916. He has also cleared and fenced practically eight acres of land, which he has in cultivation. This field is also shown. In accordance with the Listing Rules, I would recommend that the E ½ SW ¼, W ½ W ½ SE ¼, aggregating 120 acres, be listed for entry. At least 80 acres of Class 3 land susceptible to cultivation under this listing, can be secured. One hundred and twenty (120) acres recommended for listing.

Section 28

The accompanying map shows the topography of this land held for intensive examination, which is the NW ¼, W ½ NE ¼, N ½ SW ¼. While a goodly portion of same is in the per cent of slope

allowable under the Classification Rules, it is far from being good agricultural land. The ridge land is the sandy pine soil common to that portion of the Forest, which is very thin soil with a yellow subsoil that makes a poor foundation. The lowland is cold and mucky crawfish soil, and its growth is hawthorne bushes and other scrubby timber. Such land as this is not being utilized for the growing of crops in this part of the State at the present time. I would recommend that no land be listed for entry in this section.

Section 29

In addition to the 80 acres held for intensive classification, which is the E ½ NE ¼, in this section seven more forties were examined and mapped upon the request of settlers in that neighborhood, but not enough Class 3 land was found to justify the reproducing of the maps in this report; therefore no land is recommended for listing.

Section 30

The NE ¼ NW ¼ was applied for under the Act of June 11, 1906, by E.L. Rogers, of Chant, Ark. The accompanying map shows the topography of this forty. Mr. Rogers has lived on the land some time, owning the adjacent land to the north, and thinking for quite awhile that he was on his own land. The land in the northeast corner is exceptionally good strong soil, and that along the western and northwestern portion is good strong Class 3 soil. Under the circumstances I would recommend this forty, same being the NE ¼ NW ¼, be listed for entry.

One hundred and sixty (160) acres recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION

Township 1 South, Range 29 West

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. Elevations range from 1,000 to 2,800 feet, reaching the highest point in Section 1, near the southwest corner. The eliminated land between the two Forest units is known as "Posey Hollow." The north drainage is into the Fourche La Fave River, the southern drainage being Ouachita River water. Western Irons Fork is the principal stream of the area.

2. CLIMATE

The climate on the Arkansas National Forest is uniform.

3. SOILS

No land better than Class 3 is to be found within the Forest boundary except some small nooks of five or ten acres each.

4. AGRICULTURAL VALUE

"Posey Hollow," in the Irons Fork valley, is exceptionally good farming country for this part of the State. Practically all the holdings of the Mena Cattle Association, amounting to 1,160 acres, is in this valley. On the alienated land within the Forest there is no cultivation of any consequence. Practically all the land is owned by nonresidents or some one who cultivates land in Posey Hollow and lives there.

5. LAND CLASSIFICATION

9,906.58 acres within the National Forest

960.00 " alienated within the Forest

8,946.58 " of National Forest area, classified as 7,416.76 acres of natural forest and nonagricultural land

1,529.82 " held for intensive classification

The timber growth is 80 per cent shortleaf yellow pine, with the other 20 per cent a scattering of growths common to this Forest.

6. TITLE TO LANDS

National Forest land, 8,946.58 acres. This land was surveyed in 1843 and 1845 and withdrawn from entry May 10, 1907.

Alienated lands within the Forest, 960 acres. With the exception of 120 acres all this land passed to patent under agricultural homestead entries. The Mena Cattle Ass'n owns 280 acres of this land and use it for grazing; 320 acres are owned by nonresidents, and 360 acres by residents of "Posey Hollow." Practically none of the privately owned land is in cultivation.

7. FOREST VALUE

The public lands have been used for the grazing of cattle and hogs and for hunting grounds for sportsmen and trappers. The minimum farm unit under the Listing Rules for the class of land in this township is 80 acres.

The topography of this unit makes it natural forest land and far more valuable for that purpose than any other.

INTENSIVE LAND CLASSIFICATION

Township 1 South, Range 29 West

By

Wm. E. Wootten

Held for intensive classification, 1,529.82 acres, as follows:

	Section
S $\frac{1}{2}$ N $\frac{1}{2}$	7
SW $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$	8
SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$	9
N $\frac{1}{2}$ S $\frac{1}{2}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	10
NE $\frac{1}{4}$ SE $\frac{1}{4}$	20
SW $\frac{1}{4}$ SE $\frac{1}{4}$	22
NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$	23
S $\frac{1}{2}$	24
W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$	28

These are discussed in the following paragraphs:

Section 7.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 8.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 9.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 10.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 20.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 22.—Not enough Class 3 land to justify mapping. None is recommended for listing.

Section 23.—Not enough Class 3 land to justify recommendations for listing under the present Listing Rules, and none is recommended.

Section 24.—Not enough Class 3 land to justify mapping and none is recommended for listing.

Section 28.—Not enough Class 3 land to justify mapping and none is recommended for listing.

No land recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION
Townships 3 and 4 South, Range 29 West
Arkansas National Forest, Arkansas

By.
William E. Wootten

1. TOPOGRAPHY

This division lies in the Cossatot Mountain range. East Hanna, elevation 2,450 feet, runs from the eastern boundary to the Cossatot River on the west, in T. 4 S., R. 30 W.; Katy Mountain, elevation 2,200 feet, in the southeastern portion, lies between East Hanna and Little Manganese Mountain, at the headwaters of the north of Caney Creek; Little Manganese Mountain lies one mile south of East Hanna and south of Caney Creek, elevation 2,000 feet; Tall Peak, elevation 2,350 feet, is in the extreme southwestern portion of this unit. The waters of its northern slope go to Caney Creek, a tributary of the Cossatot River, while the waters from its west, south, and east slopes go into Harris' Creek, also a tributary of the Cossatot. Shadow Rock Mountain runs parallel to and immediately north of East Hanna, from Buckeye Mountain on the east to the Cossatot River on the west, lying between Short and Sugar creeks; Nickols Mountain, a continuation of McKinley Mountain, to the west, from Dicks Gap to the Cossatot River, elevation 2,100 feet, lies between Sugar and Mine creeks; Cossatot Mountain, elevation 1,900 feet, lies directly north of McKinley and Nickols mountains, being separated from them by Mine Creek, between Sugar Tree Gap to Cossatot River; Bald Eagle Mountain lies one mile northwest of Shady post office, elevation 2,400 feet. Lookout Tower No. 5 is located on this mountain. (See Photograph No. 21994A) Bear Mountain occupies a good portion of the northwest part.



Photograph No. 21994A was taken just south of Shady post office, in the SE ¼ SE ¼ Sec. 31, T. 3 S., R. 29 W., looking northwest. Bald Eagle Mountain, with Lookout Tower on same, shows prominently. Photograph No. 21992A shows the small valley around Shady post office and the west end of Nickols Mountain. The northeast part is drained by Gap Creek, a feeder for Board Creek, which is Ouachita River water. The remainder of the unit is drained by the Cossatot River, a tributary of Red River. Sugar Creek, Short Creek, Caney Creek and Mine Creek, all tributaries of the Cossatot River, are prominent streams.

Photo No. 21994A

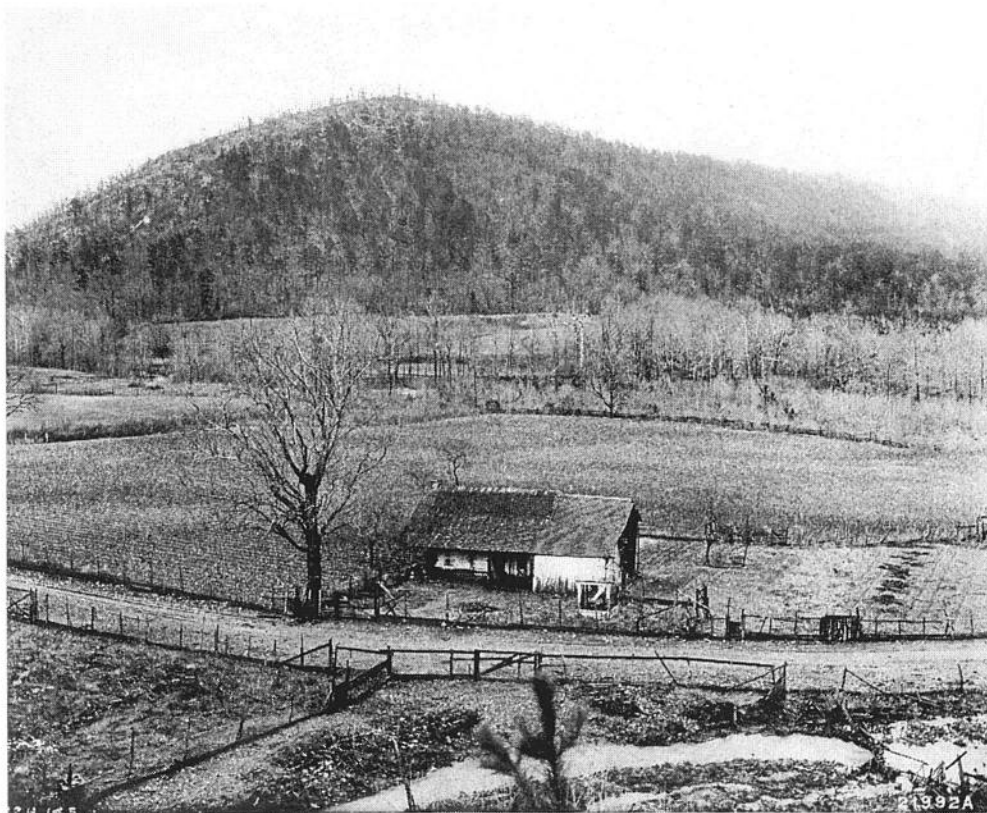


Photo No. 21992A

2. CLIMATE

The climate on this Forest is uniform.

3. SOIL

The rock formation is mostly sandstone and novaculite, with some occurrence of slates and shales, and the greater part of the soil is the result of their disintegration. Some Class 1 soil is under cultivation, but the most is Class 2 soil and under.

4. AGRICULTURAL VALUE

With but little exception the land topographically suited for cultivation is alienated; the small amount of public land suitable for the plow has been left for intensive examination. This area will amount to 3,538.34 acres in this unit, and there will probably be between 700 and 800 acres recommended for listing.

Photographs No. 21991A, 21993A, 21995A, and 22000A show the best portion of the Cossatot River valley in this unit. Note that the small fields are surrounded by steep slopes and high mountains. This is the best agricultural area in this unit, and such land will grow the local crops, making from one-fourth to one-half bale of cotton, 15 to 25 bushels of corn, 8 to 15 bushels of wheat or oats, or about two tons of hay per acre.

With the possible exception of a small acreage the remaining public land in this unit is by far more valuable for forest purposes than for agriculture, rendered so by its being an area of steep and rugged mountains, with precipitous slopes and very narrow valleys.

5. LAND CLASSIFICATION

27,693.86 acres within National Forest

7,126.37 " alienated within Forest

20,567.49 " National Forest land, as follows:

17,229.15 acres nonagricultural land

3,338.34 " held for intensive classification

The forest cover is mostly shortleaf pine on the ridges and mountains, especially the southern slopes. The northern slopes have good young white oak and some merchantable white oak that has not yet been cut. The lowlands along the streams bear hickory, black and sweet gum, green briars, holly, etc. The tops of the mountains are covered with black jack and other scrub growths.

6. TITLE TO LANDS

27,693.86 acres within National Forest
20,567.49 " National Forest land
7,126.37 " alienated within Forest, which passed to patent under the following entries:
4,916.73 acres Agricultural Homestead entries
469.64 " Cash entries
880.00 " Timber and Stone entries
640.00 " School Selection
40.00 " listed under Act of June 11, 1906

Of this alienated land, 1,168.14 acres are now owned by slate and other mining companies; 1,440 acres are held by timbermen. This leaves 4,518.23 acres in the hands of resident farmers. Of this latter acreage 1,050 acres are under the plow, leaving 3,468.23 acres under its natural forest growth, not over five per cent of which will ever be cultivated.

These lands were surveyed in 1842-3-6-7 and withdrawn from entry May 10, 1907.

7. FOREST VALUE

The vacant land has been used in the past as public range. As far back as 1880 this area has been prospected and mined for manganese and other minerals. Some sixteen years ago Shady was known as "Eberson City" and quite a mining boom was on there for a short period. There are numerous mining claim filings now within this unit. At one time a water-power flouring mill was operated on the Cossatot, near Shady, which went out with higher water and has never been rebuilt.

This unit is accessible, for roads and trails follow the meandering of every creek and over the low divides.

Considerable pine timber has been cut from this area under Government supervision from the W.E. Tibbs 3-17-12, W.E. Tibbs 5-1-12, and W.E. Watkins 2-7-12 public timber sales. The white oak has nearly all been cut under the W.J. Reno 10-16-13 and M.C. Trumbull 11-1-13 sales.

Photo No. 21991A



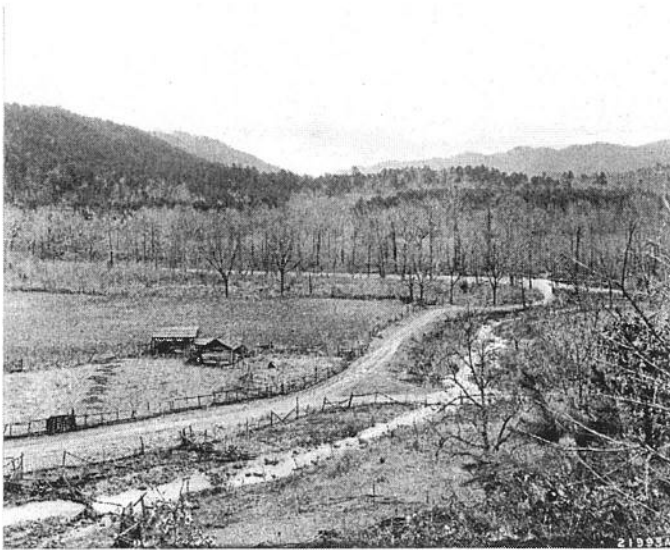


Photo No. 21993A



Photo No. 22000A



Photo No. 21995A

INTENSIVE LAND CLASSIFICATION
Townships 3 and 4 South, Range 29 West
Arkansas National Forest, Arkansas

By
William E. Wootten

There are 3,338.34 acres held for intensive examination in these two townships, as follows:

Township 3 South, Range 29 West	
	Section
N ½ NE ¼	21
S ½ NE ¼, N ½ NW ¼	22
S ½ SW ¼, NW ¼ SW ¼, S ½ SE ¼	25
S ½ NW ¼, W ½ SE ¼	31
S ½ NW ¼ NE ¼, NE ¼ NW ¼	33
SW ¼ NE ¼, SE ¼ NW ¼	34
S ½ S ½ NE ¼, E ½ SE ¼, S ½ SE ¼ NW ¼	35
NE ¼ NE ¼, S ½ N ½ S ½, S ½ S ½, N ½ NW ¼ SW ¼	36
Township 4 South, Range 29 West	
	Section
N ½	1
S ½ NW ¼, SW ¼ SW ¼	4
S ½ NE ¼, S ½ S ½	5
NW ¼ NE ¼, NE ¼ NW ¼	7
All vacant land in the NE ¼ and N ½ SE ¼	12
N ½ S ½, S ½ N ½	17
N ½ S ½, S ½ N ½	18
N ½ NE ¼, NE ¼ NW ¼	21
NW ¼ SE ¼, SW ¼	25
S ½ N ½, N ½ S ½, SE ¼ SE ¼, SW ¼ SW ¼	26

The above described areas are fully classified and discussed in the following paragraphs:

Township 3 South

Section 21.—The NW ¼ NE ¼ was applied for by Mrs. Nancy J. Lewis, Application No. 1363. As shown by the map two fields of the applicant merge into this tract. About eight acres are in cultivation in the southwest quarter and about one acre in the northwest quarter. Perhaps two acres of the NW ¼ are arable. I recommend that the S ½ NW ¼ NE ¼ of this section be listed for entry. The remaining arable portions of this tract are too meagre to be considered, as they form only a small part of the remaining portion of the area.

The NE ¼ NE ¼ of this section was found after thorough field inspection to be nonagricultural in character and was not mapped.

Section 22.—In this section I would recommend for listing under the Act of June 11, 1906, the following:

S ½ SW ¼ NE ¼	20 acres
SW ¼ SE ¼ NE ¼	10 “
S ½ SE ¼ SE ¼ NE ¼	5 “

There is still a small parcel of Class 3 land in the N ½ SW ¼ NE ¼, some of which is under fence, but as this forms only a small part of this 20-acre subdivision I would recommend that it be not

listed but handled under a special-use permit should one be desired. The remaining lands held for intensive classification in this section were found after a field inspection which was quite thorough nonagricultural in character and were not mapped.

Section 25.—A glance at the map of the area held for intensive classification would seem to show that there is considerable agricultural land in this section. There is arable land enough were it all together and not cut up by numerous small gulleys and dry branches in this section to make a very small farm unit. By arable I mean land that is not too steep to plow over; but the thin soil of this part and its rocky nature, and taking into consideration that the tract would have to be fenced in numerous small areas for fields, all lessen the value of it to a great extent as an agricultural proposition. In fact, it could not be considered as having enough agricultural value to tempt any prudent man to enter such land for a home. This tract lies in the slate belt between the Fork and Missouri mountains, and while there is a considerable area of alienated land to the north of it this land is all owned by nonresident slate men and companies. Big Fork is the nearest post office and school, by road and trail eight miles away. Mena, the nearest market point, is 25 miles away. In January, 1913, I examined and recommended for listing the SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 30, Township 3 south, Range 28 west, one-fourth mile west of this tract. This land was opened for entry on March 13, 1913. This land is still vacant and subject to entry. One party filed on it but never established residence. This was in 1913. I have sent at least fifty men to this tract—men who were anxious to farm and looking for homesteads—but one and all have turned it down for one reason or another, some on account of its isolation, others its poor soil, etc., yet this is the best tract of vacant land in this township. The land just discussed was examined and listed under the application of Ben E. Rees, Application No. 659, made July 3, 1912.

Section 31.—As shown by the accompanying map, the land at the foot of Eagle Mountain, which was mapped under the intensive classification, was found to be in too small bodies for a farm unit, and while some of it is in the degree of slope, its stony nature and poor thin soil render it unfit for cultivation. This land lies in the settlement around the Shady post office, and any of the numerous settlers of the community will testify as to its nonagricultural character. The remaining vacant lands of this section are far more valuable for public uses and forest values than for agriculture.

Section 33.—The Class 3 land shown on the W $\frac{1}{2}$ NE $\frac{1}{4}$ is a very poor quality of our ridge type, a class of land that is not being farmed only on rare occasions, and when cultivation is attempted it lasts only from two to three years and then the land is thrown out to grow up in wild vines, briars, and other growth. While it is within the per cent of slope and percentage of rock allowed, it would be subject to terrific erosion when cleared. This land should be classed as far more valuable for forest purposes than for agriculture, likewise all the other vacant lands in this section. The buildings shown in this section were erected by timber operators and had not been removed when field examination was made. No land recommended for listing in this section.

Section 34.—While the Class 3 land shown on the map of this section is somewhat better in quality than that on the W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 33, its timber value is far in excess of five dollars an acre. To my certain knowledge the alienated land lying adjacent on the south has been on the market at a price of \$5 per acre with its timber stand, and it is better land than the vacant land to the north of it, but no purchaser has yet been found that is willing to pay the \$5 per acre for it. The alienated land south of this tract was once in cultivation, but the fields are now grown up in poles of from 5 to 10 years. I would recommend that no land be opened for entry in this section.

Section 35.—Recommended for listing in this section: E $\frac{1}{2}$ SE $\frac{1}{4}$, 80 acres. Regarding this recommendation reference is made to "L-Arkansas-Claims, Whisenhunt, W. T., H. E. 02039, Camden," and "L-Ark.-Settlement, Whisenhunt, W.T. #1199," cases for leniency shown. That part of the tract on Mine Creek is exceptionally good strong land, while that on the south forty is only a fair ridge type and would not be recommended for listing were it not for the circumstances surrounding this case. The remaining lands of this section should be classed as more valuable for forest purposes than for agriculture.

Section 36.—The SL land in this section is of ridge type, lying on slopes that would be subject to erosion to such an extent as would render it worthless for agriculture after a short period of cultivation

were the ground cover removed. It therefore is not Class 3 land and I would recommend that no land in this section be listed for entry.

The remaining Government lands in this township not recommended for listing under the Act of June 11, 1906, are far more valuable for forest purposes and public uses than for agriculture and should be so classified.

Township 4 South

Section 1.—There are thousands and thousands of acres of better ridge land in Polk County, the county in which this section lies, that are alienated within the Forest and along its boundaries, far more accessible to railroads, markets, school, etc., where no attempt has been made to cultivate them. Hundreds of acres of this ridge type in the county where agriculture was attempted on a meagre scale, after a few crops have had their fences torn away and the land turned into public range, the settlers and farmers classifying it as nonagricultural. On this basis alone if for no other reason, and many could be given, all vacant lands in this section should be classed as nonagricultural.

Section 4.—A field inspection showed that there was no land among that held for intensive classification where there were enough agricultural possibilities to justify mapping it.

Section 5.—Mr. Nova Avants, of Shady, Ark., has applied for the S $\frac{1}{2}$ NE $\frac{1}{4}$, same being Application No. 1375, recorded January 3, 1915. Mr. Nova Avant's father, E.T. Avant, owns the NW $\frac{1}{4}$ SE $\frac{1}{4}$ and the NE $\frac{1}{4}$ SW $\frac{1}{4}$. During the field examination I was at Mr. E.T. Avant's house and he was afraid that a goodly portion of his field would show to be on Government land, and had his son, Nova Avants, make application for the above tract to protect himself. The land shown under fence of the Nova Avant application is not in cultivation, though in former years some attempt had been made to do so, but owing to its slope and erosion that occurred after every plowing, cultivation ceased on it and it is now grown up in a thick stand of shortleaf pine saplings. The applicant and his father, by ceasing their cultivation of the most favorable portion of the area embraced in the application, classified it as nonagricultural, therefore I do not hesitate to do the same. It is the type that runs from rough to rolling and is not cultivated in this portion of the State.

The SE $\frac{1}{4}$ SE $\frac{1}{4}$, also the SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 4 has been applied for by R.H. Avants. This land was of such rugged nature that it was not thought to justify mapping and showing in the report, having no agricultural possibilities whatever.

Section 7.—A field investigation by myself, in company with the applicant, of the land held for intensive classification in this section developed the fact that while there were some fifteen or twenty acres of Class 3 land, it should not be listed for several reasons. Chief among them is that there is not enough arable land to constitute a farm unit; its isolation from markets, schools, and settlements; its lying with a compact body of natural and National Forest land where no settlement could ever be built upon agricultural lines; its inaccessibility, being reached by a long, meandering trail following Short Creek from the Cossatot River. See correspondence in the "L-Arkansas, Settlement, Lein, William, #980," case for further data. Application was withdrawn for this tract November 18, 1916.

Section 12.—Mr. C.F. Walston has a forty-acre June 11 entry in this section (see map). That this entry might have the benefit of the remaining arable land surrounding it, I would recommend the following be listed:

NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$	10 acres	<i>Disapproved</i>
N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$	5 "	NE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$
N $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$	10 "	N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$
SW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$	2.5 "	N $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$
W $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$	5 "	W.L.H.
W $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	5 "	See page 40
SE $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	2.5 "	
NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$	10 "	
Total	50 "	

This entry lies on the main public road following the Sugar Creek valley, which is settled and farmed along its course.

Sections 17 and 18.—The unit held for intensive classification in these two sections embodies that country surrounding Caney Creek. The examiner was well acquainted with the topography of the area before it was intensively mapped, and it was held for intensive examination only because of the fact that for several years past a number of people had spoken to him of the “fine bottomlands” it contained. Special attention was given this area on this account in order that we should be able to show the exact limits of these small areas of creek bottomlands. As shown on the map there are several small patches of good rich soil (Class 2), but they are scattered over two miles of length; and in no place, within the restricted limits for a homestead entry of one mile in length, can enough land of this character be found to support an ordinary family. The maps show this valley to be extremely narrow, with rugged steep slopes on either side. These slopes are covered with merchantable timber at the present time which in a few years must come out and down this valley. This will necessitate the building of roads along the creek, and when the road right-of-way is subtracted from that portion of the valley not covered by Caney Creek there will be no land left for farming purposes. I recommend that no land be listed in these two sections.

Section 21.—A field inspection developed that the land held for intensive classification was of such a rugged nature that it contained no agricultural land whatever. No attempt was made to map same. All Government lands in this section should be segregated and held for National Forest purposes.

Sections 25 and 26.—See the accompanying map for the topography and areas that are within the limit of 15 per cent slope and 50 per cent of rock in the first eight inches of soil. While there are some small areas in these sections that have been classified as Class 3 land, it is not felt that we should be justified in recommending them for listing because of the fact that such lands are not used in this part of the State for agricultural purposes. These areas lie on sloping ridges that would be subject to terrific erosion after every plowing that was followed by a rain, and would be rendered unfit for agriculture after a short period of tilling were they cleared and agriculture attempted. This is the history of other such lands in the same community. All Government lands in these sections should be held for National Forest purposes.

General Recommendations

It is further recommended that all Government lands in these two townships not specially discussed, except those recommended for listing under the Act of June 11, 1906, be segregated and held for the purpose for which they were withdrawn.

While there are some small scattered patches of Class 3 land in these sections which aggregate about 160 acres, nevertheless these patches are too small and scattered to allow of their being combined into a listing unit without including a larger percentage of nonagricultural land than the classification rules permit.

EXTENSIVE LAND CLASSIFICATION

Township 4 North, Range 28 West

Arkansas National Forest

By

Wm. E. Wootten

1. TOPOGRAPHY

This area is in the Fourche Mountain system. Elevations range from 800 to 2,250 feet. This includes the rugged north and south slopes of White Oak Mountain. Sugar Creek, a tributary of Petit Jean River, runs in a general easterly direction and drains the area as a whole.

2. CLIMATE

The climate on all portions of the Forest is uniform.

3. SOIL

The alienated land in cultivation contains no soil better than Class 2; the larger portion under plow is Class 3. On the vacant lands no soil better than Class 3 was found.

4. AGRICULTURAL VALUE

The vacant lands in this area are situated so as to be topographically unfit for cultivation.

5. LAND CLASSIFICATION

12,935 acres within the National Forest

3,826 " alienated within the Forest

8,869 " National Forest nonagricultural land, with an average timber stand of 4,000 feet
b.m. per acre

240 acres left for intensive examination

The timber stand will run 90 per cent shortleaf yellow pine. The land topographically suited for agriculture has been eliminated under the Agricultural Homestead Act and the Forest Homestead Act.

6. TITLE TO LANDS

9,109 acres National Forest land

3,120 " alienated land within the Forest largely acquired under the Agricultural Homestead
and Forest Homestead acts.

On account of the very poor quality of the soil and the unfavorable topographic conditions a very small amount of the alienated land is under cultivation. The land was withdrawn from entry May 10, 1907. Surveyed in 1842 to 1847.

7. FOREST VALUE

The shortleaf pine type predominates, covering about 90 per cent of the area; the balance is of mixed hardwoods, white oak predominating. The vacant lands are largely used for grazing purposes.

INTENSIVE LAND CLASSIFICATION

Township 4 North, Range 28 West

Arkansas National Forest

By

Wm. E. Wootten

Two hundred and forty (240) acres held for intensive examination in Section 36. The accompanying sketch shows the limit of the Class 3 land on that area. The greater portion of the Class 3 land is found in the narrow creek bottom, through which runs the county road. Not enough land of agricultural value is found to make a farm unit, therefore no land is recommended for listing in this township.

EXTENSIVE LAND CLASSIFICATION

Township 3 North, Range 28 West

Arkansas National Forest

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. Elevations run from 850 to 1,750 feet. Sections 25, 34, 35, and 36 form the extreme west end of Dutch Creek Mountain. The northern portion drains into Dutch Creek, the southern portion drains into Fourche River. The northern portion of the unit is the west end of Petit Jean Mountain, the southern portion of which drains into Dutch Creek; the northern portion drains into Sugar Creek. Owing to the steep north and south slopes there is little opportunity for soil lodgment. Unfavorable topographic conditions, coupled with the very poor quality of the soil, makes cultivation of lands of this nature impossible.

2. CLIMATE

The climate of the Arkansas National Forest is uniform. Crops are planted, grown, and gathered between the occurrence of killing frosts.

3. SOIL

This area has been burned over from year to year, consequently erosion has left the ground denuded of soil and covered with loose rock. Shortleaf pine is about the only timber that will grow to merchantable size with the necessary quality. Farming is carried on in a small way in the Dutch Creek valley. Places have been cleared and put in cultivation on the flat tops of the ridges, but in almost every instance the improvements have been abandoned and the fields allowed to grow up in sprouts.

4. AGRICULTURAL VALUE

Unfavorable topographic and soil conditions eliminate this area from having any agricultural value, therefore no portion was held for intensive classification.

5. LAND CLASSIFICATION

5,124.41 acres within National Forest

921.05 " alienated within the Forest

4,203.36 " National Forest land, all of which is classified as nonagricultural timberlands with an average stand of 3,000 feet per acre. Shortleaf pine composes 90 per cent of the stand, mixed hardwoods of a very poor grade compose the remaining timber stand.

0 acres left for intensive classification.

6. TITLE TO LANDS

The 921.05 acres of alienated lands passed from Government possession mostly under the Homestead Acts. National Forest lands amounting to 4,203.38 acres were withdrawn from entry May 10, 1907. The land was surveyed in 1841.

7. FOREST VALUE

The greater portion of merchantable pine timber has been cut under Forest Service administration, consequently a fine stand of pine reproduction has a good start. Hardwoods that reach maturity on lands of this character are of a very inferior quality and at the present time of little or no market value. The exceedingly rough character of the country and poor quality of the soil make the area valuable only for forest purposes.

INTENSIVE LAND CLASSIFICATION

Township 3 North, Range 28 West

Arkansas National Forest

By.

Wm. E. Wootten

No lands held for intensive examination in this unit.

No Intensive map of this Township was made.

EXTENSIVE LAND CLASSIFICATION

Township 1 North, Range 28 West

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. Elevation range from 700 to 2,700 feet. Blue Knob, in the southeastern part of the unit, is rated the highest point on the Forest. Mill Creek Mountain is the principal range of this township, though Buck Knob, of the Fourche Range, along the southern boundary, reaches its highest point just below the south line. The valley of Mill Creek has been eliminated from the Forest, and the remainder of the unit ranges from very broken to exceedingly rough and steep.

2. CLIMATE

The climate of the Arkansas National Forest is uniform.

3. SOIL

Mill Creek valley has some good Class 2 land but is out of the Forest boundary. None of the lands within the Forest is better than Class 3 with the exception of now and then a small nook of Class 2 land but not enough acreage to justify discussion. Within the Forest boundary no soil better than Class 3 is in cultivation.

4. AGRICULTURAL VALUE

Taking the lands within the Forest boundary as a whole the agricultural value is small in comparison to the merchantable stand of timber and their value for growing timber. By far the greater acreage, were the ground cover removed from rolling ridges, would in a few years be unfit for cultivation. The township as a unit has some exceptionally good farms and good lands but they have been eliminated from the Forest boundary. Waldron, from 10 to 15 miles distant, is the market point for this part of the Forest.

5. LAND CLASSIFICATION

15,207.79 acres within the National Forest

7,164.97 " alienated within the Forest

8,042.82 " National Forest area, classified as follows:

7,282.82 acres of nonagricultural, natural forest timberland, with an average commercial stand of 4,000 feet board measure per acre.

760.00 acres left for intensive classification

The merchantable timber will run 80 per cent shortleaf yellow pine, the remainder being a scattering of hardwoods common to this Forest. The pine timber is exceptionally good on the southern slopes of Mill Creek Mountain.

6. TITLE TO LANDS

There are 8,042.82 acres of National Forest land, which was surveyed about 1842 and withdrawn from entry May 10, 1907.

Land alienated within the Forest, 7,164.97 acres. This land passed to patent under the following entries:

3,680.00 acres	Cash Entry
1,320.00	" Timber & Stone Entries
640.00	" School Selection
<u>1,524.97</u>	" Agricultural Homestead Entries
7,164.97	

This alienated land is now owned by the following nonresidents and resident farmers:

640.00 acres	State
800.00	" C.E. Forrester
760.00	" R.A. Castleberry
3,200.00	" Williams, Watrous & Matson
240.00	" Logan Roots Estate
80.00	" Regan & Bates Lumber Company
520.00	" Small operators
<u>924.97</u>	" Resident farmers
7,164.97	

The above figures show that, considering the size of the unit, agriculture is carried on a very limited scale, and with Waldron, a good market for all produce raised, only a short distance away, is substantial evidence that the people do not consider this area an agricultural one.

7. FOREST VALUE

The unfenced, or open lands are used as public range for cattle and hogs. No timber has been cut from any of the large holdings or from the Government lands. The area is accessible by numerous roads and trails.

Owing to the extremely rough topography of the greater portion of the area, it is far more valuable for timber growing than for agriculture.

INTENSIVE LAND CLASSIFICATION

Township 1 North, Range 28 West

By

Wm. E. Wootten

Seven hundred and sixty (760) acres left for intensive classification, as follows:

	Section
SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	1
N $\frac{1}{2}$ SE $\frac{1}{4}$	2
NE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$	10
E $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$	35
N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	36

Section 1.—Though the land held for intensive classification was thoroughly inspected in the field and a topographic map made of same, all the land that came within the per cent of slope allowable was stony, sandy loam, and it was not considered of enough moment to reproduce same in this report. No land is recommended for listing in this section.

Section 2.—The accompanying map shows the extreme limits of the Class 3 land. No land recommended for listing.

Section 10.—The map shows that there is enough Class 3 land to constitute a farm unit under the Listing Rules, but as none of the land around this is producing crops, practically all of it being owned by nonresident land or timber companies, and this area having a merchantable timber stand averaging 4,000 board feet per acre, I would recommend that it be held for the present for higher values. At some future date after the timber stand is removed and if thought wise to list any of it, I would recommend that the N $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, amounting to 160 acres, be listed for entry but for the present held for higher values.

Landrew J. Wilson, of Parks, Ark., has made Application No. 1167 for the NE $\frac{1}{4}$ NE $\frac{1}{4}$.

Section 35.—A thorough field investigation showed no land as good as Class 3 that could be cultivated. No land recommended for listing in this section.

Section 36.—The accompanying map shows that limits of the Class 3 land. This, taken in connection with the adjoining land of the same class in Section 36, T. 1 N., R. 27, will make a good farm unit. Therefore, I would recommend that the NE $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, amounting to 60 acres, be listed for entry.

Sixty (60) acres recommended for listing in this unit.

One hundred and sixty (160) acres recommended held for higher values in this unit.

Disapproved W.L. H.

EXTENSIVE LAND CLASSIFICATION

Township 1 South, Range 28 West

Arkansas National Forest

By

W.E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. Fourche Mountain forms the main portion of the area. Elevations range from 1,000 to 2,300 feet, reaching the highest point on Buck Knob, in Section 1. The extreme northern drainage is into Mill Creek, of the Fourche La Fave River, while the remainder of the area is Ouachita River drainage.

2. CLIMATE

The climate on the Arkansas National Forest is uniform. All the local crops can be planted, grown and gathered between the occurrence of killing frosts.

3. SOIL

Owing to the extreme roughness of the country and the area being the head of the drainage, there is little opportunity for soil lodgment and no soil in areas of any consequence better than Class 3 was found.

4. AGRICULTURAL VALUE

On the Government lands the land showing any indication of having any agricultural value was left for intensive classification and the most likely places were mapped. The intensive map shows that this area has practically but little value for agriculture, taking into consideration the land that is farmed in

this community. There are 1,390 acres of alienated land in this unit; of this amount, 1,065.13 acres are owned by nonresidents and timber companies, leaving 324.87 acres owned by residents of the unit; this deducted from the total acreage of 13,274.89 would go to show that it has not been looked upon by homeseekers as being of any value for the growing of the average crops, especially when it is taken into consideration that the lower tier of sections and the township to the south are all practically owned by resident farmers and intensively farmed.

5. LAND CLASSIFICATION

15,847.79 acres within the National Forest
 1,795.13 " alienated within the Forest
 14,052.66 " National Forest area, classified as being
 13,462.66 acres of nonagricultural land.
 590 acres left for intensive classification.

The merchantable timber stand will average 3,500 board feet per acre, with 80 per cent shortleaf yellow pine.

6. TITLE TO LANDS

14,052.66 acres of public lands within the area. This land was surveyed in 1838, 1841, 1842, and 1848. Withdrawn from entry May 10, 1907.

1,795.13 acres of alienated land within the unit. This land passed from Government possession under the following patents:

680.00 acres School Selection
 305.13 " Cash Entry (Logan Roots Estate)
 710.00 " Homestead Entries
 100.00 " Restored to entry, Act of June 11, 1906
 (not entered)

One 40-acre tract was a swamp selection and ceded to the State. This forty acres is in cultivation. The 16th section, 640 acres, is now owned by C.R. and E.S. Willett, of California, timber speculators; 305.11 acres are owned by the Logan Roots estate, of Little Rock. Not over one-fourth of the acreage held by resident farmers is in cultivation.

7. FOREST VALUE

The public lands and unfenced private lands have been used as public range for cattle and hogs and hunting and trapping. No Forest Service timber sales have been operated in this unit.

The topography of this area is such that it is far more valuable for the raising of timber than for agriculture.

INTENSIVE LAND CLASSIFICATION

Township 1 South, Range 28 West

Arkansas National Forest

By

Wm. E. Wootten

Five hundred and ninety (590) acres left for intensive classification, described as the-

N ½ NE ¼, SE ¼ NE ¼, N ½ NE ¼ NW ¼, SE ¼ SW ¼	Section 17
SW ¼ SW ¼, E ½ SW ¼, SE ¼	" 23
All vacant land in SW ¼ SE ¼, SE ¼ SW ¼	" 24
NW ¼ NE ¼, SW ¼ SE ¼	" 25

These are discussed in the following paragraphs:

Section 17.—The land held for intensive classification in the North-half was mapped in the field, but as it did not show any Class 3 land it was not reproduced on the intensive map. The SE $\frac{1}{4}$ SE $\frac{1}{4}$ does not contain a farm unit. No land recommended for listing in this section.

Section 23.—The accompanying intensive map shows the character of the best vacant land in this section. No land recommended for listing.

Section 24.—In the SE $\frac{1}{4}$ SW $\frac{1}{4}$ and the SW $\frac{1}{4}$ SE $\frac{1}{4}$ there is quite a tract of land that should have been included in the adjoining June 11 recommendation. There is also a small lot in Section 25. I would recommend the NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, amounting to 20 acres, be listed for entry. Twenty (20) acres recommended for listing in this section.

Disapproved W.L.H. See page 40 II

Section 25.—The accompanying map shows the Class 3 land in this section. I would recommend that the W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, amounting to 20 acres, be listed for entry. This, taken in connection with the June 11 entry and the land recommended for listing in Section 24, will make a good farm unit. There is not enough Class 3 land to consider on the SW $\frac{1}{4}$ NE $\frac{1}{4}$, and not enough Class 3 land on SW $\frac{1}{4}$ SE $\frac{1}{4}$ to make a farm unit, and no land is recommended for entry on these two last named units. Twenty (20) acres recommended for listing in this section.

Disapproved See page 40 II

E $\frac{1}{2}$ W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ -10 A

W.L.H.

Forty (40) acres recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION
Townships 2 and 3 South, Range 28 West
Arkansas National Forest

By
William E. Wootten

1. TOPOGRAPHY

These townships lie in the Northern and Caddo Mountain systems, the topography of which is fully covered in the introductory of this report. Big Fork Creek, Butcher Knife Creek, and Cates' Creek are the principal streams of the area. The accompanying map is a splendid topographic reproduction of the unit. All except the extreme southern portion is easily accessible by numerous roads. Big Fork, a small village of three stores, hotel, blacksmith shop, school, and two churches, is located in the NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 15.

2. CLIMATE

The climate of this unit is uniform with other portions of the Forest.

3. SOIL

On the remaining vacant land there is no soil better than Class 3. On many of the farms just outside and on alienated land within the boundaries of the Forest, it would seem that there was no soil at all, as the fields are covered with a conglomerate mass of small broken stone. This stone is known locally, and to Geologists, as "Big Fork Chert." It is very porous, a great moisture retainer, and does not interfere with cultivation.

4. AGRICULTURAL VALUE

Settlement in the Big Fork Creek valley, near the town of Big Fork, was made in 1858. Since that time the country in this unit has gradually settled until practically all lands susceptible to cultivation passed to private ownership years ago.

The alienated lands that are farmed in these units produce exceedingly well and the settlers for the most part are very prosperous. A great deal of attention is paid to cultivation of forage crops and raising of cattle and hogs in this community.

In the northeastern part of the unit there is only one area of vacant land that has sufficient agricultural value to make it consequential. This would not be the case were not this tract adjacent to privately owned farm lands that will help it to make a part of the living of some one family.

In the southern part of this unit, which is very mountainous and slaty, there is no agricultural vacant land in bodies large enough to entice a prudent man to attempt farming on them.

5. LAND CLASSIFICATION

15,485.74 acres within National Forest

6,012.72 " alienated within the Forest

9,473.02 " National Forest land, shown as follows:

9,214.80 acres nonagricultural timberlands having a merchantable timber stand of from 2,000 feet b.m. per acre to 10,000 feet b.m. per acre.

258.22 acres left for intensive examination

6. TITLE TO LANDS

9,473.02 acres of National Forest land

6,012.72 " of alienated land within the National Forest, as follows:

960.00 acres Timber and Stone entries

920.00 " Cash entries

4,132.72 " Agricultural Homestead entries.

Of the above lands, 1,720 acres are held by slate and land companies which are nonresidents; 4,292.72 acres are owned by resident farmers of the unit, 1,385 acres of which are in cultivation. This leaves 2,907.72 acres of privately owned land held by resident farmers in the unit which are not being tilled. Seven-eighths of this land is nonagricultural.

7. FOREST VALUE

The Big Fork Creek valley, which lies just without the Forest boundary, is extensively farmed. The open lands have been used to a great extent as cattle and hog range. The southern portion has been mined a great deal for slate and many slate claims now exist under the placer mining laws. The merchantable white oak timber has been cut in Forest Service timber sales. Several small shortleaf pine sales have been made to sawmill men and settlers.

INTENSIVE LAND CLASSIFICATION
Townships 2 and 3 South, Range 28 West
Arkansas National Forest

By
William E. Wootten

Section 13.—The NE $\frac{1}{4}$ NE $\frac{1}{4}$ T. 3 S., R. 28, was applied for under the Act of June 11, 1906, by Jesse A. Newman, Application No. 1018, same being recorded February 10, 1914. Mr. Newman owns 15 acres which lie adjacent to this 40-acre tract on the west. I would recommend the following lands be listed for entry in this section:

N $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$	20 acres
N $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$	10 “
Total	30 “

The remaining 10 acres of the tract applied for can not be classed as agricultural and should not be listed. The northern portion of the area listed is a little rough but could be used for pasture. This lies adjacent to alienated land.

Section 21.—The S $\frac{1}{2}$ NW $\frac{1}{4}$ was applied for under the Act of June 11, 1906, by R.M. Edwards, Application No.1326. Same was recorded March 20, 1916. As shown by the topographic map accompanying this report, the northern half of the area applied for could in no way be called agricultural land. The greater portion of the southern half likewise, though there is a small amount in the southern portion that could be plowed, but it is very thin of soil and poor in humus. It is the common ridge type of land that is not being cultivated at this time on this Forest. Mr. Edwards owns land adjoining that which he applied for on the north and wished to take the land mentioned in his application as an adjoining entry. As the land lying adjacent to his privately owned land is not agricultural and could not conscientiously be listed under the Forest Homestead Act he would not care to put his application into effect should any of the southern portion be listed. As the alienated land lying adjacent to this Class 3 land on the south is not being cultivated and is not classed as such by the owner, I would recommend that no land be listed in this section.

Section 28.—The NW $\frac{1}{4}$ NW $\frac{1}{4}$ was applied for by Mr. John T. Davis, Application No.1198, under date of October 16, 1914. This land was embraced in a former homestead entry and a small patch of land, approximately eight acres, was cleared. This about covers all the land that would be suitable for tilling on this 40-acre tract applied for, and to recommend this small area it would be necessary to list the whole 40-acre tract. As the alienated land all around this 40 is not being cultivated, and so small a portion of the land applied for being agricultural, and the fact that it forms part of a mountainous body of National Forest land, I would recommend that no land be listed in this section.

Sections 30 and 31.—The land held for intensive examination in these sections was found, after a field investigation, not to be agricultural in character and was not mapped. Another reason that no land should be listed in these sections is because of the fact that in 1913 eighty acres lying adjacent to the land held for intensive classification on the east was listed under Application No. 659. This is one of the best bodies of agricultural land listed in many years on this Forest, but its isolation makes everyone who looks at it reject it for a home. I would recommend that no land be listed in these sections.

I would further recommend that all National Forest lands in this unit be segregated and held for the purposes for which they were withdrawn, except those especially mentioned as having agricultural value and recommended for listing under the Act of June 11, 1906.

Thirty (30) acres recommended for listing in this unit.

EXTENSIVE LAND CLASSIFICATION
Townships 4 and 5 South, Range 28 West, 5th P.M.
Arkansas National Forest
By
William E. Wootten

1. TOPOGRAPHY

The principal peaks are Hurricane Knob, McKinley Mountain, Lost Mountain, Blalock Mountain, Buckeye Mountain, Tall Peak Mountain, Raspberry Mountain, Brushheap Mountain, Fodder Stack Mountain. The elevation of these peaks reaches from 2,000 to 2,500 feet, and they stand from 800 to 1,500 feet above the surrounding drainage. The main creeks of this unit are Long Creek, Brier Creek, Blalock Creek, Viles Creek, and Straight Creek. These streams are all tributaries of the Little Missouri River, which has its source along the north boundary. Sugar Creek, a "feeder" for the Cossatot River, heads in the NE ¼ Sec. 8 and runs in a westerly direction, leaving Sec. 7 near the center of the western boundary of this section. The west and east forks of the Saline River, a tributary of Red River, gather their headwaters in the southwest portion of Twp. 4. The valleys, or troughs, through which these waters travel are narrow and deep. As a rule the slopes are very abrupt. A difference in altitude of 500 feet in one-quarter mile is no rare occurrence. In fact, this unit is free from gentle slopes, gradual inclines, or low ridges which are often found in other portions of the Forest. At no place can a horseman, in justice to himself and mount, ascend from water level but a short distance without dismounting and leading his horse. Then to climb to any of the above named peaks, or even their foothills, it is often necessary to use hands as well as feet.

2. CLIMATE

The climate on all portions of the Arkansas National Forest is uniform.

3. SOIL

The soil of the rough mountain portions is coarse and sandy in composition and ranges from very poor at the top to fair at the bottom of the ridges or mountains. Without exception the soil on the northern slopes is deeper and richer in humus than that on the southern slopes. Opportunity for soil lodgment is rare except in the very narrow valleys along the creek beds, where it is the prey of annual freshets which carry away a larger per cent of it, leaving a surface often of rock and gravel.

4. AGRICULTURAL VALUE

Except in the extreme southwest corner of Twp. 4, where it merges into the Piedmont plain, agriculture has been attempted only on a very meagre scale. Before the creation of the Forest but thirteen homestead entries had been made, which later went to patent and selection was made upon the most inviting spots. The other entries were initiated under the Timber and Stone Act. These thirteen entries comprise a total of 1,791.47 acres. Three hundred (300) acres is a large estimate for the land under fence, while 240 acres would cover all the land under plow. Since the creation of the Forest there have been four lists under the Act of June 11, 1906, totaling 225 acres. Of this only 57 acres are under plow, and in each case this land was nearly all cleared and cultivated by some former entryman or squatter who formerly lived upon the land but never attempted final proof. The only means of transportation is by wagon and team. The wagon roads invariably follow the meandering of the creeks, which flow in an easterly and westerly direction. When the road right of way and the channel of the creek are subtracted from the width of these limited valleys the man who has attempted to cultivate the small narrow patches of arable land left has to "hug" the mountain to the extreme limit of slope to get a "field" of from one, two, three, to four acres. The photographs accompanying give a good idea of these contracted valley farms. In taking picture No. 22004A the photographer stood on an abrupt slope high above the improvements on the farm, and across the creek from same. In this way he was able to secure this picture showing channel of creek, road right of way, buildings, and all the land that has been cleared and

cultivated under this entry, which passed to patent some five years ago. This photo was taken on Long Creek, in the N $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10. All the available land on this entry is under the fence shown. Photograph No. 22003A was also taken on Long Creek, in the S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 11. The best land on this entry, which is shown in front of the improvements, has not been utilized. The land where the buildings are located is very stony. This picture is a facsimile in character of the other farms in these townships. Neither of these pictures show to good advantage the abrupt slope of the mountains in the rear of the improvements. The "farms" shown in these two photographs form a part of five homesteads that were entered by an old man, two sons, and two daughters. On three of the claims just enough improvements were made to obtain patent, when three of the claims were deserted. The old man and one son still cultivate enough land on their entries to live upon while waiting to dispose of the entire 800 acres as a timber proposition. This information was obtained first hand. The party who entered the remainder of the alienated land on Long Creek, in Section 8 and 9, moved away shortly after submitting final proof. In 1909 an entryman was living on the S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, Sec. 22. At that time there were good buildings and ten acres in cultivation. This entryman abandoned his claim without deriving any benefit from his improvement because of the rugged character of same and its inaccessibility. The parties who entered and received patent for the alienated land in Section 23, 25, and 26, which lie at the foot of the mountains, in the Blalock Creek valley, found that as an agricultural proposition they were impractical, owing to the long distance from market and the scanty productivity of the soil. A portion of this unit which, in the opinion of the ordinary observer, might be classed as having an agricultural value, is the valley at the head of the Little Missouri River, in Section 1, 2, 3, and 4, in Township 4. The history of those who have attempted farming in this valley is direct evidence that same has but little, if any, agricultural value, and it certainly has not under present conditions. The only instance where agriculture has ever been attempted in these sections is an entry which was composed of the N $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 3 and the N $\frac{1}{2}$ NE $\frac{1}{4}$ Sec. 4, Township 4, which was made May 8, 1905; patent was issued on same August 8, 1912. This entry was fractional and comprised only 114.61 acres. The entryman was not aware of this fact until it was called to his attention by Forest officers; he then had the lines of his entry established and it was found that practically all his improvements were on Government land. He then made application under the Act of June 11, 1906, for forty acres to include the land in cultivation and which his improvements were on. Thirty-five (35) acres of the area applied for was listed to him, making a total of



149.61 acres. Less than ten acres of this tract has ever been in cultivation. Photograph No. 21990A shows the only field on the tract. Note the "leanness" both as to breadth and productivity, as verified by the stubs of the cornstalks left in the field after the corn was cut. Small ideas can be derived of the percentage of rock on the surface, owing to the carpet of snow, though numerous small boulders project through same. Lost Mountain, in Sec. 6, two and one-quarter miles away, is shown by the tall peak. This entryman was a cook by profession, and seldom on the land during the life of the

entry, or since, as his time was spent mostly at the mining camps at Slatington, camping parties, or restaurants in Mena. During his absence from the claim his wife, two little girls, and two boys attended to the cultivation and improvements of the entry, and this, coupled with what he made on the outside, barely enabled them to eke out a "sweat shop" existence. The two boys, when arrived at approximately 15 or 16 years of age, refused to isolate themselves longer from civilization and left home. The wife and mother and the two little girls remained on the claim until some time after final proof was made, when she too left and the place has been without human residence since. These cases are cited merely to show that those who have selected and been allotted the "cream" of the land in these townships have made an utter failure of producing sufficient crops upon which to exist with any degree of comfort, and without future expectation from the land other than its timber or slate value.

This valley will always be a nonproducer of agriculture. Even the timber in portion is far below the standard for this Forest. This fact is caused by so much slate and shale being so close to the surface that only a few consecutive days without rain and the ground becomes so excessively hot as to parch the growth upon it.

5. LAND CLASSIFICATION

24,196.94 acres within Forest
4,600.93 " alienated in Forest
19,596.01 " National Forest land, classified as follows:
17,845.47 acres nonagricultural
1,715.54 " held for intensive classification
35.00 " pending final proof

The majority of these tracts held for intensive work were held for no other reason except that they were covered by applications under the Act of June 11, 1906. Other tracts were held because entrymen living on June 11 homesteads claim they did not get all the agricultural land on the area applied for, while other tracts were held that had been applied for but been examined and rejected under a different policy from what is now in vogue on this Forest. The lines have been broadly drawn around these areas so that the examiners on the intensive classification work could examine all the land that had any possible agricultural value. In my estimation there will not be ten per cent of the land held for intensive work classified as agricultural. The accompanying chart shows the nearest school house, which is usually a church, in each direction. By this it will be seen that this unit, with the exception of the extreme southwest corner, is remote from schools, churches, markets, and settlements. Mena is the market point for this portion and is reached by a meandering route, over extremely rough roads, from twenty-five to forty-five miles of travel by wagon road.

6. TITLE TO LANDS

24,196.94 acres in National Forest
4,600.93 " alienated within Forest; passed from Government ownership as follows:
640.00 acres School Selection
920.00 " Cash Entry
227.05 " June 11 listing
560.00 " Timber Entry
2,347.05 " Agricultural Entry

Of this latter amount not over 240 acres are under plow in this unit. This leaves 2,107.05 acres of timberlands in the hands of farmers. Most of this land is on the market at a price less than its forest value, but being in such small bodies, with no possibility of enlarging these holdings, timbermen are not anxious for them.

Lands were surveyed from 1843 to 1848 and withdrawn from entry May 10, 1907.

7. FOREST VALUE

The unit has been used to a great extent in the past by cattle and hog men for grazing and argument has been made that it is an excellent range for this class of stock and land should be opened up to give stockmen a chance to establish ranches. It is true that from nine to ten months in the year cattle can live and grow fat on the range without any other feed, and hogs with the exception of a month or so in the summer, but on the Government land there is in no one place enough arable land in a body where any man would be able to grow enough forage and provision for his saddle horses and family while attending to his stock.

The unit is accessible by roads and trails. The total timber stand is estimated to be 11,593,700 feet b.m. Shortleaf pine and white oak predominate, though nearly all of the merchantable white oak has been cut. There is a large amount of red and black oak, beech, walnut, gums, hickory, and basswood. This unit no doubt contains more merchantable hickory and walnut than any like area on the Forest. No pine has been sold for commercial purposes, owing to the long, rough haul to market.

The small amount of agricultural holdings in this thickly settled country would indicate that it has never been looked upon favorably in that light, especially when it is taken into consideration that almost the whole of Township 5—outside the Forest boundary—is being farmed intensively.

INTENSIVE LAND CLASSIFICATION
Townships 4 and 5, Range 28 West, 5th P.M.
Arkansas National Forest
By
Wm. E. Wootten

There are 1,715.54 acres left for intensive classification in Township 4 south, described as follows:

	Section
All the Government land in S $\frac{1}{2}$ N $\frac{1}{2}$	1
SE $\frac{1}{4}$ NE $\frac{1}{4}$	2
SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, and all Government land in SW $\frac{1}{4}$ and SE $\frac{1}{4}$ NW $\frac{1}{4}$	7
N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$	8
N $\frac{1}{2}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$	13
SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$	22
S $\frac{1}{2}$ SW $\frac{1}{4}$	28
S $\frac{1}{2}$ S $\frac{1}{2}$	29
N $\frac{1}{2}$ S $\frac{1}{2}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$	30
NE $\frac{1}{4}$ NE $\frac{1}{4}$	31
N $\frac{1}{2}$ N $\frac{1}{2}$	32
N $\frac{1}{2}$ N $\frac{1}{2}$	33
NW $\frac{1}{4}$ NW $\frac{1}{4}$	34
S $\frac{1}{2}$ N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$	36-?

Township 4 south, Range 28 west

These are to be discussed in the following paragraphs:

Township 4 South

Sections 1 and 2.—The June 11 entry in these sections was made by William H. Luttrell under his application No. 333. The listing under the examination was 32.50 acres. The accompanying map shows the listing to be a very narrow tract and to include all the agricultural land upon the area applied for. In

fact, the entryman not having his lines established but thinking that he had secured all the immediate agricultural land cleared and fenced several acres of National Forest land. In order to square the conditions surrounding this entry and to make same a more natural farm unit, I would recommend that the following lands be listed for entry under the Act of June 11, 1906: SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, of Section 1, and E $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 2 be listed for entry. The acreage recommended in these sections amounts to approximately 57.50 acres.

Disapproved See page 40 II
W.L.H

Section 7.—The land held for intensive examination in this section has been applied for by J.C., A.H., and Lois Aleshire. Two or three June 11 examinations of this land have been made and each time rejected. In February, 1916, I again looked these lands over to see if in any way they later presented qualifications wherein they could be considered in the general classification of the Forest, and my conclusion was that they did not represent enough agricultural value to justify intensively mapping them. There are several maps of this section in the June 11 files. No land recommended for listing in this section.

Section 8.—Not enough Class 3 land in this section to justify its reproduction on the intensive map. No land recommended for listing in this section.

Section 13.—An application on the land in this section and a 40-acre tract in Section 18, Township 4 south, Range 27 west, was made by one Mr. Antony M. Reeves, of Big Fork. This area did not show enough land as good as Class 3 to constitute a farm unit and the intensive map was not reproduced for this report. No land recommended for listing.

Section 22.—The 160-acre tract held for intensive examination was solely due to the application upon it of Walker Smith, Application No. 1344. I was on the land for the first time in July 1909, and talked to Mr. James D. Henderson, who at that time had homestead entry on the area and was living upon it. He told me that he never expected to live there long enough to offer final proof as he could not open up enough land on the entire 160 acres to make a living. Mr. Henderson left the place and relinquished same on September 7, 1910, though his relinquishment was not turned into the land office until 1913, it being held by one of Henderson's former neighbors. There was a small patch of ground in cultivation which the party holding the relinquishment cultivated until he turned the relinquishment over to me in 1913. It is this small cleared spot that has caused an application to be made on the land. I have been on the tract many times and know absolutely that it is nonagricultural in character. I would recommend that no land be listed for entry in this section. The accompanying map shows the extreme limit of the Class 3 land.

Section 28.—The accompanying map shows that there is not enough land as good as Class 3 in this section to form a farm unit under the Listing Rules. No land is recommended for listing. The land in this section and Section 33 held for intensive examination was applied for by H.A. Bissell.

Section 29.—No land recommended for listing. The accompanying map shows the extreme limits of the Class 3 land.

Secs. 30-31.—There was not enough Class 3 land on the acreage held for intensive classification to justify reproducing the field map.

Sections 32 and 33.—The accompanying map shows the limits of the land as good as Class 3 that was to be found on the area held for intensive classification.

Sections 34-36.—A field examination showed that there was no land as good as Class 3 on the area held for intensive classification. No land recommended for entry.

There are 57.50 acres recommended for listing in this unit.

Disapproved W.L.H.

No land recommended for listing in Township 5 south.

EXTENSIVE LAND CLASSIFICATION

Township 4 North, Range 27 West

Arkansas National Forest

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system. The larger portion of the unit consists of the north slopes of Petit Jean Mountain and the north and south slopes of White Oak Mountain. Elevations range from 700 to 2,250 feet. The larger portion of the unit drains into the Petit Jean River. The rugged slopes are covered with rock and broken by numerous draws.

2. CLIMATE

The climate of the Arkansas National Forest is uniform. All the local crops are planted, grown and gathered between the occurrence of killing frosts.

3. SOIL

The soil is a poor, thin, sandy loam, covered with loose rock and broken with numerous outcrops of rock ledges. No soil is found better than Class 3.

4. AGRICULTURAL VALUE

The Government lands showing topographic possibilities of agricultural value were held for intensive field examination. Taken as a whole the unfavorable topographic features, coupled with the poor quality of the soil, preclude the probability of successful farming being carried on to any extent. Several small farms in the narrow bottoms and on the flat tops of the ridges are in cultivation, but with only indifferent success.

5. LAND CLASSIFICATION

26,272.68 acres in National Forest

5,672.13 “ alienated within the Forest

20,600.55 “ National Forest lands, of which

18,453.13 acres are classified as nonagricultural timberlands, having an average of
3,000 feet of timber to the acre, and –

2,147.42 “ held for intensive field examination.

6. TITLE TO LANDS

20,600.55 acres National Forest lands withdrawn from entry May 10, 1907, surveyed in 1842.

5,672.13 acres alienated lands passed from Government possession under School Selection, Cash, and Homestead entries.

7. FOREST VALUE

The area embraced in this unit has an average stand of about 3,000 feet of timber to the acre. Shortleaf pine predominates, being about 90 per cent of the stand; the balance is of mixed hardwoods consisting of white, red, and post oaks, gum and hickory. Some of the timber has been cut under Forest Service administration and applications are in for the purchase of several million feet more. The Government lands and unfenced private lands have been used as a public range for the grazing of cattle and hogs.

INTENSIVE LAND CLASSIFICATION

Township 4 North, Range 27 West

Arkansas National Forest

By

Wm. E. Wootten

There are 2,147.42 acres held for intensive field examination, described as follows:

	Section
SW $\frac{1}{4}$	1
NW $\frac{1}{4}$ SW $\frac{1}{4}$ and Lots 1, 2, 3, in E $\frac{1}{2}$	
Lots 1, 2, 3, 9, in W $\frac{1}{2}$	2
SE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	3
SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$	8
S $\frac{1}{2}$ S $\frac{1}{2}$ NW $\frac{1}{4}$	9
E $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$	10
S $\frac{1}{2}$ S $\frac{1}{2}$	13
SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$	17
SE $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$	15
NE $\frac{1}{4}$ NE $\frac{1}{4}$	20
E $\frac{1}{2}$ NE $\frac{1}{4}$	22
SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, all vacant land in W $\frac{1}{2}$	23
NW $\frac{1}{4}$	31
NE $\frac{1}{4}$ NE $\frac{1}{4}$	32
NW $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$	33

These are discussed in the following paragraphs:

Section 1.—The SW $\frac{1}{4}$ was applied for by F. E. Elkins, application 1119, and the W $\frac{1}{2}$ SW $\frac{1}{4}$ Lot 11 by C.S. Woodliff, application 1299. Lot 11 has no agricultural value whatever, and the SW $\frac{1}{4}$ is shown by the accompanying map not to have enough Class 3 land to justify listing under the prevailing rules.

Section 2.—In the extreme northeast corner there is an old abandoned homestead where a small area has been cleared and an old shack put up. The accompanying map shows the amount of Class 3 land in this section. No land recommended for listing.

Section 3.—The accompanying map shows the limits of the Class 3 land. No land recommended for listing.

Sections 8 and 9.—Not enough land as good as Class 3 to justify mapping. No land recommended for listing.

Section 10.—The Class 3 land lying along Sugar Creek in the NW $\frac{1}{4}$ is quite rocky and entirely too small in area to be considered under the listing rules. The Class 3 land in the NE $\frac{1}{4}$ is an old abandoned homestead which reverted to the Government. A small portion was at one time in cultivation but now grown up in bushes and saplings. This is the ordinary ridge type of land, draining several ways. The soil is very thin and poor, and while the slope would admit of plowing, the soil would not produce crops enough for the subsistence of the average Arkansas family. No land recommended for listing.

Sections 13, 15, 17, 20, 22, and 23.—The accompanying map shows that the land possesses little or no agricultural value. No lands recommended for listing in these sections.

Sections 31 and 32.—The Class 3 land in the NW $\frac{1}{4}$ Sec. 31 is not of enough volume to be considered as having agricultural value. The S $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Sec. 31 and the S $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 32 contains about 30 acres of Class 3 land. This should be withdrawn as an administrative site and

attached to the Cold Springs Ranger Station. This would give the Station the needed pasturage. There is not enough land here to constitute a farm unit. No land recommended for listing.

Section 33.—Not enough Class 3 land was found to justify mapping and no land is recommended for listing.

No land is recommended for listing in this township.

EXTENSIVE LAND CLASSIFICATION

Township 3 North, Range 27 West

Arkansas National Forest

By

Wm. E. Wootten

1. TOPOGRAPHY

This unit is in the Fourche Mountain system, and is composed of the north and south slopes of Dutch Creek Mountain, the north and south slopes of Freedom Mountain, and the south slopes of Petit Jean Mountain. Elevation range from 600 to 1,750 feet. The extreme southern portion drains into Fourche La Fave River, the balance drains into Dutch and Freedom creeks.

2. CLIMATE

The climate on the Arkansas National Forest is uniform. All the local crops can be planted, grown, and gathered between the occurrence of killing frosts.

3. SOIL

The soil of this unit is a poor, thin, sandy loam, with a large content of loose rock, broken at intervals with outcrops of rock ledges.

4. AGRICULTURAL VALUE

Taking the lands embraced in this unit as a whole, the agricultural value is small in comparison with the merchantable stand of timber and their value of growing timber. Were the ground cover removed from the rolling ridges, the thin soil would erode to such an extent that cultivation would be wasted effort. A number of deserted places along the top of Dutch Creek Mountain clearly show evidence of this. That portion of the unit showing any evidence of agricultural possibilities was held for intensive field examination.

5. LAND CLASSIFICATION

12,465.55 acres within the National Forest

2,016.87 “ alienated within the Forest

10,448.68 “ National Forest lands, of which 10,088.68 acres are nonagricultural timberland having an average stand of 3,000 feet of timber to the acre

360.00 “ held for intensive field examination

The merchantable timber will run 80 per cent shortleaf pine, the remainder being a scattering of hardwoods common to this Forest.

6. TITLE TO LANDS

National Forest land, 10,448.64 acres of National Forest land, surveyed in 1842 and withdrawn from entry May 10, 1907. Alienated land within the Forest. 2,016.87 acres. This land passed from Government possession under the various Cash, Timber and Stone, and Homestead entries. Not 10 per cent of the land (alienated) is in cultivation.

7. FOREST VALUE

The National Forest lands and the unfenced privately owned lands are used as a public grazing range for cattle and hogs. Some of the timber from the Government lands has been cut under Forest Service administration. Owing to the rough character of the country it is far more valuable for forest purposes than for agriculture.

Arkansas NATIONAL FOREST

CLASSIFICATION CORRECTIONS
Subsequent to submission of this report

Memoranda

Indicating nature of correction and reasons therefore

Correction 1 Unit Map No. 34

The classification map shows the following described land to be public:

N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, Section 1, T 3 S., R 25 W., 5th P.M.

Amended List 7-515 submitted on the application of J.P. Wheeler embraces 10 acres of land previously classified as nonlistable in Section 1, T 3 S., R 25 W. The land adjoins the tract heretofore listed upon which the present applicant filed homestead entry May 13, 1915 and when the Supervisor examined the claim for his final report it was found that a mistake had been made in for agricultural and similar in character to that originally listed. The land is therefore recommended for listing in accordance with the procedure outlines in the Forester's letter to the Secretary of October 13, 1915 and constitutes a correction of the classification.

Amended List 7-515 dated _____ 1920.

Correction 2 Unit Map No. 46

The NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 5, Tp. 2 S., R. 21 W., 5th P.M. was settled by Charles L. Thornton, Cedar Glades, Ark. on November 1902. This tract has valuable improvements thereon and would have been listed but was covered by Water Power Withdrawal No. 350. It can now be listed, however, since the Federal Water Power Act takes care of the water power.

List 7-742 dated December _____ 1921.

Correction 3 Unit Map No. 46

The SW $\frac{1}{4}$ SE $\frac{1}{4}$ and the SE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 5, Tp. 2 S., R. 21 W., 5th P.M. was settled by W.S. Noles, Cedar Glades, Ark., on Nov. 9, 1909. It is surrounded by patented land and has valuable improvements thereon. This land would have been listed but that it was covered by Water Power Withdrawal No. 350. It can now be listed, however, since the Federal Water Power Act takes care of the water power.

List 7-743 dated December _____ 1921.

Correction 4 Unit Map No. 36

In T 2 S, R 23 W, Sec. 21, NE NE NE SW; W $\frac{1}{2}$ E $\frac{1}{2}$ NE SW; SE SE NE SW – 15 acres.

The tract was listed June 26, 1914, in List 7-250, and opened to entry August 15, 1921. It was filed on by George C. King on November 30, 1914, but there is no evidence of clearings or improvements on this area. This entry was cancelled on February 12, 1920. Due to the steepness of slopes and broken character of the surface the soil is of character that would erode rapidly if cleared. The land has an average stand of 1100 board feet per acre of merchantable pine stumpage and is adequately stocked with thrifty pine second growth ten to twenty years of age. The tract has considerable value for simplification of administration, watershed protection and timber production. For these reasons, the classification should be changed, and the list should be recalled. Such action was taken by the Secretary of Agriculture on 7-23-1932, and constitutes a correction of the classification. The list was revoked by the Secretary of Interior on August 1, 1932.

Correction 5 Unit Map No. 6

In T 1 S, R 31 W, Sec. 14, S $\frac{1}{2}$ N $\frac{1}{2}$ NW - 40 acres.

This tract was listed April 13, 1915, in List 7-633, and opened to entry on June 30, 1910. No entries have been made on this tract. It was settled sometime in 1906 and for a time a garden was cleared and cultivated. The improvements are gone and the cleared area has reverted to forest growth. This tract has slopes ranging from 5% or less in parts of the stony creek bottom portion to 20% on the slopes and ridges and outside of the stony creek bottom there are no appreciable patches with slopes of 10% or less. The area has an average stand of 2100 board feet per acre of pine timber of good quality and it is adequately restocked with thrifty pine second growth ten to twenty years of age. The tract has considerable value for simplification of administration, watershed protection, and timber production. For these reasons, the classification should be changed, and the list should be recalled. Such action was taken by the Secretary of Agriculture on 7-23-32 1932, and constitutes a correction of the classification. The list was revoked by the Secretary of Interior on *August 3, 1932*.

Correction 6 Unit Map No. 6

In T 1 S, R 31 W, Section 11, SW SW - 40 acres.

This tract was listed June 18, 1908 in List No. 1675. Mr. Sidney Woolridge settled on this area in May 1907 and filed homestead entry March 22, 1909. That entry was relinquished on February 6, 1914. There has never been any clearing or improvements on this tract. Slopes range from 5% to over 20% and they are mostly in excess of 10%. Due to the slope and the character of soil this area would erode seriously if cleared. The tract has considerable value for simplification of administration, watershed protection and timber production. For these reasons, the classification should be changed and the list should be recalled. Such action was taken by the Secretary of Agriculture on 7-25-1932, and constitutes a correction of the classification. The list was revoked by the Secretary of Interior on *August 8, 1932*.

CORRECTION MEMO NO. 7 Unit Map Fourche Project,

Recall of list No. 7-489, Smith, Lee A. #658

T 2 N, R 19 W, Sec. 27, S $\frac{1}{2}$ SE NW - 20 acres.

Restored to entry May 12, 1915. This tract has been re-examined and the classification is reported as erroneous for the following reasons. It was entered November 1, 1915 by Lee Wood who later abandoned the tract leaving no evidence of clearings or improvements. The entry has been cancelled and the land is not now occupied or used. It carries an average stand of 1200 bd. ft. per acre of pine stumpage and is stocked with a thrifty growth of young pine 10 to 20 years of age. Much of the tract is subject to overflow from a stream which cuts across it. The soil is sandy loam, 3 to 4 inches deep with clay subsoil and erodes very quickly when exposed. The tract is not needed for administration or recreation but will find its highest public use as part of the National Forest in the production of timber. Order restoring to entry revoked by Secretary of the Interior on *November 17, 1932*.

CORRECTION MEMO NO. 8, Unit Map Fourche Project

Recall of part of Blanket List 7-540

T 2 N, R 17 W, Sec. 8, N $\frac{1}{2}$ NE SE, 5th P.M. - 20 acres.

Restored to entry July 10, 1915. This tract has been re-examined and the classification is reported as erroneous for the following reasons: There is no evidence that any settlement or improvements were ever made on the area. Due to the steepness of the slopes and the broken surface, the soil would erode rapidly if cleared and therefore could not be maintained in cultivation for more than a few years. The tract supports a stand of 300 bd. ft. per acre of merchantable pine and is adequately restocked with young growth of this species 10 to 20 years of age. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 26, 1932*.

CORRECTION MEMO NO. 9 Unit Map No. 12

Recall of List No. 7-725, Lewis, Nancy L. #1363

S ½ NW NE, Sec. 21, T 3 S, R 29 W, 5th P.M. – 20 acres.

Restored to entry pursuant to List 7-725, dated August 3, 1918. No entry was made. Largely due to erosion of the surface soil, this area is a series of flat top ridges and shallow drains with a stony and sandy loam. Areas of this type when cleared and cultivated produce fairly well for three or four years then are worn out. The land has an average stand of 670 feet b.m. per acre of merchantable pine stumpage and is fully stocked with young growth 10 to 20 years of age. The tract is isolated from any other lands with which it might be worked as a farm unit. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest on the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 26, 1932.*

CORRECTION MEMO NO. 10, Unit Map No. 19

Recall of List No. 3-1573, Jones, Jacob #42

E ½ SE SE, Section 36, T 4 N, R 27 W, 5th P.M. – 20 acres.

Restored to entry June 29, 1912. This tract was settled by the applicant in August 1906, who has since abandoned the area. The tract has been re-examined and the classification is reported as erroneous for the following reasons: About two acres of the land were once in cultivation but are now restocking with pine and oak. Parts of this cultivated patch are now eroded into gullies to a depth of two feet. All of the fertile soil has been washed away. The remainder of the 20 acres if cleared would erode in the same manner. There is not over 250 bd. ft. per acre of merchantable timber. The area is satisfactorily restocked with young pine. The tract is not large enough to constitute a farm unit. It is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 26, 1932.*

CORRECTION MEMO NO. 11, Unit Map No. 2

Recall of list No. 3-1741, Outlaw, Reuben R. #421

S ½ NW SW, S ½ N ½ NW SW, Sec. 29, T 4 N, R 30 W, 5th P.M. – 30 acres.

Restored to entry March 17, 1913. Entries were made successively by Reuben R. Outlaw, James E. Freeman and Robert W. Moon, all of which have been cancelled. The tract is now unoccupied. Approximately nine acres were cleared and a small house and barn built in the SW corner of the clearing. The buildings have now fallen to the ground and the field grown up to briars, brush and scattered pine. There is no merchantable timber on the tract. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 26, 1932.*

CORRECTION MEMO NO. 12, Unit Map No. 4,

Recall of List No. 3-2310, Sligar, A.W. #738

T 1 S, R 32 W, Sec. 20, E ½ SE NW SE, N ½ SW NE SE – 10 acres, 5th p.m.

Restored to entry March 14, 1914. No entries have been made on this tract. It has been re-examined and the classification is reported as erroneous for the following reasons: The surface is over 50% rock, resulting from the removal of the soil by repeated over-flows of the small stream which crosses the tract. It carries a stand of approximately 480 ft. B.M. per acre about 50 years of age. The area is largely stocked with young growth of gum, black oak, red oak and pine. The tract is not needed for administration or recreation but will find its highest public use as part of the National Forest in production of timber. There are no improvements. Order restoring to entry revoked by the Secretary of the Interior *November 17, 1932.*

CORRECTION MEMO No. 13, Unit Map No. 9

Recall of list No. 3-206, McCauley, Ida J. #100

T 4 S, R 30 W, Sec. 21, SE NE NE, SE SW NE NE, 5th P.M. – 12 ½ acres

Restored to entry December 30, 1909. No entries have been made on this tract. This tract has been re-examined and the classification is reported as erroneous for the following reasons. The tract is not being occupied or used. Except for about two acres of flat ground on the east end of the tract, the area is uneven consisting of small ridges and gullies. About one-fourth of an acre has been enclosed by the owner of the adjoining land through error in the location of his line. There are no other improvements. If cleared for agriculture the land would produce only light crops and its producing capacity would soon be destroyed by erosion, as is shown by the cleared land adjoining the tract to the southwest. The tract carries a stand of pine averaging 1,090 ft. B.M. per acre about 80 years of age. It is restocked fully with a stand of young pine 5 to 15 years of age. Owing to the abandonment of adjoining farms this land could not be used to advantage in connection therewith and is too small to constitute a farm unit. Order restoring to entry revoked by the Secretary of the Interior *November 17, 1932.*

CORRECTION MEMO No. 14, Unit Map No. 12,

Recall of part of Blanket List No. 7-736

T 3 S, R 29 W, Sec. 22, S ½ SW NE, SW SE NE, S ½ SE SE NE, 5th P.M. – 35 acres.

Restored to entry pursuant to List 7-736 dated August 3, 1918. The tract has been re-examined and classification reported as erroneous for the following reasons: About 5 acres was cleared at one time but has been abandoned and the tract is now unoccupied. There is not more than five acres within the tract which could be cultivated, the soil being too thin and rocky to permit successful agricultural use. The land supports a stand of pine of approximately 300 bd. ft. per acre. About 10 acres is well stocked with young pine 10 to 15 years of age, the balance of the area being stocked with inferior species. Much of the original soil on this tract has been washed away through frequent over-flows of the creek. The tract is not needed for administration or recreation but will find its highest public use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior *November 18, 1932.*

CORRECTION MEMO NO. 15 Unit Map No. 29

Recall of part of List No. 3-1519, Hunnicutt, W.C.

T 3 N, R 25 W, Sec. 18, NE NE SE NE

Restored to entry May 2, 1912. This tract has been re-examined and the classification reported erroneously for the following reasons: It has remained open to entry since May 1912 but has never been filed on. There have never been any clearings or improvements. It is not being occupied or used at present. The soil is such a character as to be subject to destructive erosion if cleared as is shown by such action on adjacent similar land. There are no merchantable hardwoods or pine on this tract but there is satisfactory restocking or young pine 3 to 5" in diameter. Its highest value for public purposes is in the production of forest products. Order restoring to entry revoked by Secretary of the Interior *November 19, 1932.*

CORRECTION MEMO No. 16, Unit Map Fourche Project

Recall of List 7-481, Winters, D.C. #809

T 3 N, R 20 W, Sec. 27, N ½ NE NE; Sec. 26, NW NW NW; and Sec. 23, SW SW SW, 5th P.M. – 40 acres

Restored to entry May 12, 1932. There is evidence that part of this tract was cleared and a house built over 20 years ago, of which nothing now remains except part of the stone foundation. Owing to the steepness of the slope this character of soil will soon wash if cleared. The soil is a light sandy loam about 4 inches in depth. There is a stand of 1500 feet b.m. per acre of pine timber and the tract is stocked with pine young growth 10 to 20 years of age. The tract is not needed for administration, or recreation but will

find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 18, 1932*.

CORRECTION MEMO NO. 17 Unit Map No. 8,

Recall of List No. 3-2575, Ashcraft, N. E. #680

E ½ W ½ SW SE, W ½ E ½ SW SE, Sec. 28, T 3 S, R 30 W, 5th P.M. – 19.55 acres.

Restored to entry March 4, 1914. Entries were made successively by Frank Messall and Orvil B. Ashcraft, whose entry was cancelled on September 17, 1931. A Mr. Garland lived in the house for about a year and left in 1930 without making entry. The tract is now unoccupied. Approximately two acres were cleared and fenced and a small one-room cabin built of rough lumber and used as a dwelling. Bed rock is very close to the surface on the entire area. The soil contains over 50% loose rock. This tract is isolated from any other lands with which it might be consolidated as a farm unit and from any market or community center. The soil is stony and it would not be possible to cultivate the slopes. The two acres cleared is the only part level enough to be cultivated and this area has washed so that there is little soil left. The stony creek bottom is entirely non-agricultural. The tract is not needed for administration or other public purposes, but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 30, 1932*.

CORRECTION MEMO NO. 18, Unit Map No. 39

Recall of List No. 3-2528, Duvall, Henry M. #133

E ½ E ½ SE, SE SW SE SE, Sec. 11, T 1 S, R 23 W, 5th P.M. – 42.50 acres

Restored to entry October 15, 1913. The tract has been re-examined and the classification is found to be erroneous for the following reasons: There is no evidence of any clearings or improvements on the tract. The land borders a small creek for about one-half mile and the greater portion is subject to over-flow, the balance being very rough. It does not adjoin any agricultural land. The soil is a sandy loam 3 to 4" in depth and would be rapidly washed away if cleared. The tract carries a stand of 900 bd. ft. per acre of pine with a considerable volume of cedar suitable for poles. There is an excellent stand of young growth 10 to 30 years of age. The land is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *November 23, 1932*.

CORRECTION MEMO NO. 19, Unit Map No. 5,

Recall of list No. 7-717, Henry U. Dickerson #1335

" " " " 7-716 Olke W. " #1327

T 1 N, R 31 W, Section 10, S ½ S ½ SW, S ½ N ½ S ½ SW, S ½ SW SE, S ½ NW SW SE, NE NW SW SE, NE SW SE, SE NW SE, E ½ SW NW SE, SE NW NW SE, S ½ NE NW SE, 5th P.M. – 120 acres.

Restored to entry July 25, 1919. This tract has been re-examined and the classification is reported as erroneous for the following reasons: There is no evidence of any settlement or improvements. The soil is a stony sandy loam 6 to 8" deep over a stony clay. Bed rock out-crops at ridge ends and along the drain. If this tract were cleared the small amount of fertile surface soil would soon be washed away resulting in deep gullies, as evidence by such action on fields of a similar character within one-quarter mile of this land. The tract has a stand of over 1100 board ft. per acre of merchantable timber and is fully stocked with thrifty young growth. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *December 7, 1932*.

CORRECTION MEMORANDUM NO. 20

FOURCHE PROJECT

Arkansas, Classification

- List 7-530- T 2 N, R 20 W, Sec. 15, S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$; Sec. 22, NW $\frac{1}{4}$ NE $\frac{1}{4}$. Date of list Feb. 2, 1915; date of restoration to entry May 12, 1915; Listed on application #1209 of D. Rynders, Hot Springs, Ark., List revoked Apr. 3, 1919.
- List 7-284- T 2 N, R 18 W, Sec. 13, S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$. Date of list July 1, 1914; date of restoration to entry, Nov. 30, 1914; Listed on application #834, of O. Bean, Reform, Ark., List revoked subject to valid claim Oct. 15, 1918; Patent issued Mar. 1, 1920.
- List 7-532- T 2 N, R 18 W, Sec. 36, W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$. Date of list Feb. 2, 1915; date of restoration to entry May 29, 1915; Listed on application #961, of W.C. McDonald, Roland, Ark., List revoked Nov. 6, 1918.
- List 7-548- T 2 N, R 18 W, Sec. 20 E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$. Date of list Feb. 2, 1915; date of restoration to entry, May 12, 1915; listed on application #1215, of Robert Alexander, Madill, Okla. List revoked Nov. 6, 1918.
- List 7-480- T 3 N, R 20 W, Sec. 25, S $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$; Date of list Jan. 12, 1915. date of restoration to entry, May 12, 1915. Listed on application #810, of J.F. Glasgow, Hollis, Ark., List revoked Nov. 28, 1918.
- List 7-543- T 2 N, R 17 W, Sec. 17, SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$; Sec. 20, W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ E $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$. Date of list Feb. 2, 1915; date of restoration to entry, May 12, 1915. Listed on application #914, of E.F. Harviell, Reform, Arkansas, List revoked Nov. 6, 1918.

The above described areas are shown in the Classification Report as listable land. No filling has been made on the tracts, although applications were notified of listings.

These areas are part of the land classified as listable in the LaFourche Classification Project.

Since listings were made it has been found that an erroneous classification was given to the land, and that in fact it is wholly unsuited for agriculture and should have been classified as nonlistable land.

On September 5, 1918, the Secretary of the Interior was, therefore, requested to revoke the order restoring the above, and constitutes a correction in the classification.

CORRECTION MEMORANDUM NO. 21

FOURCHE PROJECT

Arkansas, Classification

Lists Nos. 7-540- 7-547

Township 2 North, Range 17 West, 5th P. Meridian (Little Rock L.D.)

Section 6, NW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$

“ 17, SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$

Township 2 North, Range 18 West,

Section 15, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$

“ 17, N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$

“ 25, SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$

“ 36, W $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$

Township 3 North, Range 19 West

Section 32, W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$

Township 1 North, Range 20 West

Section 5, NW $\frac{1}{4}$ SE $\frac{1}{4}$

“ 8, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$

“ 9, N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$

“ 17, S $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$

Township 2 North, Range 20 West,

Section 2, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$,

“ 11, W $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$,

“ 12, S $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$

“ 19, W $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$,

Township 3 North, Range 20 West,

Section 21, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$

“ 22, S $\frac{1}{2}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$

“ 23, N $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$,

“ 24, SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$,

“ 26, S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$

Township 2 North, Range 17 West, 5th P. Meridian (Little Rock L. D.)

Section 6, S $\frac{1}{2}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$

Township 2 North, Range 18 West,

Section 19, SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$

Township 1 North, Range 19 West,

Section 1, S $\frac{1}{2}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$,

Township 3 North, Range 20 West,

Section 19, NW $\frac{1}{4}$ Lot 1, N $\frac{1}{2}$ Lot 2, N $\frac{1}{2}$ Lot 3,

Total area 800.40 acres.

The above designated tracts comprise portions of the area listed in two blanket lists, Nos. 7-540 & 7-547, dated February 1, 1915, and February 25, 1915, respectively. The land was restored to entry on July 7, 1915.

These tracts are shown in the Classification Reports as listable land, but no part of the land has ever been filed upon, occupied or used in any way.

When these listings were made the land was thought to have agricultural values. Subsequent investigation and observation have fully determined the non-agricultural character of the land, and established the fact that it should not have been included in the lists. It is, therefore, classified as non-listable.

On October 5, 1918, the Secretary of the Interior was requested to revoke the order restoring to entry the above described tracts of land in Lists 7-540 & 7-547.

Such action was taken on October 24, and October 5, 1918, and constitutes a correction in the classification.

CORRECTION MEMO #22 Unit Map #16

Recall of list #7-735 Hess, P.A. #330

T 1 S, R 28 W, Sec. 25, W $\frac{1}{2}$ W $\frac{1}{2}$ NW NE, 5th P.M. 10 acres.

Restored to entry July 25, 1919. No entry has been made upon the tract. Four acres have been cleared, one acre contains house, barn, storm cellar and garden, remaining, five acres contain an old apple orchard. The house has been a good one, but is now run down and it has been deserted for several years except for transients. The house was occupied during 1931 and part of 1932 by loggers, but is now abandoned and the small garden was worked during the time by the loggers. The orchard has been abandoned so long that it is valueless. The surface of the four acres, which have been cleared, is rocky with yellow sandy clay soil. The remaining six acres are rough and rolling with several small side hollows, subject to erosion, rendering them unfit for cultivation. The tract is not needed for administration or for public purposes and will find its highest use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *February 7, 1933.*

CORRECTION MEMO # 23 Unit Map #21

Recall of Supplemental List #7-412 Ousley, Alex #982

T 2 N, R 28 W, Section 13, N $\frac{1}{2}$ NW SE NE, N $\frac{1}{2}$ NE SW NE, 5th P.M. 10 acres.

Restored to entry July 25, 1919. This tract has been reexamined and the classification is reported as erroneous for the following reasons: There is no evidence of any settlement or improvements. The soil is a sandy stony loam 4 inches to 6 inches deep over a yellow clay loam and compact clay, with bed rock at an average depth of 2 feet. The East end of the 10 acres is traversed by a deep ravine covered with loose rock and the soil contains over 50% loose rock. This area is adjacent to another June 11th entry of 40 acres which has been patented but has been abandoned on account of non-agricultural possibilities. The tract is not needed for administration or recreational purposes but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *February 13, 1933*.

CORRECTION MEMO #24 Unit Map # 8

Recall of List #7-347 Ford, W.T. #805

T 3 S, R 31 W, Sec. 12, SE NE, NE SE, 5th P.M. 80 acres.

Restored to entry November 30, 1914, entries were made successively by W.T. Ford and Wm. E. Bailey. A. B. Abshire claims to have made entry, but he has not resided on the tract for over a year. There are approximately five acres of cleared land. There is part of an old house on the area which has no value and is unfit for occupancy. The rock is sandstone. Outcrops of solid rock along the creeks and drains indicate that the soil varies in depth from one to four feet. The areas along the creek are subject to overflow and the surface soil contains over 50% loose rock. The area is now in unsuitable locality and is inaccessible. All the people formerly living in the community near this tract have moved away and part of such lands have been acquired for National Forest purposes. Small patches of land from two to fifteen acres might be cleared for agricultural use on the smoother slopes but would be destroyed by erosion if cleared. The small area under cultivation during the past season indicates that the soil is of low productivity. The tract is not needed for administration or for public purposes but will find its highest use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *February 26, 1933*.

CORRECTION MEMO #25 Unit Map #23

Recall of part of Blanket List No. 7-736

T 1 S, R 27 W, Sec. 4, N $\frac{1}{2}$ S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ 5th P.M. 15 acres

This 15 acre tract is a portion of a tract of 118.85 acres included in List #7-736 restored to entry in 1918. On January 21, 1925, Mary A. Mays, entered as a homestead and later patented 103.85 acres of the original list. The remaining 15 acres were not entered. This tract has been reexamined and the classification was reported as erroneous for the following reasons: There are no improvements or clearings on the tract and it is unoccupied. The land is too steep for agricultural purposes and would be subject to severe erosion if it were cleared. The soil is sandy clay mixed with many surface rocks. The tract is traversed by two streams which have a fairly wide rocky bottom with no surface soil. The tract contains excellent stand of young timber. It is well stocked with pine reproduction, a large part of it being in the pole size. The tract is not needed for administration or recreation, but will find its highest public use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *March 8, 1933*.

CORRECTION MEMO #26 Unit Map #33

Recall of List #7-623 Willard, Edmund #776

T 1 N, R 24 W, Section 5, N $\frac{1}{2}$ SW NE NW, SW SW NE NW, N $\frac{1}{2}$ SW NW, W $\frac{1}{2}$ W $\frac{1}{2}$ SE NW, 5th P.M. 37.5 acres.

Restored to entry August 30, 1915. This tract is now unoccupied. There are three acres of old cleared land. This tract was filed on in conjunction with the adjoining land which at that time was

improved. The settlers who were on this improved tract have long since moved away. The land and location of the tract were such that it was impossible to make a living. About 25 acres are rough broken creek bottom, overflowed during wet weather. The soil contains more than 50% loose rock on the 25 acres and less than that on the 12.5 acres and is a yellow sandy clay which is subject to erosion when cleared. While eight acres of this tract, including the three cleared acres are equal in agricultural value to some of the land that is being farmed they are not of permanent agricultural value, since much similar land in the same locality has been abandoned. The tract is not needed for administration or other public purposes but will find its highest use as a part of the National Forest in the production of timber. Order restoring the entry revoked by the Secretary of the Interior on *February 21, 1933*.

Correction Memo #27 Unit Map #39

Recall of List #7-33 Abbott, James M. #807

T 1 S, R 22 W, Section 17, W ½ NW NW – 20 acres.

This tract was listed on December 18, 1913. List was suspended on account of Power Site Withdrawal #350. Subsequent classification shows this land chiefly valuable for power purposes. List recalled *May 3, 1933*.

Correction Memo #28 Unit map #La Fourche

Recall of List #7-582 Schenk, John #1227

T 2 N, R 17 W, Sec. 30, NW NE SE, NE NW SE, containing 20 acres.

Restored to entry May 12, 1915. There is no *bona fide* settlement. The entryman's residence of the most sketchy kind and largely a phase of his engagement on fish and game work. There has been no active cultivation and no apparent intent to do any. There is a tract of 20 acres lying on Alum Fork of the Saline River with an altitude of about 800 feet. Ten acres is fairly level and suitable for farming and the balance is rocky and apparently subject to overflow. The tract is not needed for administration or recreational purposes but will find its highest use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *July 17, 1933*.

CORRECTION MEMO #29 Unit Map # La Fourche

Recall of List #7-292 Barr, Ed, # 794

T 1 N, R 19 W, Sec. 2, S ½ SE ¼ NW ¼, S ½ SW ¼ NE ¼, SW ¼ SE ¼ NE ¼ 49.815 acres.

Restored to entry May 12, 1915. There are no clearings or improvements on the tract. The area is fully stocked with young pine ten to fifteen years of age. The tract has considerable commercial value on account of the present stand of 1100 feet BM per acre of merchantable timber. The soil is a light sandy loam overlaid with yellow clay. There is no permanent surface water on the tract. Nearby tracts, after being cleared, soon washed to such an extent they have been abandoned. The tract will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *August 17, 1933*.

CORRECTION MEMO # 29 a Unit Map # 24

Recall of List #7-729 Lowery, Charles

T 4 S, R 27 W, Sec. 27, NW ¼ SE ¼ NE ¼ 10.00 acres.

Restored to entry February 10, 1919, the tract has remained unentered for fifteen years after restoration. The soil is gravelly clay loam and the subsoil is a stony clay. The southern slope is a pine site and is fully stocked to pine reproduction about ten years old. The northern slope is a hardwood site and is fully stocked with young white and red oak, sweet and black gum and hickory. The tract will find its highest use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *August 22, 1933*.

CORRECTION MEMO #30 Unit Map 23

Recall of List No. 3-556, Wickoff, Canada E., #51.

T-1-N, R-27W, Sec. 10, NW $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ 5th P.M. 60 acres

Restored to entry April 3, 1912.

There has been no recent occupancy. This tract contains a good stand of virgin timber, except the three acres that are cleared. The pine is of good quality and averages 4,670 feet B.M. per acre. There is a fair stand of pine reproduction. The slopes are rolling, the surface soil is stony sandy loam six inches deep over a yellowish clay; bed rock would not average over three feet below the surface. The tract is not needed for administration or recreation, but will find its highest public use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *August 22, 1933*.

CORRECTION MEMO #31 UNIT MAP #

Recall of List 7-25 Weldon, Robert E. #848

T 2 N, R 22 W, Sec. 21, E $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$;

Sec 28, E $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$; S $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$; N $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$; NW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$

Containing 75 acres.

Restored to entry June 17, 1914. There are no buildings on the tract but about 12 acres shows to have been cleared but cultivation has been abandoned and the area is now restored to pine. The surface is rocky and if cleared would be subject to severe erosion. The soil is a light sand and loam with sand stone boulders. The tract is not needed for administration or recreational purposes but will find its highest use as a part of the National Forest in the production of timber and watershed protection. Order restoring to entry revoked by the Secretary of the Interior on *February 16, 1935*.

CORRECTION MEMO #32 UNIT MAP #20

Recall of List 7-199 Wilson, A.T. #918

T 3 N, R 27 W, Sec. 29, N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$, 5th P.M. Containing 40 acres.

This tract was listed on June 10, 1914. No entry is of record on this land. None of the land has been cleared or cultivated in any manner. The soil is thin, rock outcrops numerous with large boulders everywhere on the area. Pine timber was cut in 1923, except for 5 acres which is relatively good. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring the entry revoked by the Secretary of the Interior on *February 16, 1935*.

CORRECTION MEMO # UNIT MAP #

Recall of Blanket List 7-540

T 3 N, R 20 W, Sec. 24, N $\frac{1}{2}$ N $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ - Containing 60 acres.

This 60 acre tract is a portion of a tract included in List 7-540 restored to entry in 1915. In August 1931 Simon Howard settled upon this tract and advertised for final proof in September 1934. About 2 acres have been improved with dwelling, garden and some outbuildings, but only a very small portion of the land is under cultivation. The soil is a light sand loam with rock bed and if cleared would be subject to severe erosion. This tract is stocked with a thrifty young growth of pine 4 inches and over. This tract is not needed for administration or recreation, but will find its highest public use as a part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *February 16, 1935*.

CORRECTION MEMO # 34 UNIT MAP# 21

Recall of List 7-599 Taylor, C.M. #1202

T 2 N, R 27 W, Sec. 27, SE NE NW – Containing 10 acres.

This tract was listed on March 19, 1915. No entry is of record on this land. Three acres have been cultivated by Cecil Elliot. There is a small house and some improvements on the land. The southern part of this tract could be cultivated but the area is too small to support a family. The remainder of the tract is sandy loam with numerous scattered surface rocks. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *February 16, 1935*.

CORRECTION MEMO # 35 UNIT MAP #41

Recall of List 7-24 Sawyer, Thomas M. #785

T 2 N, R 22 W, Sec. 22, S ½ SW – containing 80 acres.

This tract was listed on December 18, 1913. No entry is of record on this land. The soil is a light sand loam with rock bed and if cleared would be subject to severe erosion. The area is restocked with young pine ten to fifteen years old and has a considerable commercial value. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest in the production of timber. Order restoring to entry-revoked by the Secretary of the Interior on *February 16, 1935*.

CORRECTION MEMO # 36 UNIT MAP #39-1

Recall of List #3-2447 Clark, Henry C. #727

T 1 S, R 23 W, Sec. 28, W ½ SW NW – Containing 20 acres

This tract was listed on April 2, 1913. Entries have been made on this tract by Bettie Taylor and Henry C. Clark, but no claims are known to exist at this time. About ½ acres is now being cultivated by Zack Smith, who resides on the adjoining forty. The soil is a gravelly clay loam with some sand in level spots. The tract is about 50% restocked with pine about 5 years old and has a good stand of young poles 4 to 6 inches in diameter. The tract is not needed for administration or recreation but will find its highest use as part of the National Forest is the production of timber. Order restoring to entry revoked by the Secretary of the Interior on *May 10, 1935*.

CORRECTION MEMO # 37 UNIT MAP # 25

Recall of List #3-274 Pasley, Oliver

T 4 N, R 26 W, Sec. 2, S ½ SE of Lot 9,

SE ¼ and E ½ SW ¼ Lot 10, containing 19.97 acres.

This tract was listed on September 21, 1909. Entries have been made on this tract by Oliver Pasley and T.N. Flood, but no claims are known to exist at this time. None of the land is in use at the present and has not been occupied for twenty years. The soil is very poor and unfit for agricultural purposes. The five acres of fields are excellently restocked with young pine averaging about 5 inches in diameter, 400 to the acre and 40 feet tall. The former classification is erroneous and should be classified as non-listable. The tract is needed for administration of the Ouachita National Forest, especially Pigeon Creek Game Refuge. Order restoring to entry revoked by the Secretary of the Interior on *February 5, 1937*.