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Economic Geography of Lincoln County

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ECONOMIC GEOGRAPHY OF LINCOLN COUNTY

A Thesis Submitted to the Department of Geography of Marshall University in Partial Fulfillment of the Requirements for the Degree of Master of Arts

By

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PREFACE AND ACKNOWLEDGMENTS

The writer of this thesis lives in Lincoln County, near the town of West Hamlin, and teaches in a secondary school of the county. She has been interested in the economical life of the county and chose this topic as a means of actually studying problems of the county.

Research methods have been somewhat limited with reference to library work, since little material is available except certain state and federal government publications. A number of persons have been interviewed and they have contributed greatly to the success of this study. Especially helpful was Lester Espy, Federal Soil Scientist, who furnished information about the soil as yet not published. Dr. Sam E. Clagg of the Department of Geography at Marshall University helped secure maps used in the study. Dr. Leslie M. Davis also of the Department of Geography helped with the planning of the thesis.

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INTRODUCTION AND STATEMENT OF THE PROBLEM

THE COUNTY AREA

The tradition of hardy independence and love of liberty has flourished long and well in the state of West Virginia. When Virginia seceded from the Union, many settlers of its western counties objected strongly, as they were loyal to the Union. The leaders of the region decided to govern themselves, and from the action taken by these hardy individuals, the state of West Virginia was admitted to the Union on June 20, 1863.

Four years later in 1867, the formation of the county of Lincoln was wrought with similar events. Virgil A. Lewis noted in his writings on West Virginia:

> Lincoln County was the third county formed after the organization of the new state of West Virginia. It was formed by an Act of the Legislature passed February 23, 1867, establishing the county of Lincoln out of parts of Cabell, Putnam, Kanawha, and Boone Counties. The county was named in honor of Abraham Lincoln, the sixteenth President of the United States.[1]

Even the naming of the county developed into quite an issue. As was noted, the state came into existence during the Civil War, and had within its area both Union

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[1]Virgil A. Lewis, History of West Virginia (Philadelphia: Hubbard Brothers, 1889), p. 730.

and Confederate followers. In 1872, much controversy developed between the northern and the southern sympathizers over the renaming of the county. The Union Democrats were in the minority and objected bitterly to the manner in which the ex-Confederates controlled the Convention of 1872 and to their proposals to change the names of two of the counties. Had the southern sympathizers been successful in the renaming of these counties, Grant County would now be known as Davis County and Lincoln County would be known as Lee County. This definitely would have reflected a bit of southern atmosphere.[2] It is not clear as to what happened to the proposals for the renaming of these counties. However, one thing is certain, each county retained its original name.

Aside from the heated discussions that developed over the attempts to rename the county, other controversial issues evolved. The adjoining counties realized that they stood to lose a portion of their territory, and, as a consequence, much dissension arose among the counties concerned. This dispute did not culminate until 1955.[3]

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[2]Charles H. Ambler, West Virginia The Mountain State (New York: Prentice-Hall, Inc., 1947), p. 437.

[3]Edgar B. Sims, Making A State (Charleston: Mathews Printing and Lithographing Company, 1956), pp. 29-33.

One of the deciding factors in the establishing of the county of Lincoln was a provision of the State Constitution of 1863 which fixed a minimum area of 400 square miles for each new county formed. In 1872 this was raised to 600 square miles, below which existing counties could not be reduced. As a consequence, this almost put an end to the creating of new counties, and since that time only five new counties have been created, Lincoln County being one of the five new counties.[4]

The sequence in establishing the Lincoln County boundary line was discussed by Sims:

> Three acts were passed (1867-1868-1869)* before Lincoln County was finally established. The 1867 boundary was formed from areas of Boone, Cabell, Kanawha, and Putnam. In 1868 somewhat larger areas were taken from Boone, Cabell, and Kanawha; all of Little Hart Creek and Big Ugly were added from Logan, and Bowen Creek from Wayne. Putnam's territory was restored. As Lincoln yet lacked the required four hundred square miles, an amended act was passed in 1869 forming the county from Boone, Cabell, Kanawha, Logan, and Wayne.[5]

In the second section of the Provision of 1869, the boundary line of Cabell County was moved farther south and encompassed the township of Sheridan. This area was

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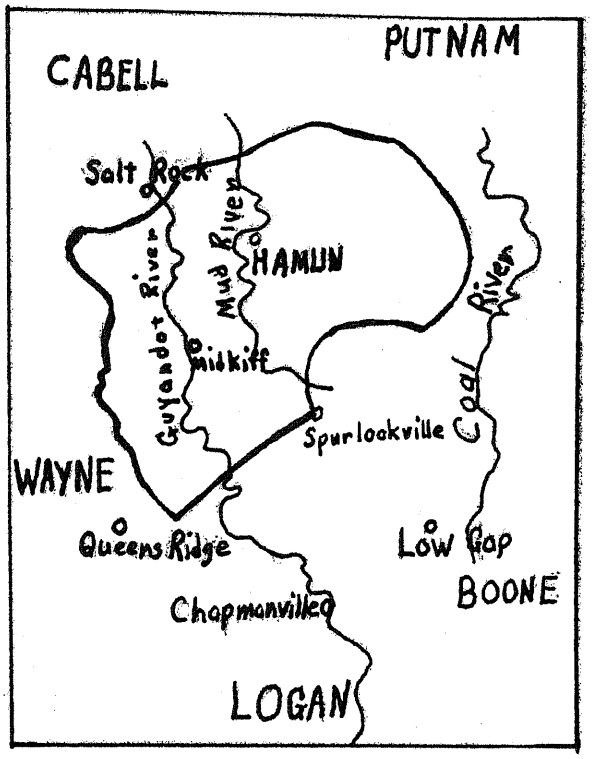
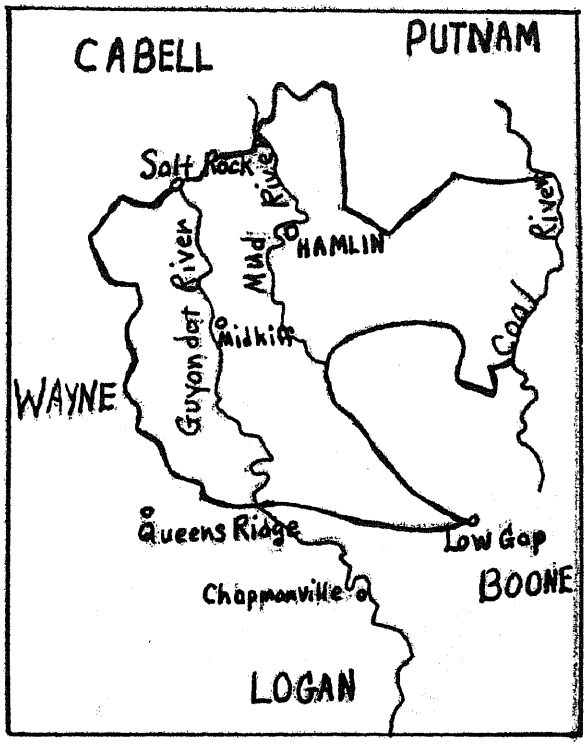
[4]Ambler, op. cit., p. 407.

*See Figures 1 and 2 of Lincoln County.

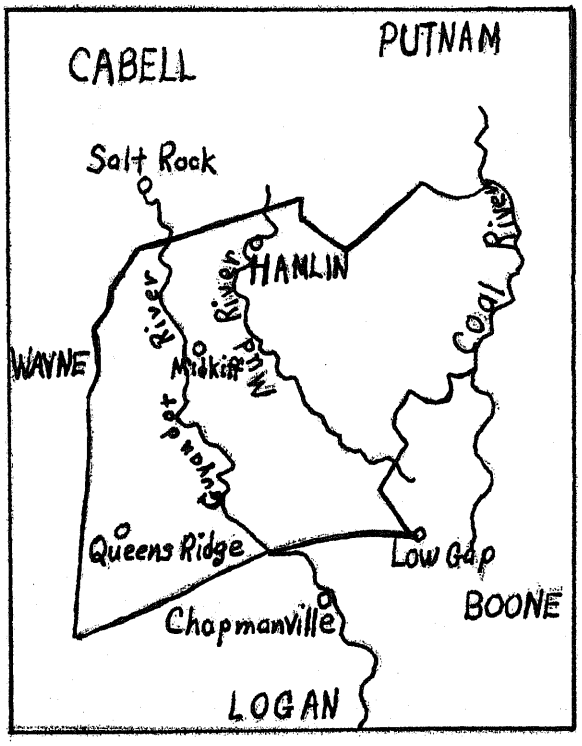
[5]Sims, op. cit., p. 91.



MAP A



MAP B



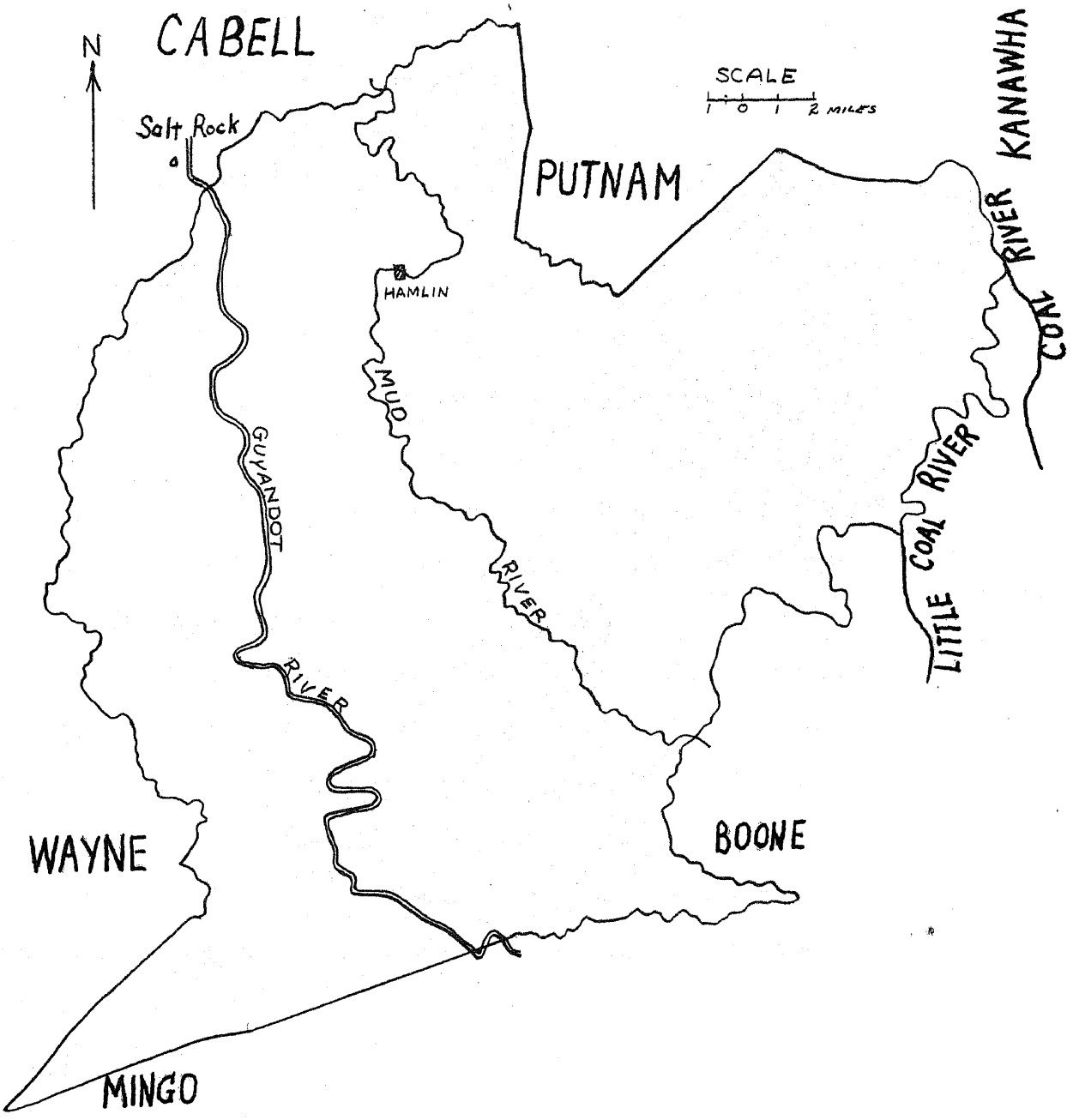
MAP C

MAPS A, B, AND C REPRESENT THE LINCOLN COUNTY BOUNDARY CHANGES MADE BY LEGISLATIVE ACTS, AS NOTED BY DATES—1867, 1868, AND 1869.[6]

FIGURE 1

[6]Sims, op. cit., p. 213.

LINCOLN COUNTY, WEST VIRGINIA



THE PRESENT BOUNDARY LINE OF LINCOLN COUNTY AS ESTABLISHED BY LEGISLATIVE ACT IN 1955[7]

FIGURE 2

[7] Sims, op. cit., p. 211.

attached to the township of McComas in Cabell County. Later, it seems the boundary line between the two counties was moved to a more northern location. It is not known what prompted the movement of the boundary line to its present location. Nor is it known what arrangement was made between the two counties for such an agreement. The area in question, however, has been taxed in Lincoln County since 1869. Under the Provision of 1869, the territory of Bowen Creek, Charley Creek, Raccoon, and the area south of Salt Rock was restored to Cabell County. In 1872, another change in the boundary line of Lincoln County was made. All of the headwater area of the east fork of Twelve Pole Creek was restored to Wayne County.

It became evident that a permanent boundary line between Lincoln County and Cabell County should be established. Realizing this need the Cabell County Circuit Court appointed Commissioners to establish a fixed boundary line between the two counties. This was accomplished in 1929. The boundary proposals that had been drafted by the Commissioners were legally established in 1955.[8]

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[8] Simms, op. cit., pp. 91-92.

THE PROBLEM

Lincoln County has held the interest of the writer for several years. Being a native of this rural county and residing within the county, she has found that information pertaining to the geography of the county is limited. The writer is also aware that there are other native sons and daughters who have found this problem equally perplexing. As a noted teacher has well said:

> Man can no more be scientifically studied apart from the ground which he tills, or the lands over which he travels, or the seas over which he trades, than the polar bear or desert cactus can be understood apart from its habitat. . . .[9]

Before a complete survey can be offered, one must consider the environmental features of the county and the manner in which the natives have adapted themselves to their environment. Therefore, a desire for knowledge pertaining to the county has challenged the writer to undertake a survey that will shed light on the subject.

Statement of the problem. It was the purpose of this study (1) to make a general survey of the geography of Lincoln County, West Virginia; (2) to show the present economic activities of the county; (3) to outline the

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[9]Ellen Churchill Semple, Influences of Geographic Environment (New York: Henry Holt and Company, 1911), p.2.

transportation and communication system of the county; (4) to show the population distribution of the county; and (5) to offer some light on the probable future economy of the county.

Importance of the study. A comparison of the census count of Lincoln County between the years of 1930 and 1960 showed an increase in population of only 111 people. During this thirty-year period, many changes have been noted—wars, industrial booms, and advancements in technical knowledge. Even so, none has markedly affected the economy of Lincoln County.

Lincoln County has, since the days of the horse-drawn plows which frequented the hill-side farms, remained nearly static in her population growth. In the early days of Lincoln County's history, the population movement was hampered by poor roads and poor means of conveyance. Today, with the modern modes of transportation and improved highways, the younger generation finds it less difficult to seek employment in other counties of West Virginia and other states. This movement of the natives to other areas results in a loss in the population of the county.

It is the consensus of the writer that a more extensive survey of the natural resources of the county should be made. After such a survey has been made, the results should be made available to any and all industries that

might be interested in locating within the county. This could best be accomplished if the natives would develop a better understanding of the potentialities which the county offers and show more interest in the selecting of congressional and state leaders to represent the county.

Limitations of the study. Because of the limited amount of material written on this subject, the research was confined to the history books written on the state of West Virginia, the history of the county involved, interviews with county and state officials, residents of the county, the County Agricultural Agent, the County Soil Conservation Department, the County Forestry Service, the study of the State Departments of Mines and Highways, and the United States Census reports.

CHAPTER II

ENVIRONMENTAL FACTORS OF LINCOLN COUNTY

The environment no longer controls man's activities so completely as it did in the ancient past. In studying the physical earth geologists have found that great portions of the globe have undergone many changes which forced the living creatures to migrate to regions more suitable for sustaining life. Even though man has learned to cope with the geographical factors of his environment, he still lives somewhat at the mercy of nature. The rotation of this planet and its relation to the sun gives us our diurnal and seasonal changes and the topography and location determine the climate of a certain region. Even though man can now influence certain phases of his environment, great geological changes, such as earthquakes, tidal waves, and volcanic action can alter the face of the earth in just a few minutes.

If man is to continue to exist on this planet he must take into consideration the environmental factors of the region in which he lives and adapt himself to the geography of his locality. Thus, in making a survey of the geography of Lincoln County, the writer will give a brief summary of the environmental factors: (1) the location and size of the county; (2) landforms and streams; (3) climate

of the county; (4) soils of the county; and (5) mineral resources of the county.

LOCATION AND SIZE OF THE COUNTY

The topography of the state of West Virginia can be divided roughly into four sections: the lowland, known as the Ohio Valley section; the hilly section, referred to as the Allegheny Plateau; the mountain section which is known as the Allegheny Highlands; and the section which lies north and east of the Alleghenies and known as the Potomac section. It is in the Ohio Valley section that Lincoln County is located.[10] Figure 3 locates the county within the state.

Lincoln County is located in the southwestern part of West Virginia and can be considered a rural county. The county lies within twenty-five miles of Huntington, West Virginia, a large city in the Ohio Valley; less than sixty miles from Charleston, West Virginia, the largest city in the Kanawha Valley; and within twenty miles of Logan, West Virginia, one of the cities in the southern part of the state.

Lincoln County is bordered on the south by Logan and Mingo Counties; on the west by Wayne County; on the east by Kanawha and Boone Counties; and on the north by Putnam and Cabell Counties. As was noted previously, the boundary line

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[10]Phil Conley, West Virginia Yesterday and Today (Charleston: West Virginia Review Press, 1931), pp. 12-13.

LINCOLN COUNTY, WEST VIRGINIA

AREA LOCATION

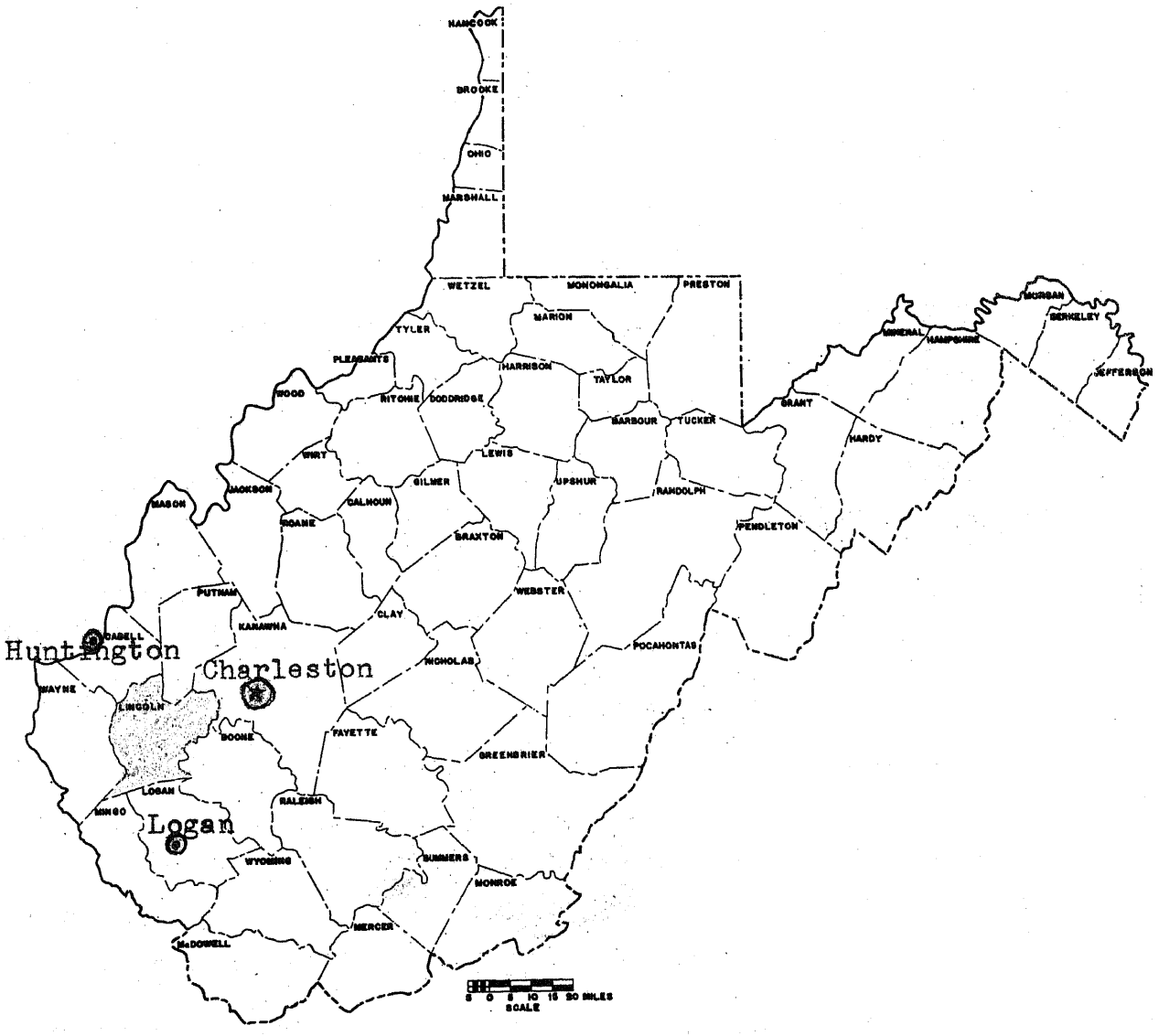

FIGURE 3

of the county had been shifted from time to time, increasing or decreasing the size of the county. This in part can be attributed to the fact that the boundary line is political and not of a geographical nature.

The size of Lincoln County is not absolutely certain. The West Virginia Geological Survey of 1913 showed the entire area to be 448.76 square miles. In treating the magisterial districts separately each district comprised the following area:[11]

Magisterial Districts	Square Miles
Carroll	67.50
Duval	58.95
Harts Creek	91.79
Jefferson	48.85
Laurel Hill	66.50
Sheridan	48.70
Union	30.71
Washington	35.76
Total	448.76

According to the West Virginia Blue Book of 1960, Lincoln County comprised only 437.04 square miles of territory. This is a difference of 11.72 square miles.[12]

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[11] C. E. Krebs and D. D. Teets, Jr., West Virginia Geological Survey (Wheeling: Allied Printing, 1913), pp. 12-14.

[12] J. Howard Myers, West Virginia Blue Book, Vol. XLIV Jarrett Printing Company, 1960), p. 541.

LANDFORMS AND STREAMS

The Ohio Valley section of West Virginia is comprised of river valleys and rolling hills. It is within this region that Lincoln County is located, therefore, it too, in large measures, consists of the same topographical features.

The overall average elevation of the county is approximately 535 feet above sea level. One would certainly not consider Lincoln County a mountainous region but would think in terms of a rolling terrain. However, as one travels from north to south through the county, one would notice a marked increase in elevation. As noted in the West Virginia Geological Survey of 1913:

> Lincoln County varies in elevation from 535 feet above tide at the intersection of Guyandot River with the Lincoln-Cabell line, one mile and a half north of West Hamlin, to over 1500 feet on the summit of a high knob near the southern end of the county in Harts Creek District, one mile and a half northeast of Rector Post Office, or a range in elevation of 965 feet.[13]

The elevation of the county is of such a nature that one finds farming too dificult to be profitable.

The Appalachian Highlands extend across West Virginia from northeast to southwest, decreasing in elevation from east to west. The western portion of the

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[13]Krebs and Teets, Jr., loc. cit.

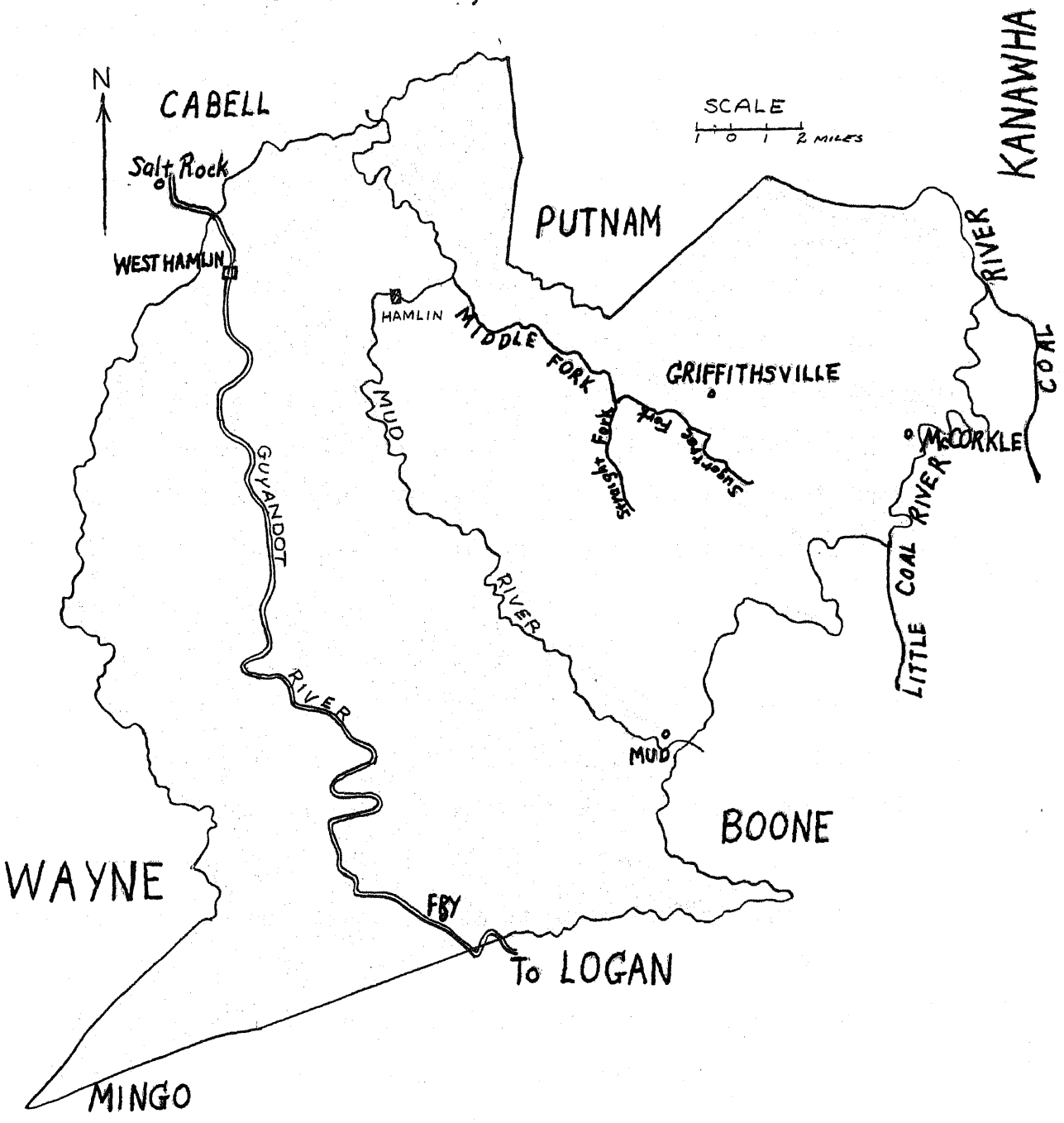
state in which Lincoln County is located, is commonly referred to as a plateau region, with rounded hills and alluvial river valleys. These hills and valleys are the result of weather and stream erosion. It is in this section that the streams flow to the Ohio River, which forms the main watershed of this part of northeastern United States.

The drainage basins of Lincoln County are comprised of the Guyandot River, Mud River, Coal River, and numerous smaller tributaries of these three main streams. The drainage basin map, Figure 4, shows the location of these streams in the county.

Guyandot River. Guyandot River flows from a southern to a northern direction, emptying into the Ohio River at Guyandotte, West Virginia. The river has its source at or near Flat Top Mountain in Raleigh County. It is formed by the junction of Stonecoal, Winding Gulf, Tommy and Devil's Fork Creeks, and flows through Raleigh, Wyoming, and Logan Counties. It enters Lincoln County near Big Creek, West Virginia, and flows through the western portion of the county, leaving Lincoln County near Salt Rock, Cabell County, West Virginia.

The Guyandot River meanders through Lincoln County for some thirty-four miles, forming wide bottomlands along

LINCOLN COUNTY, WEST VIRGINIA



DRAINAGE BASINS OF LINCOLN COUNTY

FIGURE 4

its course. During its journey through the county, the river receives the waters of several small tributaries: Two Mile Creek at West Hamlin; Coleman Creek and Bear Creek, north of West Hamlin; Fall Creek, south of West Hamlin; Mile Creek, north of Sheridan; Four Mile Creek at Branchland; Six Mile Creek near Hubball; Nine Mile Creek at Midkiff; Ten Mile Creek, south of Midkiff; Vernatter Creek near Bradyville; Fourteen Mile Creek near Ranger; Aaron Creek at Gill; Hamilton Creek at Lattin; Little Ugly Creek, south of Lattin; Big Ugly Creek at Gill; Sand Creek at Sand Creek; Little Hart Creek at Atenville; Big Hart Creek at Harts; Green Shoal at Fry; and Limestone Branch, south of Fry.

In the early history of Lincoln County, the Guyandot River served as a main artery for transportation. As early as 1853 coal mined at Branchland was transported down the river to Guyandotte, West Virginia, for further distribution. The river also played an important role in denuding the forests of the county, in that it was used to transport the logs to market. It has been said by older residents of the county that it was a common sight to see rafts of timber floating down the river during the spring raises.

The early settlers of Lincoln County depended in part on the boating of supplies from Huntington and Guyandotte, West Virginia. Since the stream was not deep

enough to permit the use of steam driven boats throughout its entire chartered course, the boats were propelled over shallow areas by men using push poles and paddles. During the summer season, when the stream was low, the boats were towed through the shoals and rapids by mules. This form of transportation was discontinued with the completion of the Guyandot branch of the Chesapeake and Ohio Railroad in 1904.[14] Today, the Guyandot River is of little value to the inhabitants of the county. One might say that the coming of the automobile and improved highways have brought about this condition.

In talking to a resident of Lincoln County about the condition of the Guyandot River in earlier times, it was noted that one thought little about taking his drink of water from the river and that in some cases, cables were stretched from the home to the river in order to supply the home with water.[15] This is a far cry from the condition which exist today. One barely dares to wade in the waters of the Guyandot River. This drastic condition can be attributed to the industrial and human waste material that are discharged into the river throughout its entire length.

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[14]Krebs and Teets, Jr., op. cit., pp. 28-30.

[15]Statement by Silas Lawrence, Branchland, West Virginia, personal interview.

Mud River. Mud River rises in Boone County and flows in a general northwest direction, draining the central area of Lincoln County. The river empties into Guyandot River at Barboursville, in Cabell County, West Virginia. It is believed that once this river was a tributary of the Kanawha River. Krebs and Teets, Jr. in their geological survey of West Virginia reported that:

> During the Quarternary Period, the great northern glacier, which moved across Ohio, had a great effect upon the drainage area of the Cabell-Wayne-Lincoln area. One direct result of the movement of the glacier was the change in the course of the Kanawha River from west to north, resulting in the evacuation of its old channel along Teays Valley. Mud River was one of the tributaries of the Kanawha River when it flowed through Teays Valley; and after the course of the Kanawha was deflected from Teays Valley at St. Albans to its present course, the drainage of Teays Valley was taken up by Mud River.[16]

The valley through which the river flows offers very little elevation. This forces the river to meander in its journey through Lincoln County, coursing some forty-three miles. Throughout the year, the river is muddy. This is due to the alluvial deposits that have settled in the channel of the stream and which are constantly being agitated by the teeming marine life inhabiting the river. This muddy condition, no doubt, accounts for the derivation of the river's name.

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[16]Krebs and Teets, Jr., loc. cit.

Mud River is very narrow and shallow, and only at times does one find it deep enough for boating. The banks are lined with willow trees and elderberries that add to its congested condition. This foliage has been a haven for wildlife which the farmers trap during the winter months. The revenue received from the pelts of these animals has proved to be a boost to the farmers' income during the non-farming season.

The main tributaries of Mud River are: Connelly Branch, Charley Branch, Berry Branch, Stonecoal Branch, Slab Fork, Laurel Fork, Rich Branch, Parsner Creek, Josh Branch, Slash Branch, Big Creek, Fez Creek, Panther Branch, Laurel Creek, Cooper Branch, Lower Big Creek, Burns Creek, Buffalo Creek, and Coon Creek.

The farmers find a disadvantage in farming the bottom-lands located along Mud River, since at times the stream overflows its banks and spreads over much of the tillable land. This overflowing of the river adds little value to the fertility of the soil; instead, it deposits sand that is low in humus content.

Middle Fork is a main tributary of Mud River and drains the Duval section of Lincoln County. Its source is at the junction of Straight Fork and Sugartree Fork, in Duval District. It flows in a northwesterly direction, and empties into Mud River two miles east of Hamlin, West

Virginia. The entire length of this stream is eight miles, and during its journey to its outlet, it receives the waters of Merrick Creek, Straight Fork and Scary Creek, Davis Trace Branch, Middle Creek, Trace Creek, Meadow Branch, and Simon Branch.

Coal River (Little and Big.) Little Coal River has its source in Boone County, West Virginia, and flows in a northerly direction, serving as a natural boundary line between Boone County and Lincoln County. Little Coal River, from the mouth of Dick's Creek to its junction with Big Coal River, one mile south of Alum Creek bridge, serves as a boundary line between Kanawha and Lincoln Counties. Big Coal River, from its junction with Little Coal River, forms a boundary line for a short distance between Lincoln and Kanawha Counties.

The main tributaries of Little Coal River, draining the eastern section of Lincoln County are as follows: Ivy Creek, which drains the region comprised between Ely Fork and Laurel Fork of Big Ugly Creek (where the lay of the highland structure permits); Cobbs Creek, which collects the water that flows from the hills along the eastern terminus of West Virginia secondary road 12-2, flowing eastward, and emptying into LittleCoal River, near McCorkle, in Washington District, of Lincoln County.

Lick Branch and Ezekial Branch, along with numerous small streams, comprise the drainage system that lies between McCorkle, Lincoln County, and the junction of Little and Big Coal River.

The tributaries of Big Coal River that have their source in Lincoln County are Fuguay Creek and Island Creek. Fuguay Creek collects the waters of Beech Fork, Road Fork, Toms Fork, and Molly Branch. Island Creek collects the waters of Boardtree Run and Rocky Run.

Coal River serves as a haven for the anglers and those who wish to enjoy a day of outing, since it serves as a picnicing and camping location. Coal River is much cleaner than Guyandot River, and this can be attributed in part to the lack of factory and chemical plants along its source.

Conley had this to say about the naming of Coal River:

> The first journey by white men on the Coal River was made in 1742, when John Peter Salley, John Howard, and three other persons discovered the stream and gave it its name because of the abundance of coal on its banks.[17]

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[17]Conley, op. cit., p. 56.

CLIMATE

West Virginia has a great range of climate. This variety of climate is due to the difference in elevation throughout the state and to the land formation which comprises each section of the state. As was noted earlier in the chapter, the state is divided into three main topographical sections: the lowlands, the hills, and the mountains, and that Lincoln County was located within the lowland section.

Topographic characteristics considerably modify the climate of West Virginia, with the result that variations in temperature and precipitation occur, not only between the mountain, hill, and lowland areas, but also between different parts of the same county. This is evident in Lincoln County, since quite often the temperature will be low enough to permit frost to form on the higher elevation, while in the river valleys the temperature will remain high enough to prohibit frost from forming.

Lincoln County rarely experiences excessive cold and the summers are very hot. Cold waves occur on the average of three times during the winter, but cold spells, as a rule, last only two or three days. The summers are usually warm along the river valleys and rather mild in higher sections, where temperatures in excess of 90° F.

are infrequent. However, readings of 100° F. or higher have occurred in different sections of the county almost every summer. Figures 5 and 6 show the average January and July temperatures.

Precipitation is ample and well distributed throughout the county, falling in the form of snow and rain. Summer rainfall occurs mostly during thunderstorms or as moderate showers in connection with low-pressure areas that pass north of West Virginia. The thunderstorms are usually extensive and well developed, with sporadic rainfall, and while ordinarily of short duration, they are at times violent and attended by excessive falls, causing local flooding of streams. The heaviest precipitation of the fall and winter months occurs during the passage of the general storms that move from the far Southwest northeastward over the Ohio Valley.

There are numerous occasions when one local area will receive a fairly heavy downpour, while within viewing distance the adjacent area will remain dry.

During the winter months precipitation that falls in the form of snow is varied, showing an increase during the months of February and March. Most of the time, the falling snow will melt soon after hitting the ground. This prevents an accumulation of snow for any great period of time and enables the melting snow to seep into the

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE JANUARY TEMPERATURE

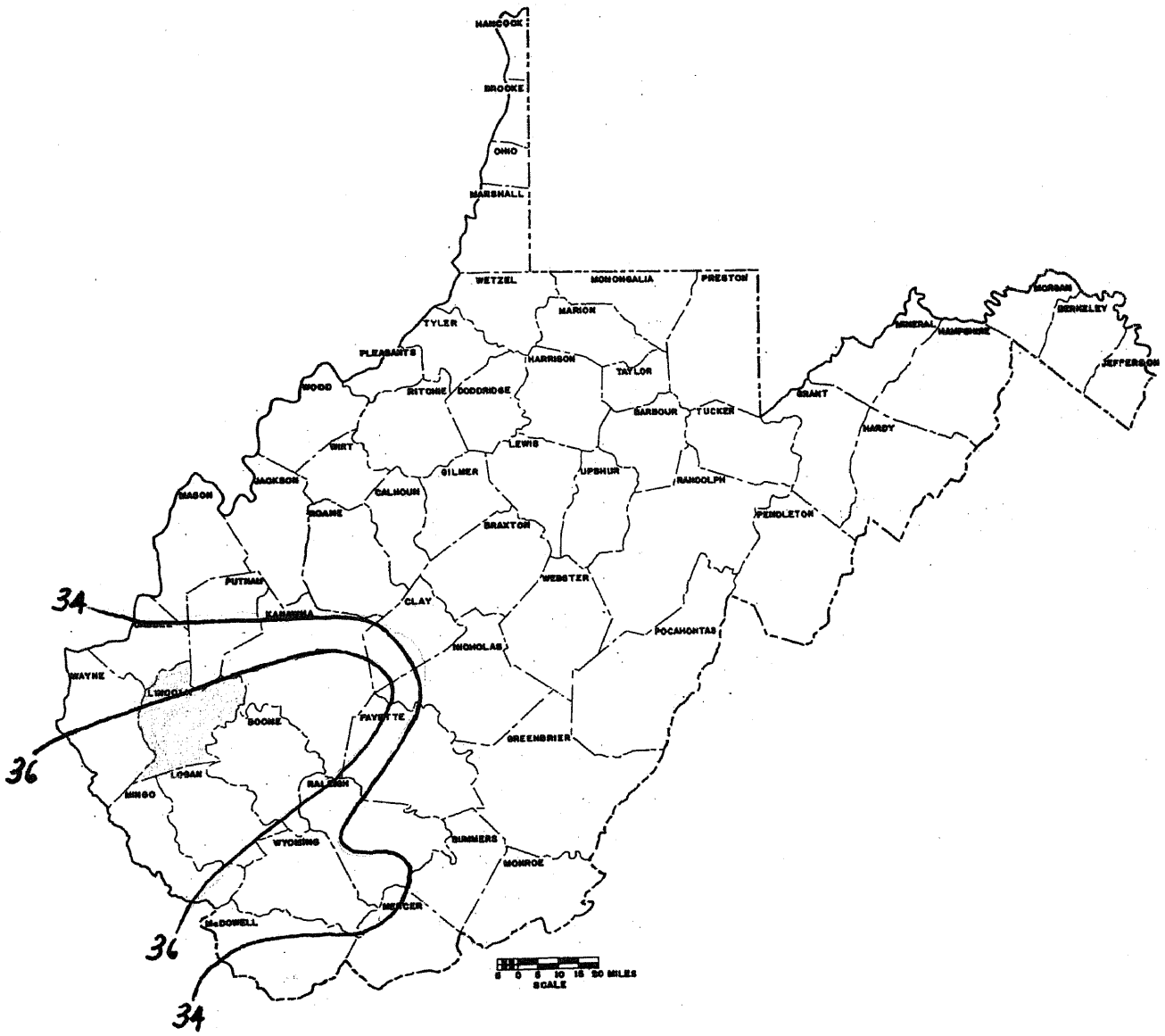

FIGURE 5

[18]United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1186.

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE JULY TEMPERATURE

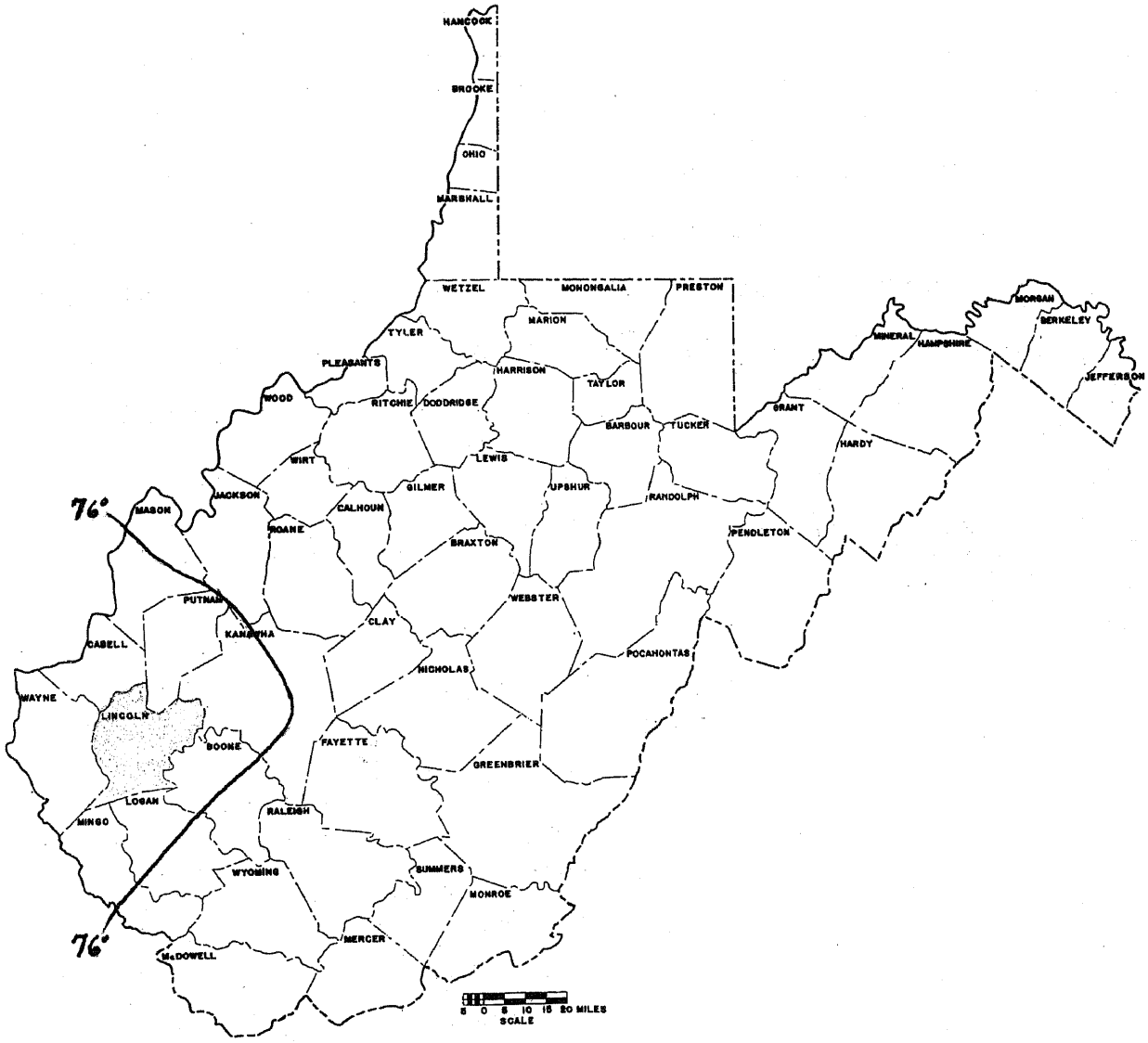

FIGURE 6

[19]United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1186.

ground gradually, and, in most instances, eliminates rapid runoff. As was noted in the Spring of 1955, an excessive accumulation of snow blanketed the entire state. This was followed by a warming trend and precipitation in the form of rain, causing a rapid runoff that forced the rivers to over flow their banks, and much damage was done by the local streams. The writer cited this adverse condition as an example of what happens occasionally when there is an accumulation of snow. Figures 7 and 8 show the summer precipitation and the annual precipitation for the area in which Lincoln County is located.

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE WARM-SEASON PRECIPITATION (INCHES)

(APRIL TO SEPTEMBER, INCLUSIVE)

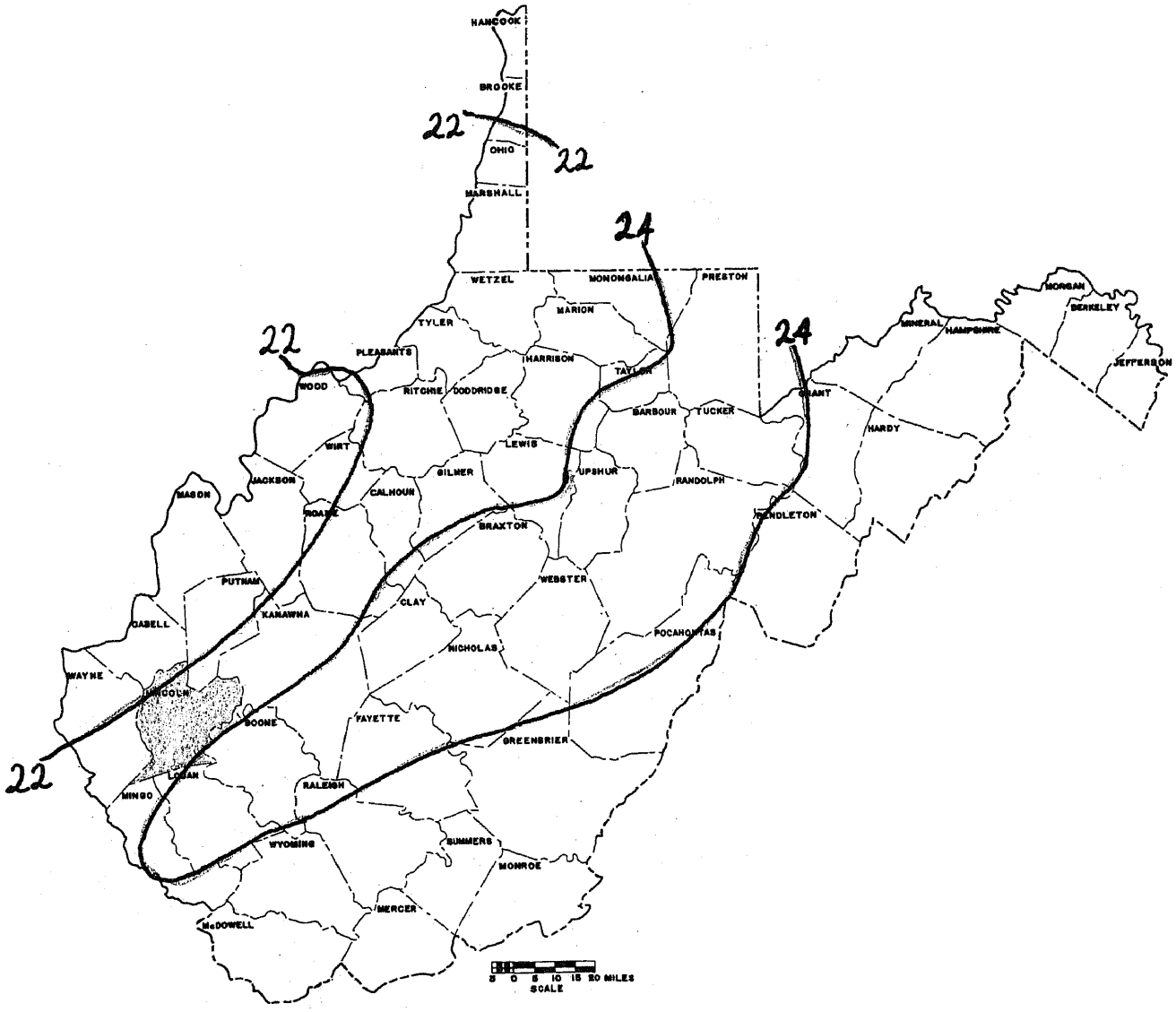

FIGURE 7

[20]United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1188.

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE ANNUAL PRECIPITATION (INCHES)

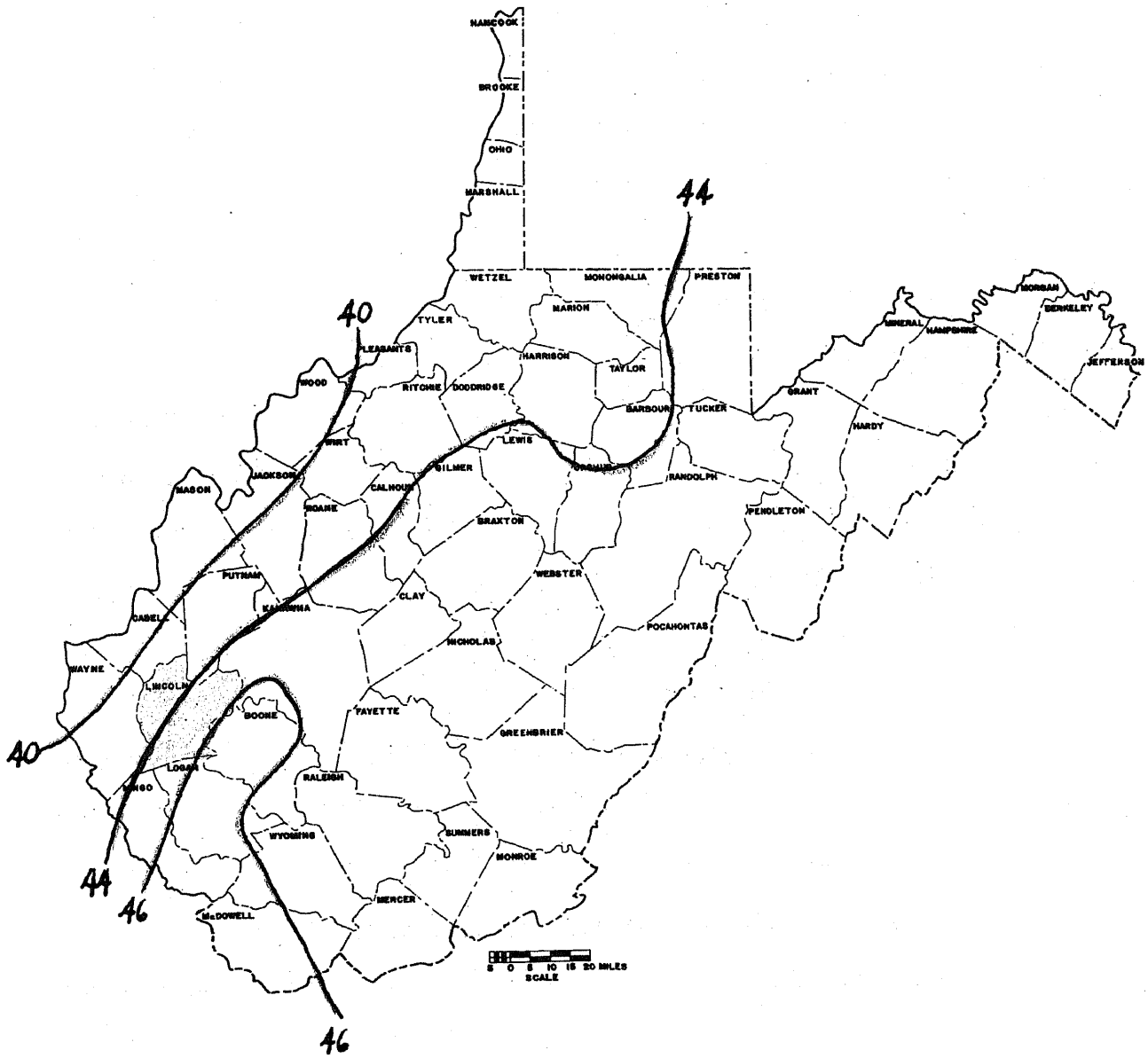

FIGURE 8

[21] United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1189.

SOILS OF LINCOLN COUNTY

The soils of Lincoln County owe many of their characteristics to the rocks and rock material from which they were formed. One of these characteristics can be traced directly to rainfall. That character is due to the nature of the material; once it is rendered soluble in water it will be removed in the drainage unless it is tied up in the organic complex or in the clay complex.

The rocks of Lincoln County are largely of the Monogahela geological formation. This formation occupies a position in the upper part of the coal bearing rocks. There are three types of these rocks, (1) coarse grained soft sandstones; (2) yellow and black shales or mudstones; and (3) red clay beds. The mineral make-up of the three mentioned soils are such that they are inclined to weather deeply, and as a result, the soils tend to be deep. There are a few cases where the soil rocks are less than 36" from the surface.[22] The soil type map, Figure 9, shows the location of the different soils in the county.

The sandstones and the shales develop a soil which is medium textured (easy to work). This soil is somewhat

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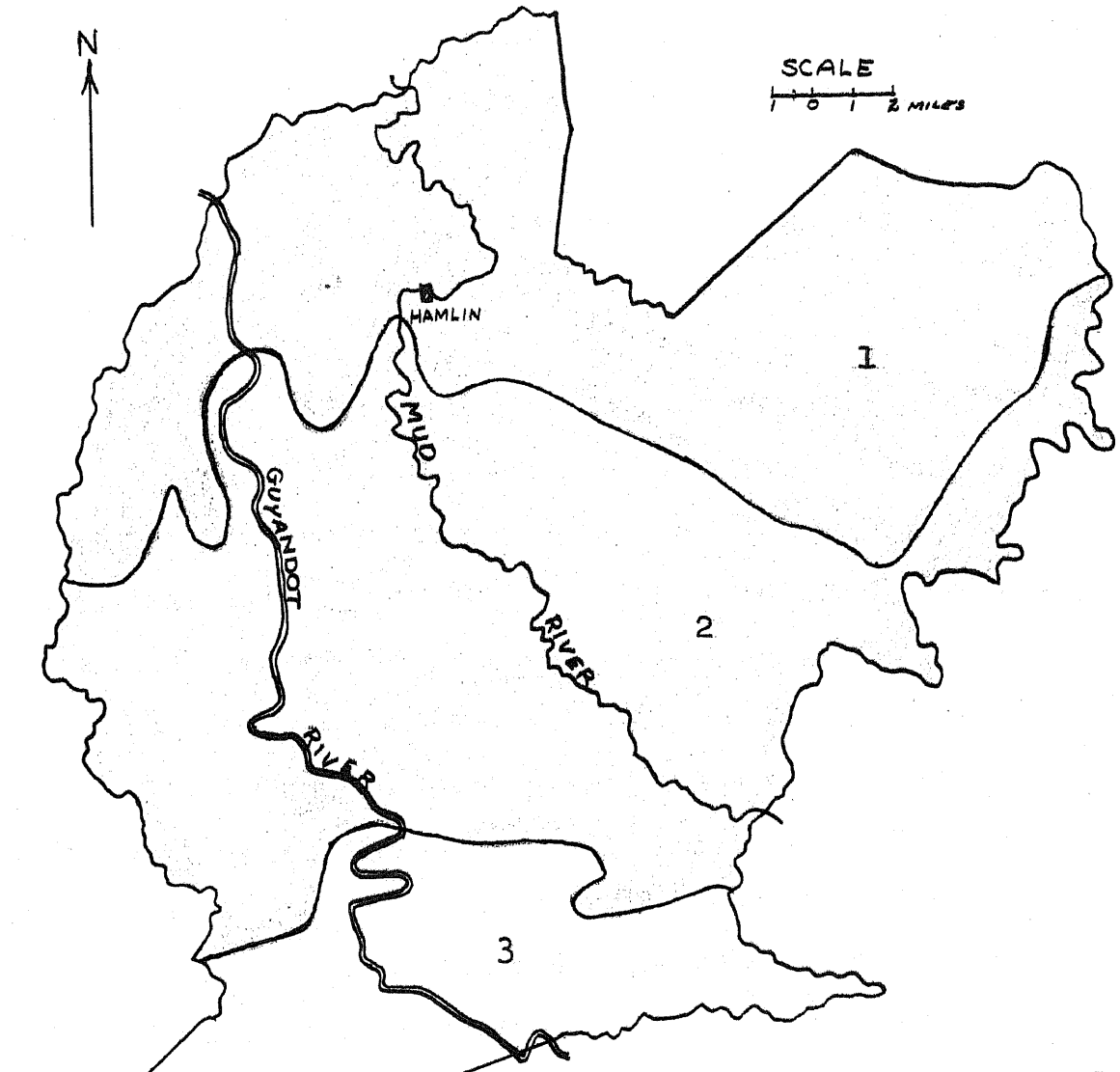
[22]Lester Espy, Soil Scientist. Soil Conservation Service, United States Department of Agriculture. Beckley, West Virginia. November 4, 1961.

LINCOLN COUNTY, WEST VIRGINIA



1 Red Clay (Upshur Clay Loam S Soil) benches with intervening Sandstone (Muskingum Silt Loam and Stony Loam) steeps

2 Red Clay benches on hilltops, with lower slopes of Sandstone and Shale (Muskingum Silt Loam and Stony Loam Soils)

3 Entire Ridges of Sandstone and Shale (Muskingum Soils)

FIGURE 9 SOIL FORMATION MAP OF LINCOLN COUNTY

[23]Lester Espy, United States Department of Agriculture.

low in lime and phosphorus but high in potassium. It is recognized by nomenclature as Muskingum soil.

The red clay beds develop a soil which is fine (sometimes called heavy) textured. This soil is more difficult to work than a medium textured soil. Lime and potassium supplies are fairly high in this soil but phosphorus is in low supply. Soil scientists call this soil Upshur.

A small percentage of the county is occupied by creek bottom and river bottom soils. These soils are deep, medium to coarse textured, and free of stones. Drainage ranges from somewhat poor (no water logging, above eight inches from the surface) to well drained (no water logging above thirty-six inches from the surface.)

As a general rule all the soils of Lincoln County are excellent tree soils and all except the water bottomlands are good tobacco soils. In fact, there is a local rumor that the best quality of burley tobacco in the country is grown in Lincoln and a few neighboring counties.

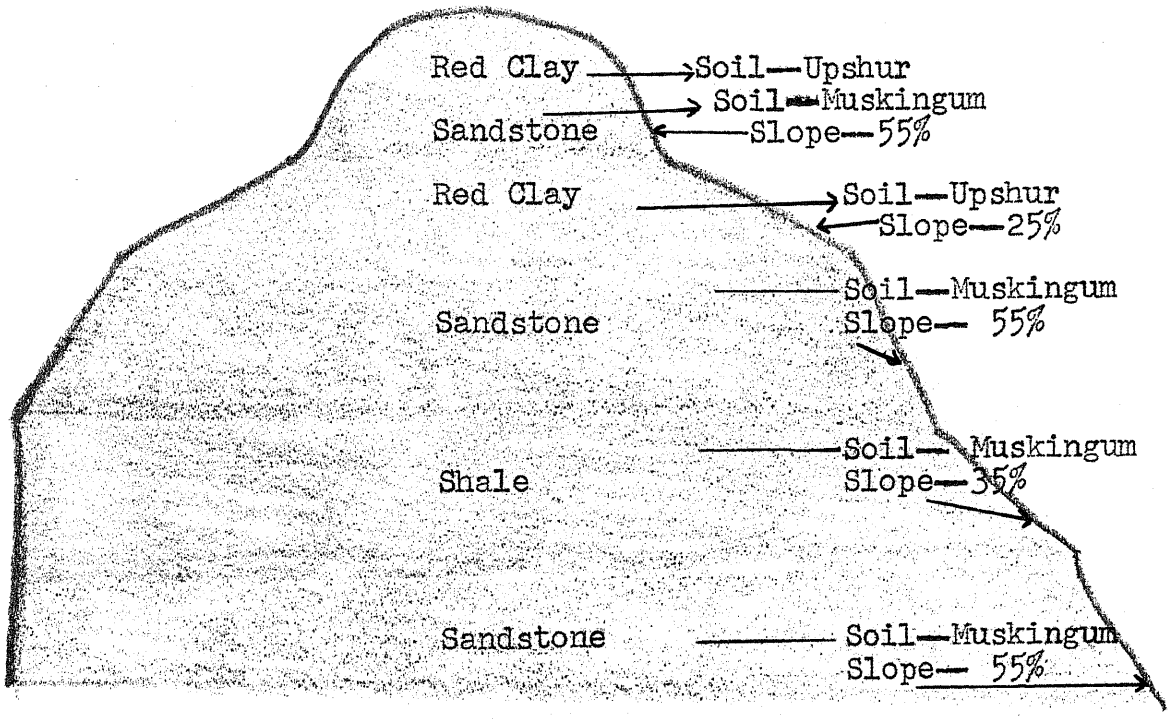
The Muskingum soil requires generous applications of lime and phosphorus to attain a satisfactory level of general farm production. The Upshur soil is difficult to work and to keep under control (particularly in regards to erosion), but is one of the finest grassland soils of the world. It does not resemble a good quality soil but that in part is due to the system of season-long grazing which

does not allow grasses to build a deep root system. With a shallow root system, the grasses cannot use the moisture and mineral nutrients of the deeper subsoils.

As far as stoniness is concerned, there are some stones and boulders on the steeper slopes; but that is land that should not be plowed and these soils are of little consequence. Figure 10 shows the underlying rock layers and their effect on soil and slope.

The surface of the land in Lincoln County is decidely hilly. The south end of the county is very hilly with a high proportion of steep slopes and a small amount of gentle and moderate slopes. As one proceeds northward there is a gradual increase in the proportion of gentle and moderate slopes. Figure 11 shows the percentage of slope in the county.

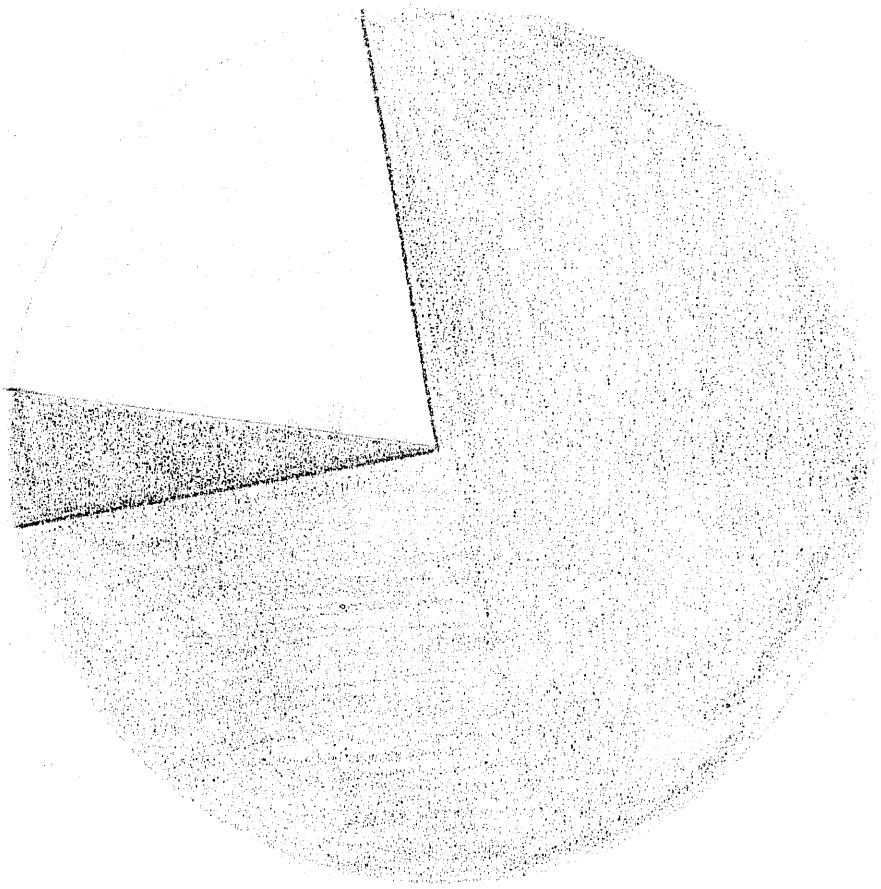
The accompanying land capability figures indicate that there is a large amount of land which should not be used more intensively than for woodland, but fortunately this land has soils that are of high value for timber growing. One of the greatest possibilities for expansion of income is on this land. A strictly modern application of sustained yield forest management could produce a suprising number of dollars. Extensively checked figures are not yet available, but a fairly safe minimum figure seems to be about three hundred board feet of growth per



A CROSS SECTION OF A SLOPE DEMONSTRATING ROCK LAYERS AND THEIR EFFECT ON SOIL AND SLOPE

FIGURE 10

[24]Lester Espy, United States Department of Agriculture.



Gentle slope with a rise of 0' to 10' for each 100'

Moderate slope with a rise of 10' to 30' for each 100'

Steep slope with a rise of 30' and up

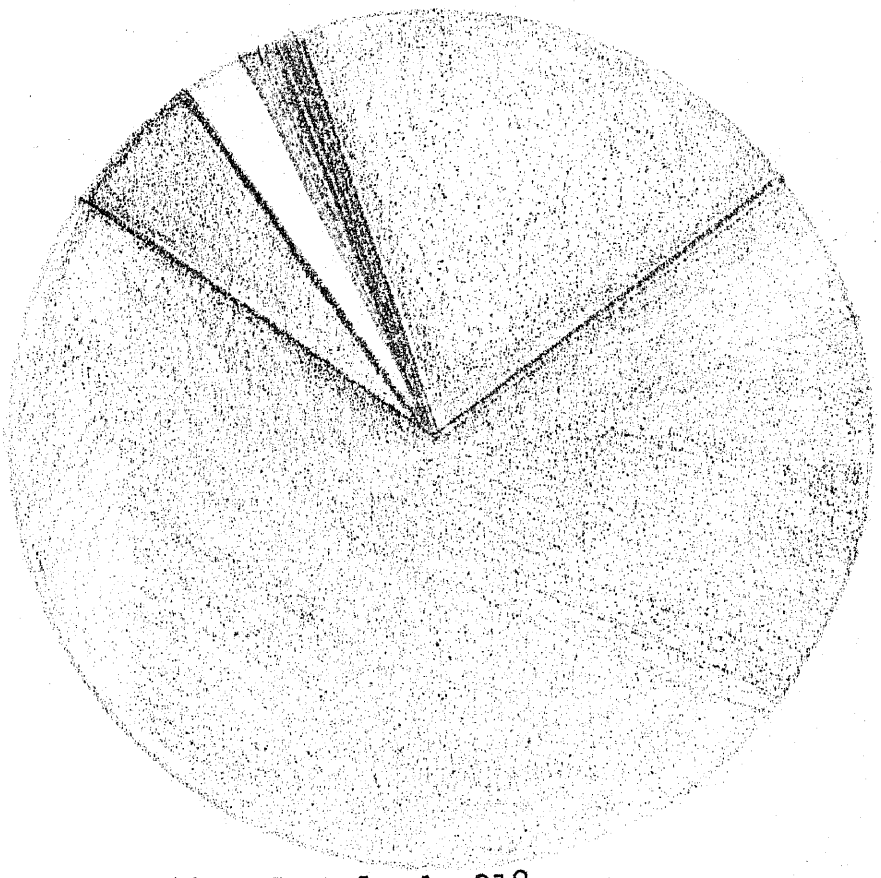
ACREAGE IN LINCOLN COUNTY IN EACH STEEPNESS OF SLOPE

FIGURE 11

[25]Lester Espy, United States Department of Agriculture.

acre, per year. (This is worth approximately three dollars per acre). It would be necessary to spend an additional six dollars per acre for labor in the act of cutting and skidding the timber. An acre of woodland thus can furnish about nine dollars income per year. Therefore, 188,000 acres of woods would be good for more than 1,500,000 dollars.

The cropland is already developed, therefore, little need for further discussion is necessary. Figure 12 shows the seven different classes of soils found in the county and their use. Figure 13 shows the different uses of land in Lincoln County and the number of acres employed for the different uses as of 1958.

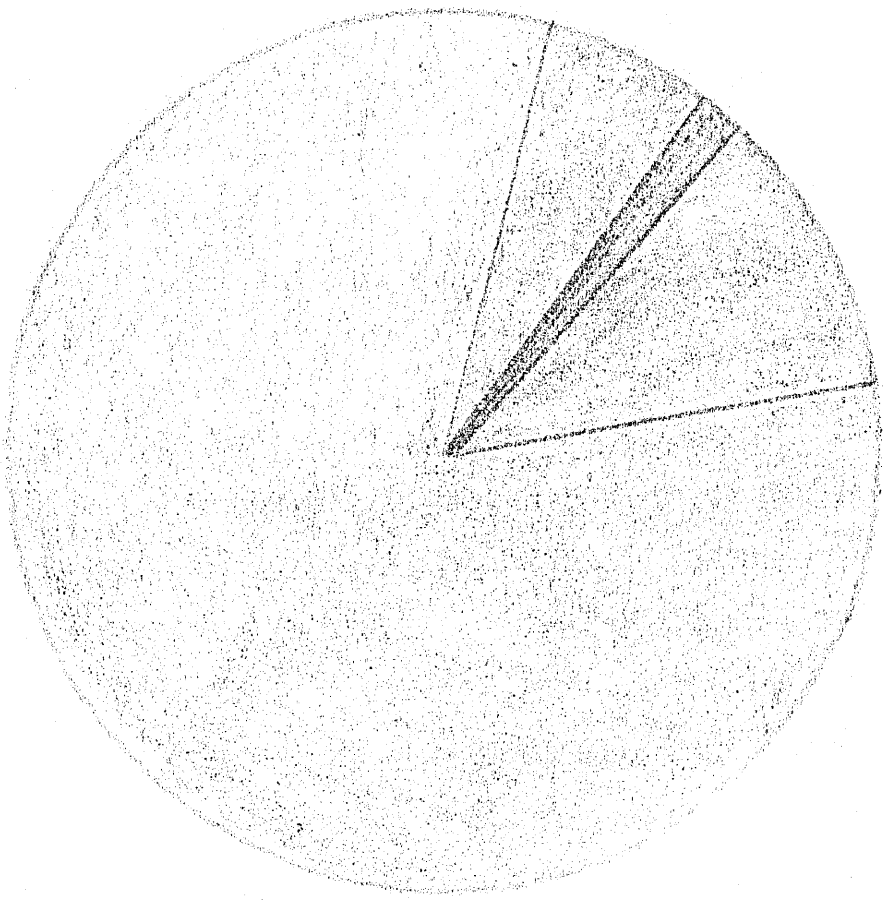


Class I Better Crop land—318 acres
Class II Average Crop land—11,583 acres
Class III Poor Crop land—793 acres
Class IV Hay land—5,712 acres
Class V Grass land—not applicable to Lincoln County
Class VI Pasture land—71,984 acres
Class VII Wood land—188,765 acres
Class VIII Grass land found in Western United States; not applicable to Lincoln County
Class IX Urban or town—1,164 acres

FIGURE 12

ACREAGE IN LINCOLN COUNTY BY LAND CAPABILITY CLASSIFICATION

[26]Lester Espy, United States Department of Agriculture.



THE DIFFERENT USES OF LAND IN LINCOLN COUNTY AND THE ACRES EMPLOYED FOR THE DIFFERENT USES AS OF 1958.

- Urban—1,164 acres
- Idle—1,904 acres
- Crop land—16,607 acres
- Pasture land—22,584 acres
- Wood land—237,952 acres

FIGURE 13

[27]Lester Espy, United States Department of Agriculture.

MINERAL RESOURCES

Lincoln County has been richly endowed by nature with an abundance of mineral resources. In order of importance, it becomes evident that gas has outranked both oil and coal. From early years natural gas has supplied revenue for the county.

Natural gas. Gas was first discovered in Lincoln County, in 1908, by the Pure Oil Company while searching for oil. This gas was piped to the city of Hamlin, Lincoln County, and by 1909, 200 families were using the fuel to heat their homes.[28]

The Pure Oil Company became disillusioned by the finding of natural gas instead of oil and sold its gas wells and pipelines to King and Kingery of Hamlin, Lincoln County. Later on, King and Kingery sold their natural gas interest to the Howard Gas Company. Then in 1932, the United Fuel Gas Company purchased these wells and distribution lines to Hamlin.[29]

From 1912 to present day, the United Fuel Gas Company has drilled over many sections of Lincoln County,

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[28] "Cities We Serve in Lincoln County," The Pipeline, Vol. V (November, 1953), pp. 13-18.

[29] Ibid.

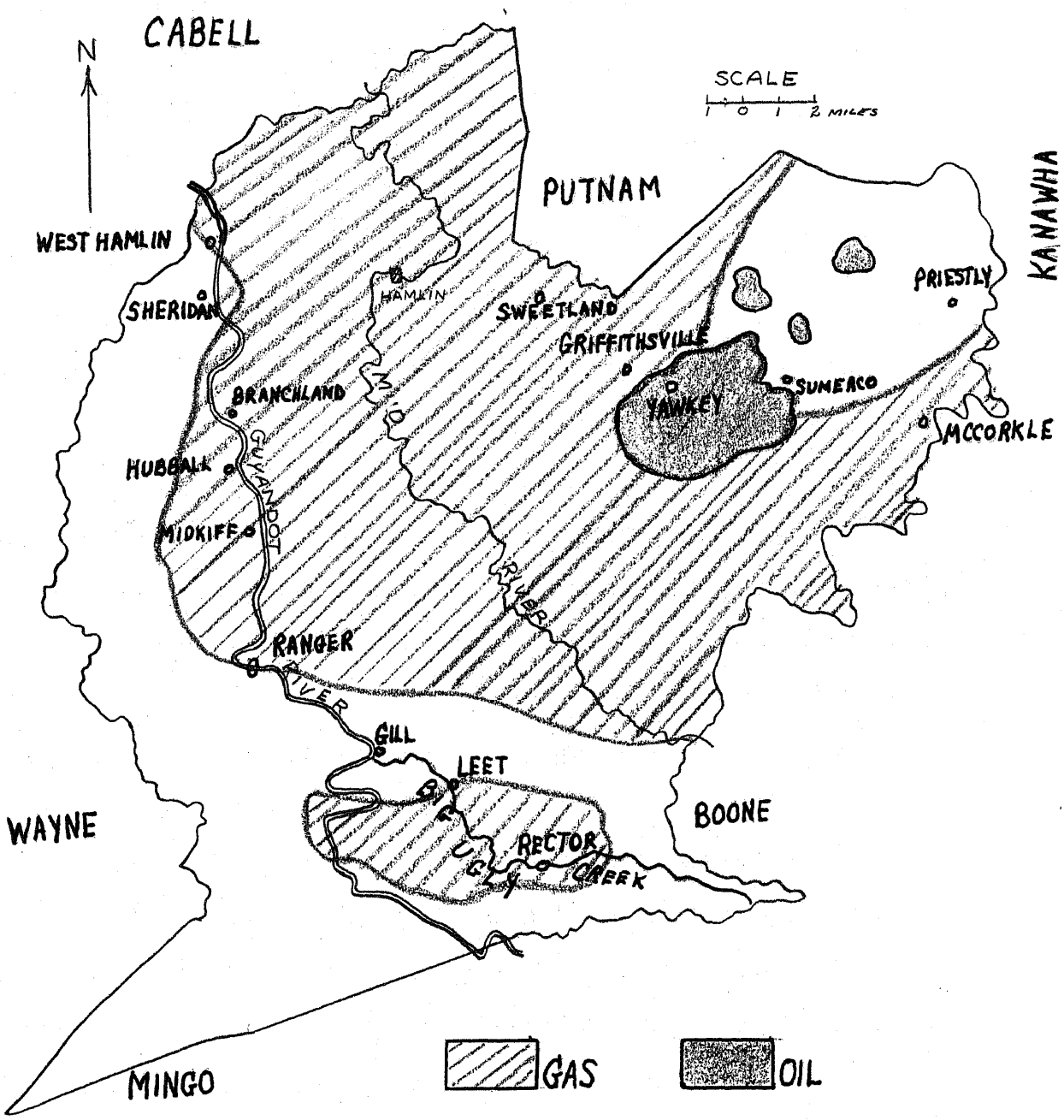
with a few wells being drilled by smaller gas companies or individuals. The three main fields in gas production developed by the United Fuel Gas Company in Lincoln County are: the Branchland area, the Midkiff area, and the Big Ugly Creek area. The county map, Figure 14, shows location of these areas developed by the United Fuel Gas Company.

The United Fuel Gas Company found it necessary to erect a compressor station at Hubball and Branchland, Lincoln County, and adjacent to the Hubball compressor station the company also built a gasoline plant, where gasoline is abstracted from natural gas.

Aside from a map, showing the location of the natural gas field in productivity in Lincoln County, further information regarding natural gas production can be found in a recent thesis written by Lottie Midkiff, titled The Production of Natural Gas in Lincoln County, West Virginia, August, 1961, and is on file in the Marshall University Library, Huntington, West Virginia.

Oil. The discovery of oil in the early 1900's, was important for Lincoln County. Drillers came from different areas to work in the drilling operations that had spread like wildfire in the Griffithsville area. Camp locations dotted a large portion of the level area in the valley from what is now the dividing road; leading to Coal River and to Charleston, West Virginia. This camp site extended north

LINCOLN COUNTY, WEST VIRGINIA



THE GENERAL AREAS IN PRODUCTION OF OIL AND GAS IN LINCOLN COUNTY AS OF 1961

FIGURE 14

[30]William Osburn, Superintendent, United Fuel Gas Company, Lincoln County. Hamlin, West Virginia.

along State Route 3 to the present location of the town of Griffithsville. There were approximately forty houses in this camp. These houses were well constructed, for ten of them still remain in their original location—some fifty-seven years later.

The first oil well to be drilled in the Yawkey oil field was by the Big Creek Development Company, in 1907, on the Serepta Workman farm and was known as the Serepta Workman Well. Several other wells were drilled in the area of the Workman well. The Eureka Pipeline Company pumped the crude oil by pipeline to Morgantown, West Virginia, and it was sent from there to the refinery in Pennsylvania.

The Big Creek Developing Company relinquished title to their claim on the Yawkey Oil Field to the South Penn Oil Company in October, 1917. Most of the men that worked for the Big Creek Developing Company continued to work at their jobs after the management had changed hands.

The primary method of transporting equipment into the oil fields in the early days comprised the use of wagons and oxen teams and in some cases, draft horses. The drilling equipment for the Yawkey Field was brought from McCorkle to Summit over a narrow gauge railroad track, powered by a steam dinky. This operation was said to be supervised by Charley Morgan, a descendant of Morgan Morgan, the first

white settler in West Virginia.[31]

The South Penn Oil Company completed drilling the field some years later. The entire drilling operation included some 1,100 drilled wells and their production average was approximately forty barrels per day, per well. In light of the number of wells that had been drilled, this made a very productive oil field. As a result of this oil boom, the town of Griffithsville was founded.

The Eureka Pipeline Company now hauls the crude oil from the oil field at Yawkey to the Elk Refinery, located above Charleston, on the Elk River. The company uses large tanks mounted on trailers to transport the oil. The oil is then transferred through pipes that underlie the Elk River, to the refinery which is located on the opposite side of the river. The oil is refined here and then it is shipped to Oil City, Pennsylvania, where it is canned, labeled, and put on the market as Penn Grade oil.

(The South Penn Oil Company's main office is located at Oil City, Pennsylvania. The branch office out of which the Yawkey field operates is located at Parkersburg, West Virginia.)[32] The Yawkey field is a part of the Freeman

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[31]Charley Suttle, Field Representative, South Penn Oil Company, Lincoln County. Yawkey, West Virginia.

[32]Ibid.

District which includes Boone, Clay, Logan, Kanawha, Cabell, Putnam, Roane, and Lincoln Counties. There are eighty-five men on the company payroll, working the Freeman District, and the monthly payroll for this district is $32,000. Not all of the wells drilled in this region are oil producing wells. There are 165 gas wells and 544 oil wells, not including 45 oil wells that are nonoperative due to mechanical trouble. These oil wells produce an average of 10,000 barrels of oil per month.

The Yawkey Field, which is a part of the Freeman District, extends over an area of approximately 20 square miles, but a few scattered wells are located outside the main area. The total output of this area at present is approximately 400 barrels of oil per week. There are approximately 30 men maintaining and operating this field. Twenty-one of the oil wells located in the Yawkey area are not producing because of needed repairs to the wells.

There are two or three small oil fields located in other parts of Lincoln County. One of the largest of these fields is located on Route 34 north of Hamlin, West Virginia. Another small field is located on Fourmile Creek, west of Branchland, West Virginia. A very small field, which produced for a short time, is located on the west side of Guyandot River north of Ranger, West Virginia. Aside from the areas that have been mentioned, there are a few other wells scattered over the county.

The South Penn Oil Company has tried to reclaim oil from the old oil field at Yawkey by drilling one central well and then sinking a ring of oil wells around it. Water was then forced into the central well by pressure. The water forced the oil into the area of the outer wells and it was pulled to the surface by pumps. This method of producing oil was discontinued, but it is said that this method of production is feasible and will be employed in the near future.[33]

The sands in which oil is found in Lincoln County are located at different depths, below the top of the Pittsburgh coal seam. The approximate intervals from the Pittsburgh coal to the top of the oil and gas sands are:[34]

Sands	Intervals below Pittsburgh Coal (ft.)
Salt sand	1,200-1,400
Big Lime	1,450-2,250
Beckett	1,550-2,270
Big Injun	1,600-2,400
Berea	2,150-3,000

Of these sands, the Berea sand is most important in the Lincoln-Cabell-Wayne area. It ranges from twenty to twenty-five feet thick and is the greatest oil producing stratum in the Griffithsville (Yawkey) field.[35]

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[33] Charley Suttle, Ibid.

[34] Krebs and Teets, Jr., op. cit., p. 283.

[35] Ibid., p. 286.

Coal. West Virginia lies within one of the largest coal fields in the world and in terms of quality and quantity the Appalachian Coal Field ranks high. This coal bed extends in a northwest direction throughout the state of West Virginia, and of the 55 counties in the state, 49 have coal measures within their territories.[36] Since Lincoln County is located on the margin of the southern coal fields, small measures of coal can be found throughout the county.

Coal was mined in large quantities in the earlier days of the county's history, but it no longer plays such an important role in the economy of the county. Most of the coal that is mined today is for home use; only a small percent finds a commercial market. Many of the farms have coal seams that are exposed and the farmers have little difficulty in digging the coal from the hillsides. Other natives find it very convenient to purchase coal from the local coal-dredging companies that are located along the Guyandot River.

As early as 1853, coal was being mined at Branchland, West Virginia.[37] It is reported that the town of Branchland got its start as a coal mining camp. The first digging of coal was begun on the western side of the Guyandot River,

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[36] Conley, op. cit., p. 171.

[37] Krebs and Teets, Jr., op. cit., pp. 28-30.

near the present site of Branchland, West Virginia.

Prior to the Civil War, it is believed that a group of Frenchmen uncovered the first seam of coal in Lincoln County, at the present site of Branchland, then known as the town of Lincoln. These Frenchmen mined coal by the use of the breast auger and pick and shovel method. They drove the main entrance to the mine for several hundred feet. It was said that they were perfect masonry workers. The sides of the entrance were sheered even and vertical, meeting a grooved arc with the top.

The coal that was mined was delivered to the west bank of the Guyandot River and from there it was sold to the small steamboat operators that navigated the river from the town of Guyandotte in Cabell County to Stratten Island in Logan County. Not all the coal was used in this method as some was placed aboard small barges that were attached to the sides of the small steamers and delivered to Guyandotte where it was sold to individual consumers.

In the year of 1905, the Lincoln Coal Company sold its interest in the mining operations at Lincoln, Lincoln County to the Hadley Coal Company. This prompted the town of Lincoln to change its name to conform to the mining operations and the town became known as Hadley.

The Hadley Coal Company employed more men and used different tactics in mining the coal. The coal that was

mined was hauled by wagons, fording the Guyandot River during low water, and sold to the Chesapeake and Ohio Railroad trains for fuel. The Chesapeake and Ohio Railroad Company constructed a short spur on the east side of the Guyandot River, opposite the mines, for the purpose of loading the coal that was to be shipped to other centers owned by the railroad company. Since there was no tipple constructed, the coal was loaded into railroad flat-cars. During the winter months, when the river was too high for fording, the coal was transported by barges, thus allowing for a continuous operation.

In 1907, the Hadley Coal Company sold its interest in the mining operations at Hadley, to Colonel J. R. Branch. Mr. Branch, a New York banker, not only bought the coal but also the land which now comprises the present location of the town of Branchland. He immediately applied for a post office to be erected on the east side of the Guyandot River. The east side of the town became known as Branchland, West Virginia. The mining camp located on the west side became known as Branchfield, West Virginia. Both towns were named in honor of Colonel Branch.

Many improvements were made at this time in the extraction of the coal. Wooden rails with steel switch points were used to tram the coal to the entrance. Mules were used to pull the loaded mine cars from the face of the workings

to the outside. The coal-cutting machine that was employed in the cutting operation was powered by the use of compressed air. A large air compressor was located near the entrance to the mine for the purpose of supplying air that was necessary to operate the air driven coal-cutting machine.

A tipple was constructed on the east side of the Guyandot River, adjacent to the Chesapeake and Ohio Railroad. On the west side of the river, near the mine entrance, a coal dump was erected. Attached to the tipple and the coal dump were two large steel cables, paralleling each other. These cables were so constructed that by the use of a device called buckets the coal was transferred to the tipple where it was dumped into railroad cars to be transported to the Huntington Chesapeake and Ohio Railroad shops. Much of the coal was loaded into the tinders of the freight trains to be used as fuel for the engines.

At one time seventy-five men were employed in this coal operation and to accommodate the mine employees, houses were erected on both sides of the Guyandot River. Many people were attracted to the mining town, including Negroes, who also were on the mine payroll.

Around 1909 Colonel Branch purchased the surface and the underlying coal in and around the vicinity of Brown City, approximately two miles south of Branchland. He immediately changed the name of Brown City to Hubball in

honor of his brother-in-law, Edgar Hubball.

Colonel Branch began mining operations on the west side of the Guyandot River, opposite the town of Hubball. He employed the cable and bucket method to transport the coal from the mine to the tipple, which was located on the east side of the river, adjacent to the Chesapeake and Ohio Railroad. The production of coal from this mining operation was not as elaborate as was the Branchland operation.

Around 1940 Colonel Branch sold his mining operations to Herb Jones and son. These men continued operating the mines, utilizing the same methods of transporting the coal to the railroad for shipment. In addition to these operations other mine openings were made on the east side of the Guyandot River, between Branchland and Hubball. The coal from these mines was trucked to the tipple at Branchland.

The Jones mining operations were discontinued after the close of the second World War. The reason for the abandonment of the mining operations is not known.[38]

There was another mining operation undertaken approximately one mile east of Midkiff, on Nine Mile Creek. This mining operation was started by a company from Huntington, West Virginia. The coal that was taken from

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[38] Silas Lawrence, op. cit.

this mine was cannel coal and was transported to the Chesapeake and Ohio Railroad at Midkiff, by the use of horse-drawn wagons. This mining operation was discontinued shortly after it began.

A mine was owned and operated jointly by Jennings Midkiff and Barney Saunders, approximately one mile north of Midkiff, on the west side of the Guyandot River. This company used modern methods in extracting the coal. A tipple was constructed adjacent to the Chesapeake and Ohio Railroad, extending up the hill to the mine entrance. Here the coal was dumped directly into the chute that led to the tipple. It is not known why this mine is not in operation today; however, it is believed that due to geological formation of the rock foldings the mining operations had to be discontinued.

Some coal mining on a minor scale was done in the Mud River section of the county, but the cost of transporting the coal to the railroad for shipment proved very expensive. The only coal being mined in Lincoln County today for commercial use is being done in this section.

According to data taken from records that have been compiled during the drilling of gas wells, a nine foot seam of coal underlies a vast area surrounding the present site of the town of Branchland, West Virginia. There are other seams located throughout the county.

The following figures show the original amount of coal, the coal that has been mined, and the approximate amount of coal that still remains in Lincoln County.

Estimated Original Coal of Minable Thickness (tons)	Production (tons) Removed 1883- to Dec., 1959	Estimated Remaining Coal of Minable Thickness (tons)
1,770,813,665	4,189,774	1,766,623,891[39]

The coal production in Lincoln County has shown a downward trend in the last decade. This condition is presented by the following figures. (Production in tons)

1949	1950	1951	1952	1953	1954	1955
12,045	34,348	6,577	2,064	...	...	1,733

1957	1958	1959
...	...	450[40]

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[39] J. Howard Myers, West Virginia Blue Book, Vol XLIV (Charleston: Jarrett Printing Company), 1960, p. 879.

[40] Ibid., p. 880.

CHAPTER III

AGRICULTURE IN LINCOLN COUNTY

There are some sections of Lincoln County that are good for farming and some that are not. As already noted, the land consists of rolling hills and alluvial river valleys, offering little space in which to farm. Along the river valleys, the land is often flooded during the spring and summer rains, while on the hillsides much of the soil has been washed down into the valleys by the falling rains. Even though the roughness of the land prevents farming in most areas, the county is still considered a rural agricultural region, with many of the residents practicing subsistence farming.* This may be because there are other features favorable for farming in the county, such as, the rainfall distribution, the amount of rainfall, and the length of the growing season.

The county lies within the area which receives between 40" and 45" of rainfall annually. Most of this rain comes in the spring and summer season when it is needed for the growing of crops. The rain is well distributed throughout the county and droughts do not occur very often. The length of the growing season is 180 days in most of the county, providing the farmers with sufficient time for the

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*See Table I, p. 54.

TABLE I

A COMPARISON OF PRESENT AND EXPECTED LAND USE FOR LINCOLN AND ADJOINING COUNTIES*

COUNTY	CROPLAND present	expected	PASTURE present	expected	FOREST AND WOODLAND present	expected	OTHER LAND present	expected
Boone	4,309	2,838	7,916	5,343	292,083	294,780	6,412	5,057
Cabell	21,793	20,173	19,285	17,737	117,957	114,394	1,480	1,540
Kanawha	22,662	12,727	58,219	19,574	433,508	478,906	13,147	4,823
Lincoln	16,607	8,523	22,584	16,733	237,952	244,225	1,904	1,753
Putnam	33,710	25,691	51,092	35,551	131,276	144,543	1,764	2,878
Wayne	33,157	24,436	55,142	41,889	225,374	243,723	8,691	8,941

*As shown by the West Virginia SOIL AND WATER CONSERVATION INVENTORY, The West Virginia Conservation Needs Committee, (Preliminary), February, 1961.

growing of vegetables to supplement the diet during the winter months, and the harvesting of grain crops for the feeding of livestock during the winter season. Figure 15, page 56, shows the average number of days without killing frost in the county.

DIVERSIFIED FARMING

In 1950 there were 2,208 farms in Lincoln County.[41] Most of the farmers were practicing mixed farming which included the growing of vegetables, livestock, poultry, hogs, and grains for livestock feeding. Although other grains are grown in the county, corn is the most important crop produced.

Corn. Corn was important in the days of Lincoln County's early settlement, as it was in other counties of the state. Early settlers cleared patches in the forest and along the streams for the growing of corn to feed their livestock and to supply the family table with bread. Lewis stated that the McComas clan was the first to settle in Lincoln County. He further stated that in the year of 1799, the McComas clan grew approximately twenty acres of corn; probably the first corn grown in this region.[42]

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[41]West Virginia Department of Agriculture, West Virginia Agricultural Statistics: 1951 (Charleston: Compiled by the Federal-State Crop Rotating Service, 1952), p. 2.

[42]Virgil A. Lewis, History of West Virginia (Philadelphia: Hubbard Brothers, 1899), p. 732.

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE NUMBER OF DAYS

WITHOUT KILLING FROST

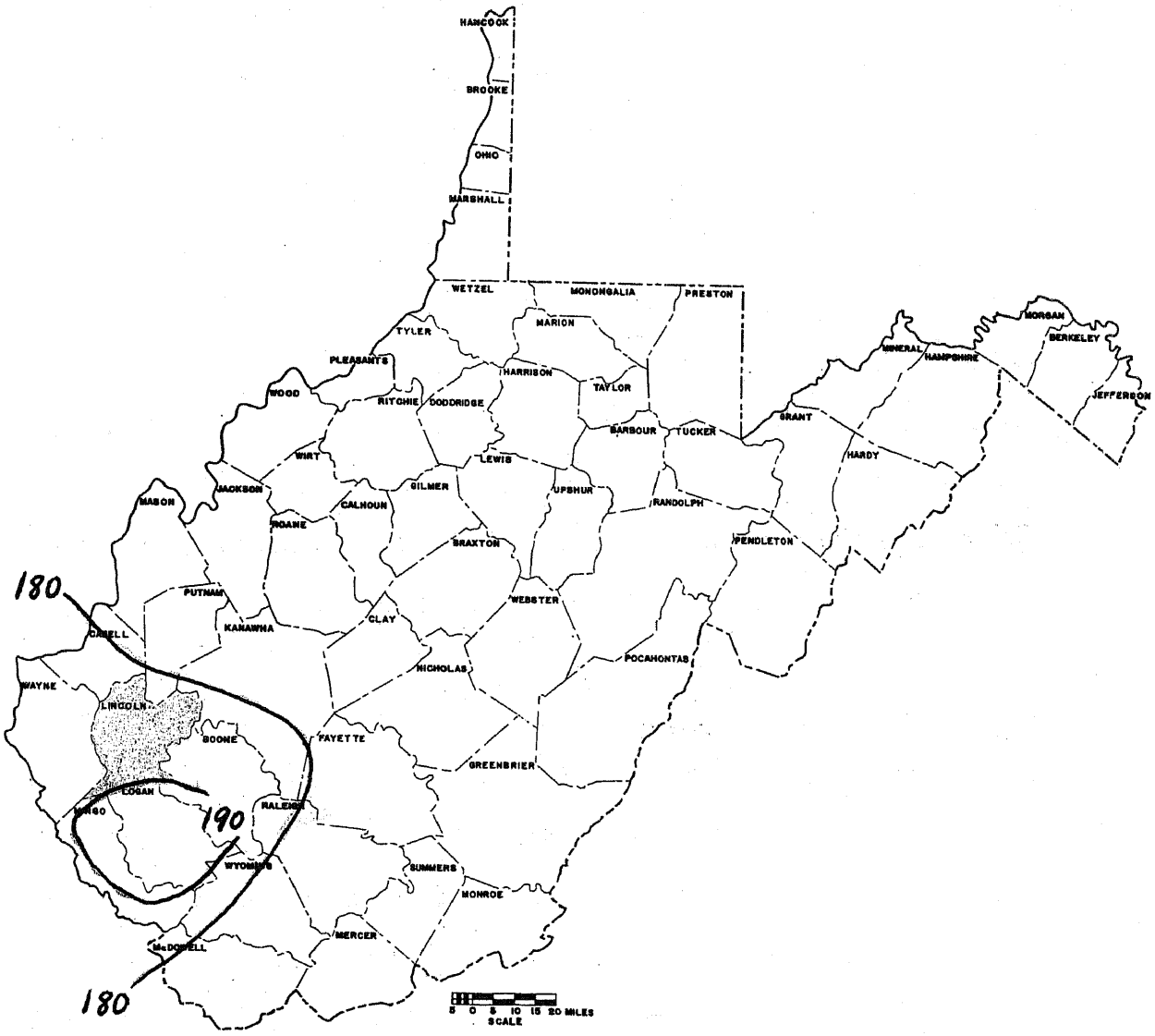

FIGURE 15

[43] United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1188.

Corn is still one of the main grain crops within the county. This can be attributed to several factors, namely, a favorable growing season, sufficient rainfall, and the fact that corn can be grown on the lower hillsides as well as on bottomland. In the early days, the settlers used the hillsides extensively for the growing of corn, and in many places the topsoil has been washed from the hillsides into the river valleys and carried down stream.

In time the farmer moved from the hillsides to the lowlands, hoping to produce enough corn to fill his needs. Due to the growing of corn year after year on the bottomland, the soil was depleted, and the farmer today must depend upon commercial fertlizers to replenish the fertility of his soil. This adds to his cost, and, in some instances, causes him to turn to other types of farming.

The early farmer harvested his corn and then by the aid of a pack animal would take his shelled corn to a nearby grist mill. Some of the most used mills were located on Mud and Guyandot Rivers. With the coming of modern transportation the growing of corn for food purposes was no longer necessary, although a few people still prefer home milling of their corn. Corn is still grown extensively in the county for the purpose of feeding the livestock, such as horses, cattle, and swine. Some farmers sow corn along with other grains and plow it under to add base to the soil.

This practice is commonly referred to as green manuring.

Corn in Lincoln County was the staple grain for the early settlers. This, in a small measure, is true of today. There is one exception—the acres planted and the yield per acre seem to reverse as can be shown by comparing three sample years:

Year	Acres Harvested	Yield Per Acre (Bu.)	Production
1949	6,800	30.9	210,340
1954	5,100	35.5	181,240
1959	4,700	48.0	225,600

[44]

Some factors explaining this trend are the use of hybrid seed, advanced technology, and the educational opportunities offered the farmer through the Department of Agriculture.

Hay. Next to corn, the farmer grows hay to feed his livestock through the winter months. Some of the hay grown is marketed locally, but the majority is used on the farm. The growing of hay demands much of the farmer's level land, because this crop requires terrain suitable for the operation

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[44] West Virginia Department of Agriculture, West Virginia Agricultural Statistics: 1951; 1956; 1960. (Charleston: compiled by Federal-State Crop Reporting Service, 1952; 1957; 1960), pp. 23; 30; 9.

of machinery. Unlike corn, which can be harvested by hand, hay is cut, raked, and baled by the use of machinery.

Some of the most important grasses grown for hay are: timothy, lespedeza, soybeans, and white and red clover. Aside from growing these grasses for livestock feed, the farmer has learned to use them to retard erosion, and to improve the fertility of his soil.

The number of acres used in the production of hay in Lincoln County is declining, but the tonnage yield per acre is larger than in 1949. This can be attributed largely to the aid given to the farmer by the governmental agencies, both in the field and in the research laboratories.

The following figures show the production of hay in the county over a ten year period:

Year	Acres Harvested	Yield Per Acre (Tons)	Production (Tons)
1949	5,590	1.2	6,580
1954	4,700	1.1	5,140
1959	4,400	1.1	6,650[45]

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[45] Ibid., pp. 23; 35; 11.

Oats. Experience has proved that the growing of oats on some of the poorer soils can be profitable. In this way the farmer is able to put to use much of his land that would be unsuitable for the growing of other grains. The farmer threshes some of the oats and feeds the grain to his draft animals. The chaff is used for bedding of animals, and in some instances is strewn on the fields to rot. The remainder of the oats is bundled and stacked to be fed to the animals during the winter months.

Oats are not grown too extensively in Lincoln County as is shown by the following figures:

Year	Acres Harvested	Yield Per Acre (Bu.)	Production (Bu.)
1949	1,030	19.7	20,260
1954	250	26.4	6,590
1959	110	25.9	2,850[46]

[46] Ibid., pp. 23; 35; 11.

Wheat. Wheat is not grown extensively in Lincoln County, since it requires level land and fertile soil. The climatic conditions are not too favorable for the growing of the grain since the county receives 45" of rainfall annually. This is too much precipitation for the cultivation of wheat. However, the wheat that is grown can be found throughout the central section of the county.

From year to year, less wheat has been grown in Lincoln County. A decline in wheat production is shown by the following figures:

Year	Acreage Planted	Acreage Harvested	Yield Per Harv. Acre (bu.)	Production (bu.)
1949	180	90	17.7	1,590
1954	100	30	19.7	590
1959	20	10	19.0	190

[47]

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[47] Ibid., pp. 22; 29; 10.

Vegetables. Most of the farmers in Lincoln County grow vegetables for home use and have some left over which they sell for cash. It is a common practice for the farmer to devote some of his most fertile land to vegetable gardening. This not only proves valuable in supplying the table with home grown vegetables; it also supplies the home with an adequate supply for home canning that will tide him through the winter months. Usually there will be an excess which the farmer trucks to the nearby markets or sells locally to transit traffic.

The farmer will in some cases plow his ground in the fall of the year, as this destroys many of the insects that infest his crops during the growing season. In turning over his top soil, the foreign plant life that matured during the growing season will be of some value, since it will decay and add humus to the soil.

Springtime finds the Lincoln County farmer very busy, repairing his fences, mending his barns, and checking his farming tools, anticipating the first break in the weather that will permit him to begin turning over the sod. The initial plowing process usually begins around the middle of March. The newly plowed ground will require a few days of airing and sunshine before the harrowing process starts. In many instances, the farmer takes the manure that he has removed from the barn and henhouse and scatters it over the

plowed ground. This preparation is thoroughly mixed by a process commonly referred to as double-shoveling, the discing and harrowing that tend to break down the clods and level the plowed surface.

Leaf lettuce and radishes are the first seeds sown by the farmer. He selects land for these aside from his plowed area, usually located on a slope that will permit good drainage. The soil is conditioned by the burning of debris which tends to destroy plant life that would otherwise damage the growth and quality of the vegetables. This planting is usually done ten to fourteen days before the last killing frost in the spring. The planting usually occurs in Lincoln County around the last days of March or the early part of April. Figure 16, page 64, shows the average dates of the last killing frost in Lincoln County.

Rapidly growing hardy crops which cannot endure the heat of summer are planted in the early part of spring. These include: onions, peas, mustard, spinach, and turnips. The farmer finds that these vegetables mature early and they supply him with the needed green vegetables which have been lacking in his diet during the winter months.

The planting of Irish potatoes throughout the county usually begins on St. Patrick's Day, a practice that has been handed down from generation to generation.

The farmer in planting his potatoes will think in

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE DATES OF LAST

KILLING FROST IN SPRING

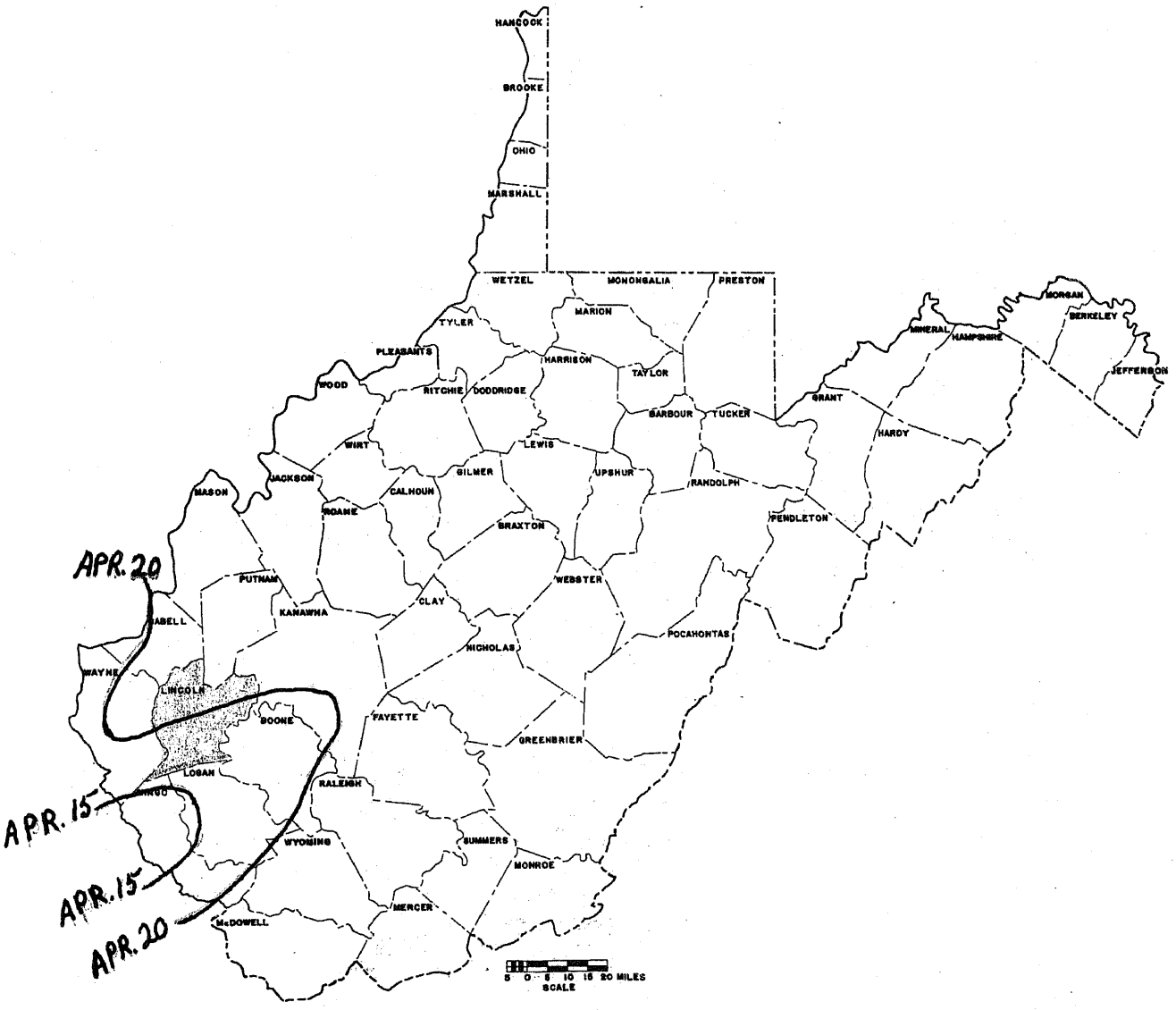

FIGURE 16

[48]United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1187.

terms of home consumption and marketing too. For the home, he usually plants an early maturing potato, usually the early Triumph or the early June potato. He finds that the best yielding potatoes and the easiest to market are the Kennebeck, Irish cobbler, and the Maine potato.

The farmer realizes that there is a great expense in growing potatoes and that he must sell his surplus at a good market price if he is to make a profit. The cost of the seed potatoes, commercial fertilizer, and insecticide, along with his own labor, proves very expensive. Despite the high cost of production, the potato is still one of the leading crops grown in the county.

The following figures show a comparison of the potatoes grown, acres harvested, yield per acre, and total production in Lincoln County over a period of ten years, at three time intervals:

Years	Acres Harvested	Yield Per Acre (bu.)	Production (bu.)
1949	568	84	47,230
1954	400	84	33,630
1959	380	36	14,800

[49]

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[49] West Virginia Department of Agriculture, op. cit., pp. 24; 32; 13.

Moderately hardy crops that grow slowly and that endure summer heat well are planted about a week before the last killing frost in the spring. The planting occurs sometime near the middle of April. This group includes carrots, beets, parsnips, parsley, and head lettuce. These are mostly grown by the farmer for home consumption.

Very tender crops that are extremely sensitive to cold are planted two to three weeks after the last killing frost. The planting occurs around the last of April and the first of May. Included in this group are cucumbers, muskmelons, watermelons, pumpkins, squash, green beans, and sweet corn.

Beans and sweet corn are grown for home consumption and marketing. The white half runner has proved to be the best marketing bean and yielding the most profit. The golden bantam and the cross bantam are the two main varieties of sweet corn grown. These two varities are grown for both home and marketing purposes.

The farmer starts his tomato, pepper, and cabbage plants indoors, transplanting them to his garden about two or three weeks after the last killing frost in the spring. By this time, the ground is warm enough to permit the plants to continue growing. This method enables the farmer to harvest an early crop. Usually the plants will bear until the first killing frost, which occurs in the county around

October 20th. Figure 17, page 68, shows the average dates of the first killing frost in the county.

The yield from these plants is large enough to enable the farmer to supply his table, preserve for the winter months, and market the surplus yield. The ease with which the farmer is able to grow these vegetables makes them among the leading vegetables grown in the county.

Milk cows. Many Lincoln County farmers are converting their rolling lands into pasture for their livestock. They have learned through experience that the profit derived from cultivating their rolling lands does not suffice to repay the efforts necessary to make the land productive.

The preparation for grasslands includes felling of the undesired trees and brush and stacking and burning them. Following this, the farmer sows the desired grass seed. This is usually of two choices—orchard grass or blue grass. Before the farmer can pasture this land, he must provide a fence that will keep his cattle from straying and to meet the requirements of the stock laws of West Virginia.

The land is allowed to remain free of grazing until the grass has taken roots firmly enough to withstand the grazing of the cattle. If this practice is not pursued, the farmer finds that much of the grass is destroyed, since the cattle will pull the young grass up by the roots.

LINCOLN COUNTY, WEST VIRGINIA

AVERAGE DATES OF FIRST

KILLING FROST IN FALL

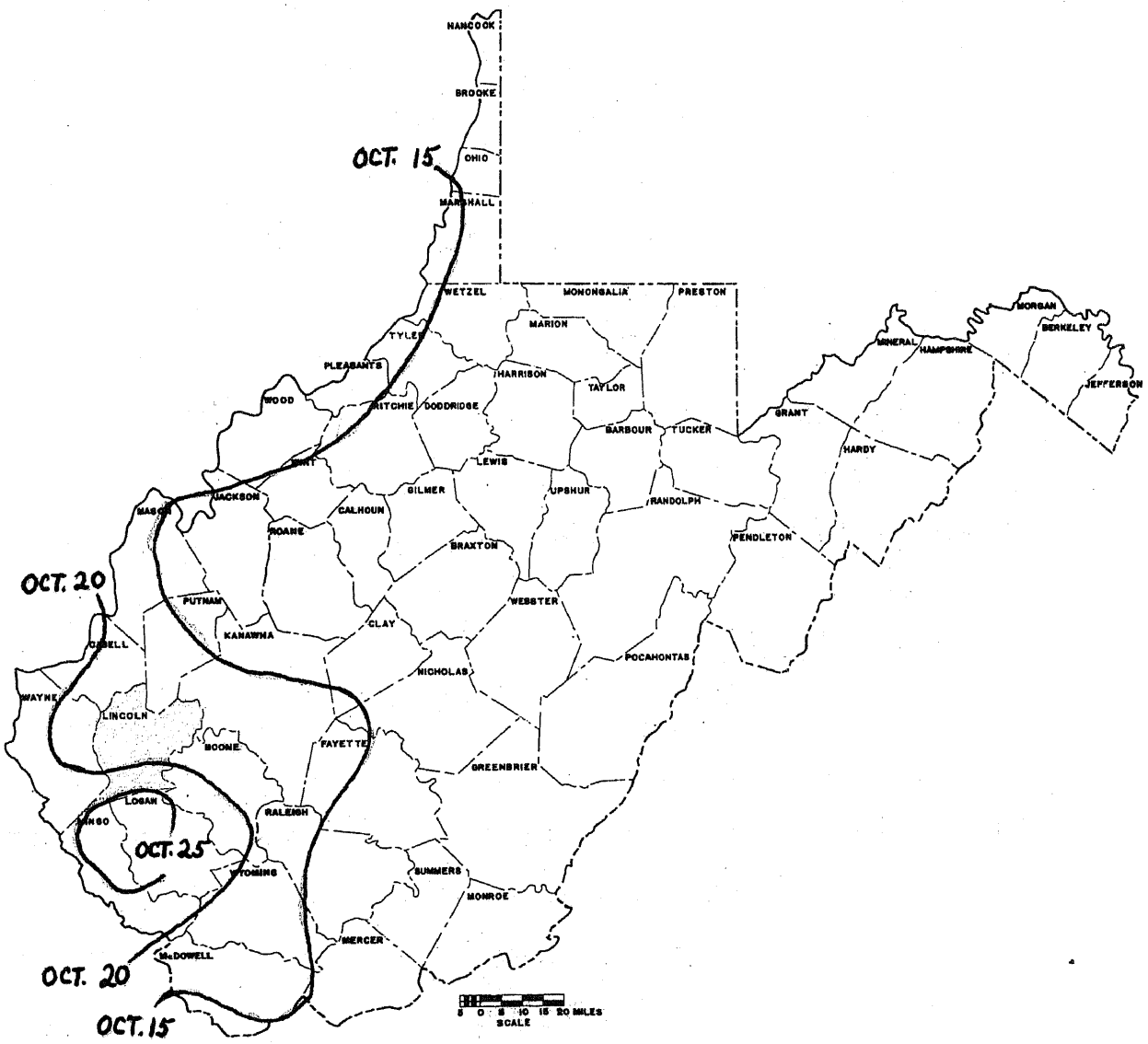

FIGURE 17

[50]United States Department of Agriculture, Climate and Man Yearbook of Agriculture (Washington: U. S. Government Printing Office, 1941), p. 1187.

During the summer months, the cost of feeding the cattle is cut to a minimum and the yield of milk and butterfat is high. This high yield of milk and butter at a low cost to the farmer helps him to balance his winter budget. It is during the winter months that the farmer finds it costly to feed his livestock. Not only does he feed the grains that he has produced on the farm but he must supplement this with commercial feeds in order to supply the required food necessary to maintain the animal through the winter months.

Most farmers in the county have from one to three milk cows. This is sometimes governed by the number of children in the family. In some instances milk cows are owned by families that are not classified as farmers.

The number of milk cows in Lincoln County over a period of ten years has shown a decrease. This might be due to the rising cost in commercial feeds and the fact that the milk can be delivered directly to the consumer's door by the local dairy. The following figures show the number of milk cows in the county over a period of ten years:[51]

Year	1950	1955	1960
Milk Cows	2,750	2,100	1,700

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[51] West Virginia Department of Agriculture, op. cit., pp. 24; 32; 13.

Hogs. The pioneers of Lincoln County brought along with their household belongings and personal property their livestock and hogs. Each family depended in large part on maintaining their own brood sows in order to provide the main source of meat for their table and seasoning for their other dishes.

Since there were no stock laws and the mountains were covered by virgin forest, the farmer had only to turn his swine loose, permitting them to forage on the fruits of the acorn and the beech tree. To avoid a mixup in identifying the hogs that had been turned loose in the early spring, each farmer would have his special markings for identification. This ranged anywhere from a "v" shaped cut in the ear to slicing a large portion of the ear away. There was no shortage of pork on the farmer's table, and even though the pork was salty or briny it was very important in the everyday diet.

Some of the early settlers stated that it was a common thing to find a sow and her brood of sucklings searching for food in any beech or oak grove that one chose to enter. With the coming of the highways and the automobile the farmer found himself faced with a situation entirely different to that with which he had been accustomed. He was forced to restrict his livestock to his own farm. This fencing of his hogs forced him to put more acreage in corn to supply the

food that was necessary to fatten his hogs.

In the early days, one could find a small building located near the main dwelling. This provided adequate space for the hanging of the meat while it was being smoked. The curing of the pork with smoke consisted of the burning of hickory bark in containers beneath the hanging meat, allowing the smoke to stain the outer surface of the exposed area. There was no set length of time for this smoking process as this depended on the desire of the farmer.

Not all of the pork was smoked; some of it was trimmed and placed in barrels. This method of placing a layer of salt and a layer of pork consecutively until the barrel was filled and headed was called salt curing.

Today, the trend has almost reversed itself. The farmer finds that it is more economical to purchase pork at modern supermarkets. Some farmers still insist on growing their own hogs for winter consumption. These farmers try to economize in the feeding of the hogs by using skim milk, scraps from the table, and grains from his own farm.

The wise farmer will have his hogs ready to butcher by early fall, in order to avoid feeding the animals for an extended period of time. Each day he feeds the swine is added cost and he must take precaution to avoid a late butchering time.

The number of farmers who depend on growing their

own pork is decreasing gradually. To support this contention, three dates are chosen at random, showing the decrease in the number of hogs grown in Lincoln County.

Year	1950	1955	1960
Hogs	3,500	1,700	1,600[52]

Poultry. Most of the farmers of Lincoln County raise their own chickens to provide the table with meat and eggs. The chickens are allowed to run free and little attention is paid to the small flocks which roam the farm yards.

The farmer has found that the growing of chickens costs little money, since most of their feed can be produced on the farm. He finds, however, that some minerals that are necessary for the growth of the chickens can only be secured in commercial feeds. The farmer finds this added cost due compensation with improved egg production and added poundage to the fowl.

One can very nearly consider conversely the growing of chickens in number to the economic status of the county. If times are of such a nature that the farmer can find local employment, he will depend less on the growing of chickens

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[52]West Virginia Department of Agriculture, Ibid., pp. 10; 31.

to supply his table needs, and in turn will purchase his poultry and eggs from the local markets. Then on the contrary if the farmer has to rely wholly upon his farm for his needs, the number of chickens will increase. One has only to note the following increase and decrease in the number of chickens grown annually during the years of 1950-1955-1960 to substantiate this contention:

Year	1950	1955	1960
Chickens	93,300	50,000	54,000[53]

Workstock. Since Lincoln Countians are diverting much of their farm land into grass land and allowing much of the land to remain fallow, the use of horses and mules for agricultural purposes is becoming less important, but the draft animals that are used for this purpose can be associated with the small farmer who cannot afford modern machinery. Some farms that are being used are located on terrain that requires the use of horses and mules for soil cultivation.

The decrease in the use of workstock over a period of ten years is shown by the following figures:

Year	1950	1955	1960
Workstock	2,400	1,550	1,000[54]

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[53] West Virginia Department of Agriculture, Ibid., pp. 10; 31.

[54] Ibid., pp. 9; 31.

CASH CROPS

Most Lincoln County farmers practice subsistence farming, selling a few surplus farm products locally. There are some farmers who cultivate in addition to their vegetable gardens other products that are sold as cash crops. The largest income from cash crops is received from the fine quality tobacco that is produced on some of the larger farms throughout the county.

Other cash crops in the county include the growing of sheep and the selling of the wool at nearby markets, egg production, beekeeping, and the marketing of honey.

Tobacco. Tobacco is commonly referred to as an American plant, as the first white people who came from Europe found the Indians cultivating and using it. The use of tobacco soon spread to England where the Queen substantiated the belief of the Indians that tobacco relieved fatigue.

Some of the foresighted pioneers found wealth in the tobacco leaf, since England began to demand more and more of its production to satisfy the growing desire for its use. So intent on growing this plant, the pioneers nearly reached starvation. To combat this condition, an emergency ordinance was proclaimed that for every acre of tobacco grown three acres would be planted in corn.

As the territory west of the Allegheny Mountains began to be occupied by new settlers, the growing of tobacco came with them. It was grown mainly for home consumption. In some instances, tobacco was used in lieu of money to pay taxes and other debts.

The first tobacco grown in West Virginia was concentrated in the Kanawha Valley, where the soil was best suited for its growth, but it was soon replaced in the northern section of the Kanawha Valley by other crops of more importance. Later it was confined mainly to the area comprising Putnam, Lincoln, Wayne, Cabell, Mason, and Jackson. To aid the farmers in marketing the tobacco crop, large tobacco warehouses were established at Huntington, Hurricane, and other tri-state cities. Unlike their predecessors, the farmers sell their tobacco on the market as a cash crop.

The growing of tobacco is by no means an easy undertaking. The farmers of Lincoln County begin their preparation for tobacco growing in the early spring, usually by (1) selecting a site for the tobacco bed that will be convenient to the farmer's house and particularly near the water supply; (2) locating it on sloping land facing either east or south to allow for better exposure to the warming sun rays and allowing for earlier cultivation of the bed; (3) constructing the framework in such a manner as to protect the bed from the cold winds; (4) locating the bed in

an area permitting good drainage to minimize the spread of infectious diseases among the tobacco plants; and (5) selecting soil that is highly fertile and high in organic matter.

In the meantime the farmer will have prepared his land for the transplanting of the young tobacco plants; this transplanting being done in the spring before the temperature reaches 85°. The farmer must keep a constant vigilance against infectious diseases and insects that are common enemies to the tobacco plant throughout its growing cycle.

The farmer will begin to cut the tobacco when the yellowing of the leaves becomes noticeable, usually around the middle of August. The tobacco is then processed and hung in tiers in ventilated barns and arranged to permit temperature and moisture control. The curing process will comprise either of two methods: curing with fire that is used to remove excess moisture, and/or open ventilation which requires temperatures between 60° and 90°.

The final step, prior to marketing the tobacco, is the grading process, which is done by hand. The tobacco is sorted and graded according to color and texture. Then it is ready to be transported to the market.

Tobacco, unlike other products grown on the farm, is governed in the quantity grown by the government through the

Department of Agriculture. Before a farmer can grow tobacco, there are certain initial steps that must be undertaken by him. This subject can best be treated by request of the reader through the Department of Agriculture, and will not be discussed in this thesis. Due to the governmental control and the added cost of growing tobacco, many farmers resort to other types of farming which they find less difficult and with less cost involved.

West Virginia is considered a tobacco growing state, but when compared to Virginia, Kentucky, Ohio, and Tennessee, it is evident that the state ranks lower in acreage allotted. In the year of 1959, the state of West Virginia as a whole was allotted 2,855 acres to the growing of tobacco.

Year	West Virginia	Virginia	Ken.	Ohio	Tenn.
1959	2,855	11,019	200,578	9,971	63,329

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Lincoln County is the largest producer of tobacco within the state of West Virginia. This in part is due to the favorable climatic conditions and the nature of the soil. The burley mammoth seems to be the leading variety grown, followed by Kentucky 35 and highleaf 21.

55Phillip Hager, Lincoln County Soil Conservationist, Soil Conservation Service, Lincoln County. Hamlin, West Virginia, October, 1961.

TABLE II

ACREAGE, YIELD, PRODUCTION, AND VALUE FOR LEADING PRODUCERS OF TOBACCO IN WEST VIRGINIA CROP YEAR 1959*

County	Acres Harvested	Yield Per Acre	Production	Value
Putnam	541.18	1575	852,804	511,682
Lincoln	720.89	1658	1,195,422	717,253
Cabell	447.87	1610	721,281	432,769
Wayne	55.24	1727	95,404	57,242
Mason	419.62	1604	673,163	403,898
Totals (5 counties)	2,184.80	8,174	3,538,074	2,122,844

*Taken from data compiled by Phillip Hager, Soil Conservationist of Lincoln County. Hamlin, West Virginia.

A random survey of the tobacco producing farms in Lincoln County was made. The two farms are offered as an example, showing the varieties grown and the poundage yield per acre.

TOBACCO VARIETY YIELD
RESULT*

1959—Bruce Alford Farm—Hamlin, W. Va.

Variety	Pounds Per Acre
Burley Mammoth	2698
Kentucky 61	2594
Kentucky 9	2490
Highleaf 21	2127
Kentucky 1	2075
Kentucky 35	1660

1960—Denver Sloan Farm—West Hamlin, W. Va.

Variety	Pounds Per Acre
Burley Mammoth	2542
Kentucky 9	2388
Burley 21	2128
Kentucky 35	1972
Burley 29	1972
Highleaf 21	1920
Burley 37	1660

*Taken from data compiled by Phillip Hager, Soil Conservationist of Lincoln County.

Egg Production. Most of the farmers of Lincoln County produce enough eggs to satisfy their personal needs. They find that to operate on a commercial basis would be very expensive and would require much time in providing adequately for the chickens.

There are, however, a few farmers who commercialize in egg production. These chicken farms are usually located off the main highways. The farmers find the traffic along the highways very destructive to their chickens if they are permitted to roam free. There are four chief egg producing farms in the county. One is located on Four Mile Creek, near Branchland, West Virginia and the other three are located in the Mud River section of the county.

The farmers find a ready market for their eggs at the local stores, with neighbors, with transits, and at the near-by markets in the local towns and cities.

The following figures show the number of layers and production over a seven year period.

Year	Number of Layers Number	Eggs Per Layer Number	Total Prod. (thous.)
1953	44,700	163	7,297
1955	40,400	166	6,726
1959	40,700	159	6,456[56]

[56] West Virginia Department of Agriculture, op. cit., pp. 27; 32.

Sheep and wool production. Some sheep are raised on Lincoln County farms, but they are not so important numerically as hogs and chickens. In the earlier days of the settlement of the county, sheep growing was more important and was one of the main sources of food, clothing, and income for the farmers. The farmers found it necessary to fence against predatory animals. Due to the lack of wire fence, the farmers substituted the split rail fence. This operation cost the farmer little since the material used was from his own farm. Today to fence against predatory animals is very expensive. Not only does the farmer pay a high price for the wire but is forced to pay an equally high price for the posts that he must use in constructing the fence.

The sheep that are grown in the county are pastured on ground that is too rough for the grazing of cattle. They use certain parts of the hay, fodder, and stalks that would be wasted by other livestock. They are grown chiefly for the lamb crop and wool production. The wool is marketed at Huntington and Spencer, West Virginia.

The number of sheep grown in Lincoln County is increasing from year to year. This increase is shown by the following figures:

	1958	1959	1960
Sheep	50	100	300[57]

[57]John Curry, County Agricultural Agent, Hamlin, W.Va.

Beekeeping and the sale of honey. Many Lincoln County farmers have found it very profitable to keep bees on their farms. They have found that the bees serve a dual purpose: pollination of their fields and orchards and the money derived from the sale of honey. Much of the honey is stored in glass containers and used by the farmers during the winter months as a source of high energy food. In comparing the cost of keeping the bees with the value derived from them, the farmers in the county have found that the greatest reward is in the pollination of their crops and not in the sale of honey.

The farmer usually keeps his bees located as near his home as possible. Since the range they travel in search of nectar is of little significance to the bee, it is important that the hives be located near the house so the bees will not become wild. Little attention is paid to the welfare of the bees during the summer months. Occasionally an inspection is made to check the condition inside the bee hive. This is very necessary since disease, insects, and animals have a tendency to attack the hives. Sometimes it becomes necessary for the farmer to feed his bees during the winter months, but this is necessary only when the flow of nectar is very light, not allowing the bees to store adequate food for the winter.

The best honey is produced by the bees during the

blooming period of the poplar and lynn trees. Many farmers will sow fields of white clover and buckwheat for the bees since this produces an excellent variety of honey that is very much in demand and offers a good profit to the farmers. The surplus honey is sold at the local stores and to individuals.

DAIRYING

Lincoln County farmers do not boast of their income from dairy products. As a general rule, each farm of a few acres or more can provide grazing land for one or two cows. The cows are kept mainly for home consumption of milk, but some surplus milk and butter products are sold to the near-by families and local dairies.

Only one dairy can be found in Lincoln County. This dairy is located on a secondary road, north of West Hamlin, and is owned by Hal McComas. This farm contains 185 acres of grazing land comprising both bottomland and rolling hillsides. The land is divided into sections, allowing cattle to graze on one section while the other section lies fallow. This is a good practice, in that it permits the cattle to have an adequate supply of grazing land and at the same time offers added protection to the grassland.

Bluegrass, clover, and orchard grass are the three varieties grown for the grazing of the herd. The herd is

comprised of seventy-one Holstein cattle of which forty-one at present time are producing milk. The milk cows average approximately one and one-half gallons milk per milking.

The bulk of the milk produced is sold locally. The area that is served by this dairy extends over most of the county. The main consumers the year around are the general public and the local stores. The seasonal consumers are the public schools of Lincoln County which participate in the hot lunch program, with the exception of the schools in the immediate vicinity of Hamlin, West Virginia. This total demand is greater than the milk production of the dairy; therefore, extra milk must be purchased from other outlying dairies.

The dairy requires approximately seven men daily to tend to the milking of the cows and the processing of the milk. The milk is pasteurized and homogenized and sold in standard quantities. Three trucks are used daily in the distribution of the milk.[58]

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[58]Hal McComas, Dairy Owner, Lincoln County. West Hamlin, West Virginia.

FRUIT GROWING

In the early days of Lincoln County's history fruit growing played an important part in the economy of the farmer. Among the fruits grown the apple was the most important, with peaches ranking second. Some of the other fruits grown were pears and cherries. These were mostly located near the farmer's home for easy accessibility and were grown mainly to supply his family needs.

The farmers have been blessed with an abundance of wild berries that can be found growing throughout the county. These include the blackberry, raspberry, huckleberry, and the domesticated strawberries.

Apples. The apple trees that once covered vast areas of the rolling hillsides of Lincoln County are no longer in evidence. The remains of these orchards stand ghostly against a green forest that nature has seen fit to replace. One of the largest and best producing apple orchards that Lincoln County boasted was owned by George Godby. This orchard covered approximately one hundred acres and was located on the summit of a hill overlooking the Guyandot River, south of Midkiff, West Virginia. It extended in a north-south direction, paralleling the river. The trees were well arranged and the best spraying methods were employed. During the harvesting time, the apples

were picked, sorted, and stored in buildings near the orchard used to protect the apples during the early freezing periods. Near Christmas time, the apples were hauled to the Midkiff railroad freight station in wagons. They were placed in a railroad box car and shipped to Logan, West Virginia. They were taken from the box car at Logan and distributed to the buyers who had purchased them prior to the shipment.

It is not known the exact number of bushels of apples that were produced by this orchard in any one harvesting period. There are still those who remember having worked in the orchard during the apple-picking time and are able to refer to the number of bushels handled as being in the thousands. The orchard produced several varieties of apples. The most abundant apples were the Roman Beauty, the Red Delicious, and the Black Ben Davis.[59]

Today there are only three young orchards of any appreciable size in Lincoln County. One of these is located on top of the Ranger ridge just west of Ranger, West Virginia. There are approximately 250 trees in this orchard. The apples from this orchard are sold to local consumers. The orchard produces several different

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[59]Statement by Hiram Scites, Midkiff, West Virginia, personal interview.

varieties of apples. Among the most abundant are the Red Delicious and the Grimes Golden. It is not known how many bushels of apples are produced by this young orchard.

The two remaining orchards are located in the Mud River section of the county. They are not nearly so large as the Ranger orchard and the annual yield is not known.

Lincoln County has a suitable climate and the proper soil texture for the growing of apple trees, but many farmers are reluctant to plant new trees. They find that to undertake a spraying program to combat the many diseases and insects that attack the trees is too expensive. As a result of this condition, the farmer finds it more economical to purchase his apples at the near-by markets.

Peaches. There was a time in Lincoln County when the farmer found it profitable to grow peaches. It was easy for him to combat the few diseases and insects that attacked his peach orchard. It was a common practice to grow the peach orchard in the same area of the apple orchard. But as time passed insects and diseases have practically destroyed the peach trees in the county. What few trees remain are for domestic use.

Pears. The pear trees, like the peach trees, have been attacked by blight and are very nearly destroyed. The only variety that withstands the blight is a large

grainy pear that has very little taste. Its main value is for canning purposes only.

Cherries. Only a few cherry trees can be found throughout the county. These are located near the farmer's home for easy accessibility, and serve the farmer for his domestic use only. There is no commercial value attached to this type of fruit growing in Lincoln County.

Blackberries, raspberries, and huckleberries. These berries are found growing wild along the creeks, hillsides, and summits of the hills. Ordinarily each farmer will supply his needs from the berry canes that grow over his entire farm. Many farmers will pick the berries and sell the surplus on the markets and to individuals. Each year during the last of June and early July, the mountains are dotted with the farmer's family and their buckets on their way to the berry fields. Six to ten gallons of blackberries make a good days picking. The black raspberry is not as plentiful as the blackberry, but is in demand because of its delicate flavor. A picking of two gallons is a good days find, but when combined with the blackberry harvest will supply the farmer with enough raspberry flavored delicacies.

The huckleberry, like many other fruits that once abounded the mountain summits in Lincoln County, is almost

a thing of the past. In the early days the family found it easy to supply their tables with this delicate berry. The berry was difficult to pick because of its location and its size. It usually grew best on the steepest and rockiest section of a hill. Two to five gallons would comprise a good days picking by an individual. It might sell on the market for one to one dollar and a half per gallon. Today, the huckleberry is difficult to find. This is due to the many forest fires that have nearly destroyed the huckleberry vines.

Strawberries. The strawberry of a hardy strain is being introduced into Lincoln County in increasing numbers. The cultivation of strawberries is being encouraged by the county division of the Department of Agriculture. Two of the chief growers of strawberries in the county are Frank and Truman Stowers and Kenny Lucas of Lower Big Creek. The Stowers' farm contained 4,000 plants and the Lucas farm 1,500 plants. These plants are of the hardy one-time bearing variety and are harvested in the latter part of spring. When sold on the market, they net the farmers a good profit. Though some of the ever-bearing plants are grown, the farmers have found the hardy one-time bearing strawberry yields a better quality and quantity.

CHAPTER IV

EXTRACTIVE INDUSTRIES

Extractive industries in Lincoln County are confined to two in number, since the dipping of sand and gravel and the securing of coal through dipping comprise activities in this economic field.

SAND AND GRAVEL

The mining of coal from the mountains of West Virginia has necessitated the use of other materials in its extraction. Of these materials, one of the most important is sand. This product is important in the operation of the electric motors that are used in the transportation of the coal from the face of the coal mine workings to the tipple. This in part is due to the formation of the coal seams that underlie the mountains. Often the elevation is of such a nature that sand is required to give added friction to enable the wheels of the motor-driven vehicles to adhere to the tracks.

The producers of the sand necessary for the mining operations turned to the local streams for their source of this material, and the Guyandot River has proved to be the best source. This stream is located parallel to State Road Ten, the main thoroughfare leading from Huntington

into the southern coal fields of West Virginia. This location made it easy for the producers to locate their sand-lifting plants in areas which enabled them, with little cost, to secure sand from the bed of the river.

The lifting of the sand from the river bed to the sand storage bins located near the entrance to the highway was done by the use of pumps. These pumps were mounted on barges with an attached movable pipe and screw-head which extended to the depths of the layer of sand in the bed of the river. The screw-head attachment agitated the sand, which, in turn, was sucked through the pipe to the pump and then forced into the sand bins located on higher elevation. This sleuce of sand and gravel mixture was separated from the foreign substances by the aid of machinery. Following this screening process, only the sand was stored in bins, allowing the other substances to be returned to the river. Most of the excess moisture would find an avenue of escape, eliminating excessive weight.

These sand bins were so constructed that trucks had only to be driven under a hopper for the purpose of loading. By the means of a lever attached to a movable steel plate, located at the bottom of the hopper, the loading of the truck was a speedy operation. After the truck was loaded, it was weighed for volume at or near the loading operation.

At one time there were at least five of these sand-

lifting operations in use in Lincoln County. These plants could be found in a line leading from Branchland, Lincoln County to Ferrelsburg, Lincoln County, and during the days when the coal mines were in production, many people gained employment through their operations. This industry today is virtually at a standstill. During the year of 1959, only one such plant was in operation for sand lifting. This was Dial Coal Company, located on the east side of the Guyandot River, north of Branchland, Lincoln County. The total output for the year of 1959, was 348 tons.[60] Figure 18, page 93, shows the location of the sand-dipping plants operative and nonoperative.

The lifting of gravel from the streams has been of little commercial value, since it has not been a common practice to lift the gravel independently. The gravel that was lifted from the river was a by-product of the sand-dipping operations. The small amount of gravel that was marketed was sold to local consumers who used it in road building and in the making of concrete. The bulk of the gravel was returned to the river with the other debris.

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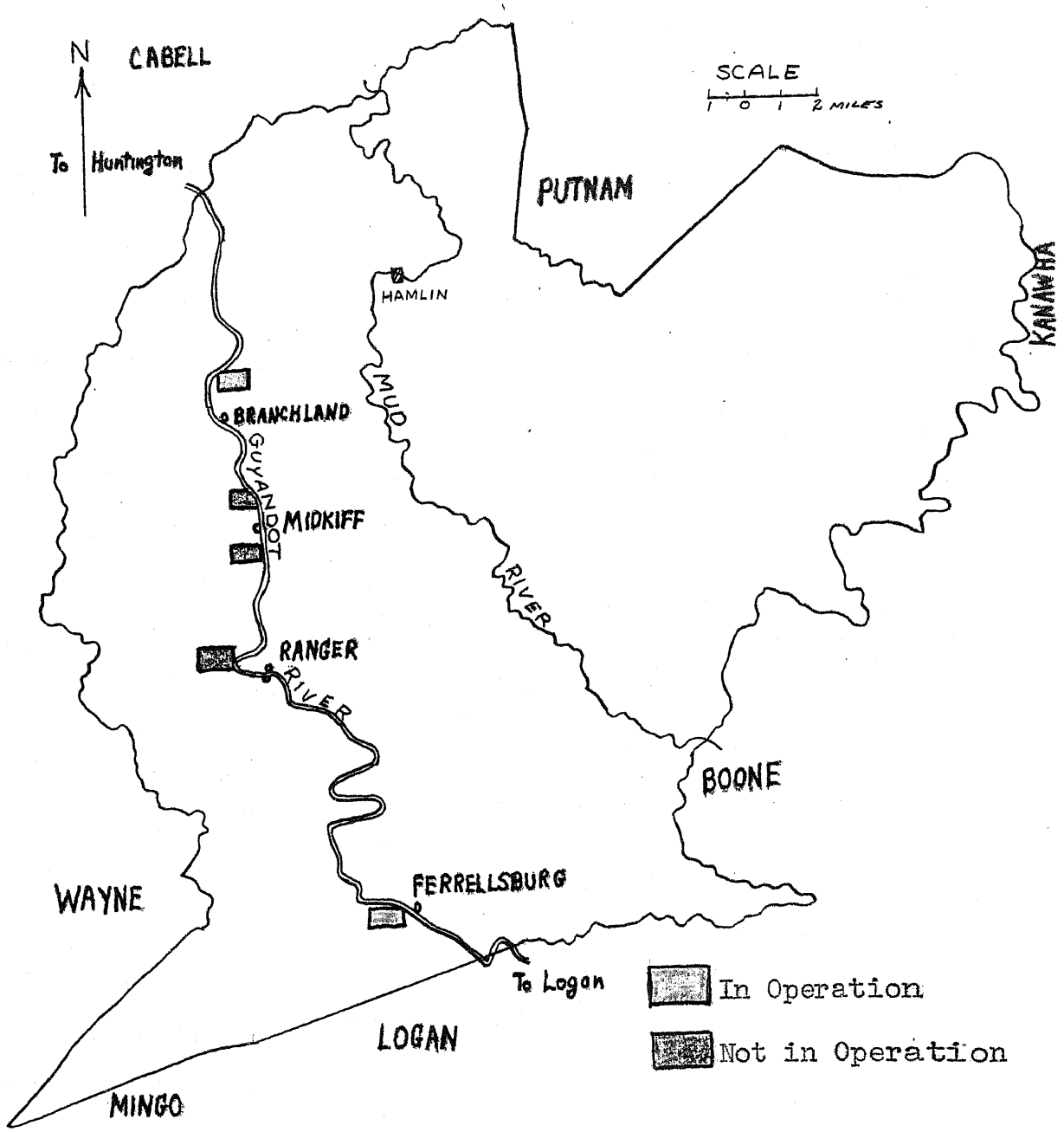
[60] State of West Virginia, Annual Report of the Department of Mines: 1959. (Charleston: Mathews Printing and Lithographing Company), p. 128.

LINCOLN COUNTY, WEST VIRGINIA



SAND-DIPPING PLANTS ON GUYANDOT RIVER (1961)

FIGURE 18

COAL-LIFTING PROCESS

Located on the west side of the Guyandot River, north of Midkiff, was the Guyan River Company. It was owned and operated by Howard Elkins, a native of Midkiff. This company's primary purpose was to lift sand from the river and to supply the needs of the coal operators. However, it was found that during the sand-pumping operations, the dredged-out basin filled with material that was largely coal. The abundance of this coal prompted Mr. Elkins to shift his reclaiming process from sand to that of coal. His decision to make this change proved very successful.

A study of the river condition and a survey of the accumulation of the coal in the basin, brought about by the rising and falling of the stream, enabled Mr. Elkins to venture into an enterprise that was considered to be the first of its kind to reclaim previously mined bituminous coal in quantity from a river. Since the location is some thirty-five miles north of the Logan County coal fields, it is believed that most of the coal that is reclaimed has traveled some forty to sixty miles with the flow of the Guyandot River.

It is evident that this coal found in the stream is the result of the coal mining operations located higher up on the Guyandot River and its tributaries. During the screening processes of the coal after it was mined, some of

the coal found its way into the river and was moved down stream by the current.

The high quality of the coal extracted from the river can be attributed to the natural forces which have cleaned, polished, and dusted the coal during its journey down stream. It is believed that the farther down stream the coal travels, the better in quality it becomes. This is due, in part, to the absence of sulphur and ash content that enabled the coal to drift so far down stream. In the natural laundering process brought about by the movement of the coal down stream, the nuggets of coal lose their sharp edges and take on the form resembling that of briquette coal.

The equipment necessary to lift the coal from the river and process it for shipment comprised the following: a pumping dredge boat; a screening and sand-storage installation called a sand-and-coal tipple, which is located three miles south from Midkiff; an additional sand-and-coal tipple, including a fine-coal washer and called a coal reclamation plant, located on the west side of the Guyandot River just north of Midkiff; and a loading ramp located on the east side of Guyandot River, opposite the reclaiming plant and adjacent to the Chesapeake and Ohio Railroad.

The coal is lifted from the river by the use of a pump mounted on a dredge boat. The pump is operated by the use of natural gas. The digger suction-head, which is

capable of working twenty-four feet below deck level is a standard rotary type driven through a flat belt. By the use of wire ropes that are stretched across the river and passing over hand winches on the boat, the operator is able to move the boat in and out from shore. The dredged material is lifted to the sand-and-coal tipple through a six-inch spiral pipe.

The dredged material pours onto a vibrating screen that separates the foreign substances from the coal. About 90% of the foreign material is removed. Most of the remaining pieces of material are picked from the coal by a man as the substance moves over a wide belt that carries the coal to a truck-loading hopper. The coal is considered absolutely clean and the lumps range in consistency from slack to 3 1/2" by 1" nuggets.

The finished product was transported from the reclaiming site to the loading ramp by the use of dump trucks. The total operation of this reclaiming plant employed six men, a dredge-boat operator, picker, sand screener, truck driver, reclamation-plant operator, and a handy man. The average production per day ranged from 50 to 200 tons.

The bulk of this coal was shipped to the consumers via the Chesapeake and Ohio Railway, but some was sold to local consumers. The local consumer found the use of this coal damaging to his heating equipment, in that its heating

power was too great.

Today there are two other plants of similar nature operating north and south of the above named plant and their operation parallels that of the Guyan River Company. South of Midkiff, on the west bank of the Guyandot River, is the Campbell Brown Operation, which employs eight men. The coal is hauled by dump trucks from the reclaiming plant to a conveyor unit, located adjacent to the Chesapeake and Ohio Railroad at Ranger, Lincoln County. The bulk of this coal is shipped via the railroad to the Great Lakes region to be distributed to the consumers. The second operation is located north of Branchland, Lincoln County, West Virginia, and is owned and operated by Hal Dial, Jr., known as the Dial Coal Company. This company does not operate on a full scale as does the Campbell Brown Coal Company but its operation is similar to the others mentioned.[61] Figure 19, page 98, shows the location of the coal-dipping plants operative and nonoperative.

The writer proposed to cite the Guyan River Company since it was the first of its kind to employ the coal-dipping process in the county. This company is not in operation today due to legal procedures beyond the control of its owner.

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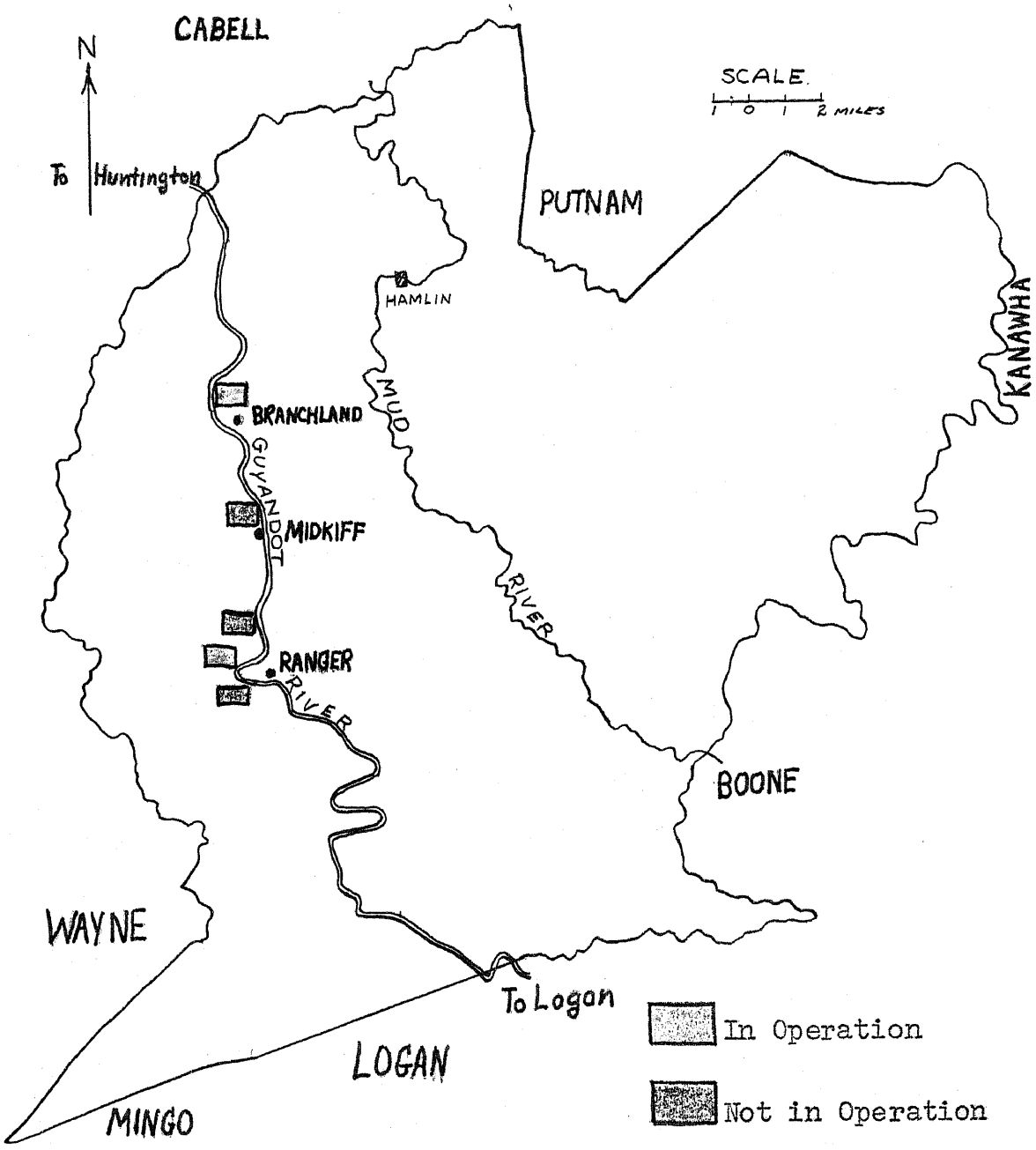
[61]Howard Elkins, Owner of Guyan Coal Company, Lincoln County. Midkiff, West Virginia.

LINCOLN COUNTY, WEST VIRGINIA



COAL-DIPPING PLANTS ON GUYANDOT RIVER (1961)

FIGURE 19

CHAPTER V

FINISHED PRODUCTS

Lincoln Countians find themselves in need of industries in which they can gain employment. The county has been recognized as a secondary agricultural region, and little emphasis has been placed on the value of industry. There are those, however, who have sought to initiate and bring into the county some form of manufacturing. The two leading local industries in the county are: (1) the Lincoln Clay Products Company; and (2) the Dee-Mure Brassiere Incorporated.

LINCOLN CLAY PRODUCTS COMPANY

The Lincoln Clay Products Company is located south of West Hamlin, West Virginia, adjacent to State Route 10, and it is owned and operated by Thomas Kerwood, a local resident. The company was formed in November, 1950, with a total asset evaluation of $500.

Mr. Kerwood got the idea of developing a machine that would yield a finished product while employed by the Island Creek Coal Company. The coal mines demanded a substance that was non-combustible and would pack in a drilled hole, enabling the use of dynamite for the purpose of breaking down the coal from its underground formation. The

common practice of filling paper-like funnels and crimping each end by hand was a slow and tedious operation that had been practiced until Mr. Kerwood discovered a method that would produce a finished product known as a clay dummy.

The clay dummy is approximately twelve inches in length and varies in diameter from one inch to one and five-eighth inches. It is constructed of clay covered with heavy brown wrapping paper. The machine which manufactures the dummies receives the clay, compresses the clay, cuts the compressed clay into uniform lengths, wraps the compressed clay, and drops the finished product onto a conveyor belt, which leads to a packing crate. It is then packed in a paper carton, which is sealed tightly and then stored for future delivery.

To operate this machine continuously for one eight-hour shift one hundred and twenty tons of clay are needed. The machine is capable of producing approximately 14,167 finished clay dummies in one eight-hour shift. There are at the present time six such machines in operation, with a working crew of thirty-two men, giving a total output of 85,000 feet of clay products each shift.

The clay which is basic in the manufacturing of the dummy is purchased from local farmers and is usually found near the surface of the hilltops. Bulldozer machines are used to uncover the beds of clay. The clay is then pushed

into piles where it is lifted by inloaders and dumped into large dump trucks, and then transported to the processing plant. The employees that are required in these operations are included in the total employment of thirty-two men.

Ninety-nine per cent of the clay dummies that Mr. Kerwood manufactures is sold to coal operators that use explosives of such a nature that requires tamping substances. These sales are made to coal mine operators located in Kentucky, Ohio, Virginia, Pennsylvania, and West Virginia. There are seventeen heavy-duty trucks used in transporting these dummies to the different buyers. The farthest point of delivery is 460 miles.

The future operation of this industry will depend on the continued operation of the coal mines. It is believed that the present speed of operation will produce an adequate supply of these clay dummies for an indefinite period of time. This is due to the abundant supply of good-quality clay that is found throughout the county.[62]

There is but one other clay dummy plant located in the county. This plant is owned and operated by Barney Saunders and Sons, and is located at Midkiff, West Virginia,

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[62]Thomas Kerwood, Owner of Lincoln Clay Products Company, Lincoln County. West Hamlin, West Virginia.

on State Route Ten. This plant is much smaller than the one owned by Mr. Kerwood; requiring only a six-man crew to operate daily. There are approximately 24,000 dummies produced daily by the one machine used in this operation.

The vehicles used to transport the clay from its natural location to the processing plant and to transport the finished product to its users are: one dump truck and two heavy-duty transit trucks. The clay products are sold to the following companies: Island Creek Coal Company; Akers Supply Company; Ames Mining Company; Sement-Solvay Company; and Stevenson-Elkhorn Coal Company. These companies utilize approximately 20,000 clay dummies per day.[63]

DEE-MURE BRASSIERE INCORPORATED

The second major industry of significant importance in Lincoln County had its beginning May 12, 1954. A group of interested business men put at the disposal of M. D. Growe of New York City, some twenty thousand dollars for the purpose of initiating the business. After this money was made available, the second step necessary was the securing of a building adequate to house the machinery. The American Legion Building, in Hamlin, was made

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[63] Barney Saunders, Owner of Saunders Clay Products, Lincoln County. Midkiff, West Virginia.

available. The company began production under the name of Lincoln Brassiere Company and continued operations in this building until September 15, 1961.

The Lincoln Brassiere Company later became known as Dee-Mure Brassiere Incorporated. It was relocated in a new building erected primarily for the company. The new building contains 14,000 square feet of floor space, constructed of block and brick material, with a concrete floor. The building is of modern construction, containing an air conditioning system.

There are 133 sewing machines in operation at the present time, with the future possibility of this number reaching 225 machines. There are 115 full time employees including seamstresses, mechanics, inspectors, and packers. The company is affiliated with the International Ladies Garment Workers Union (I.L.G.W.U.) and the employees receive the minimum wage. This is not to mean they can only make the minimum hourly wage of $1.15 per hour, but can make as high as $14.00 per day. It is said that being on piece work it is possible for a fast and efficient worker to receive much more than the minimum wage.

There is cooperation between the Lincoln County Board of Education and the Dee-Mure Brassiere company, since all persons who anticipate employment by the

company must apply for jobs through the West Virginia Security Office at Huntington, West Virginia. The applicant must apply for position and upon notification by the Huntington Employment Security Office at a prearranged date, undergo a sewing aptitude test. The results will be tabulated by the Huntington Office and forwarded to the office of the Dee-Mure Brassiere Company. Mr. Mirrel Clark of the office of the Lincoln County Board of Education will upon notice by Mr. James Jordan, foreman for the company meet with Mr. Jordan and review the test scores that they receive from the Huntington Office, and in turn will select the most capable applicants for job fulfillment. It is said that the hiring by this method is not final, since the company can hire an experienced operator in preference to the recommended trainee.

These applicants are to be trained for approximately 100 hours before they are eligible to operate a machine on their own. This 100 hours of training is usually done in a period of two weeks. There are 12 trainees undergoing training at each interval.

Of the 115 employed in the plant 90% are recognized as natives of Lincoln County, allowing for 7% employment from Cabell County, and 3% from Putnam County. The entire operations payroll is approximately $6,500 per week.

The material necessary for the manufacture of the

product enters the plant in bulk form. It is spread, cut, and put through the many different phases of assembly before it reaches the final inspection table as a finished product. There are several phases of this operation, while at the same time, four or even five different designs may be undergoing completion at the same time.

The Dee-Mure Brassiere Company offers thirty-two different styles or designs of brassieres for the market. The company has found an open market over the entire United States and its outlying possessions, Europe, and South Africa.[64] (Figure 20, page 106, shows the location of the Lincoln Clay Products plant; Saunders Clay Products plant; and the Dee-Mure Brassiere plant.)

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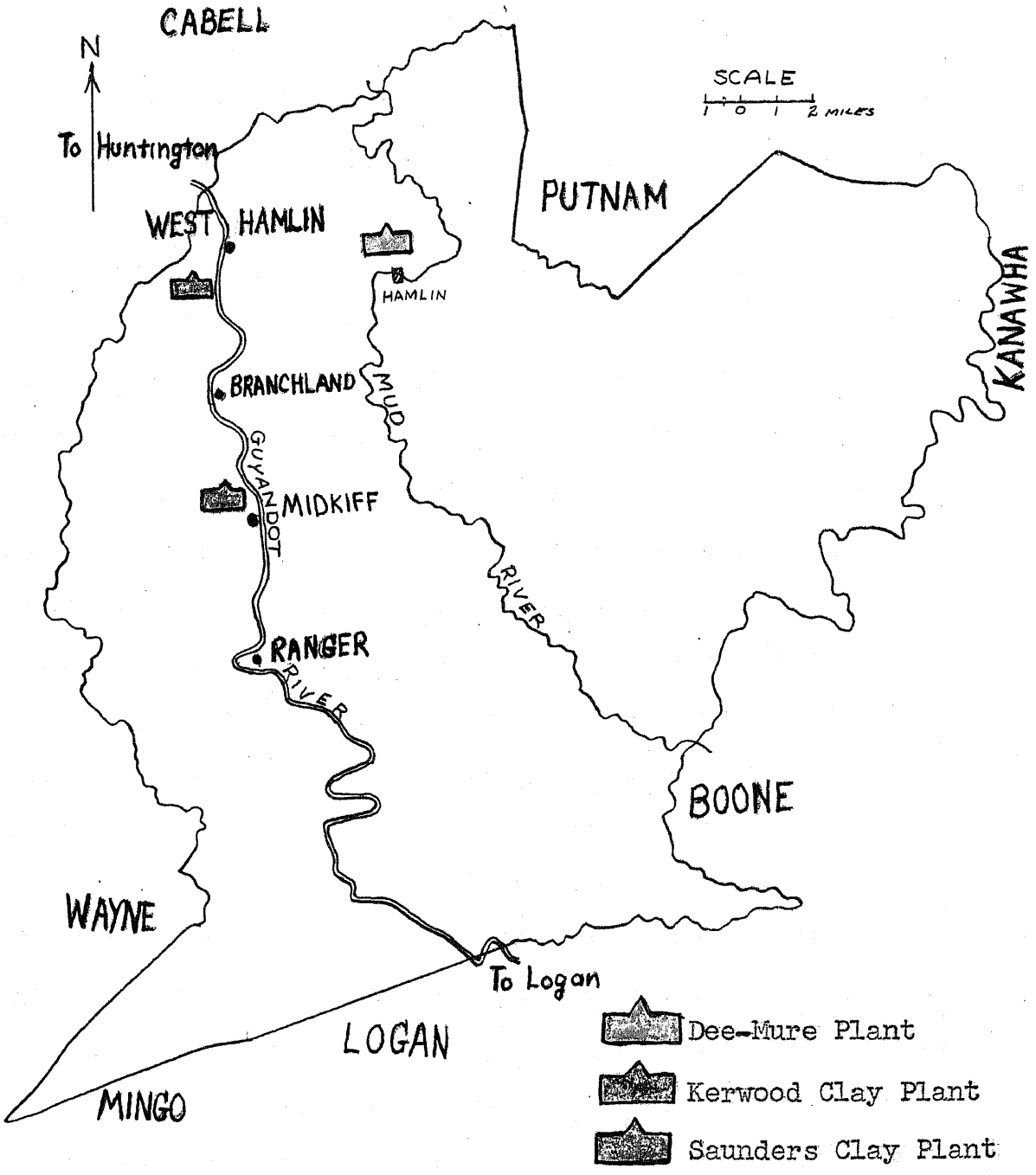
[64] James Jordan, Plant Manager of Dee-Mure Brassiere Incorporated, Lincoln County. Hamlin, West Virginia.

LINCOLN COUNTY, WEST VIRGINIA



LOCATION OF FINISHED PRODUCT PLANTS IN THE COUNTY

FIGURE 20

CHAPTER VI

TIMBER INDUSTRY

The first pioneers to enter the territory now known as Lincoln County could see virgin timber in any direction in which they chose to look, and the view would include many varieties of hardwood and softwood trees. Among the many species that flourished throughout the area were: yellow poplar, black walnut, white ash, black cherry, white oak, red oak, and chestnut oak. These were recognized as the choice timber trees of the forest. There were also many varieties of less value found growing throughout the region; namely, beech, maple, hickory, birch, black gum, white elm, sycamore, and hemlock.

As population increased there came a need for home sites and garden plots. With little thought as to the destruction of the wealth that nature had provided, the farmer began to fell the timber. Not only did he remove the trees for home sites and for use in the construction of the homes but he needlessly felled and burned much valuable timber in preparing land to be farmed. This practice was not done through ignorance of the farmer but can be blamed on the lack of commercial value for the timber. As a result, this period of timber destruction continued for some time. Krebs and Teets, Jr. reported that this

clearing of the land for home sites lasted for approximately fifty years, from 1820-1870.[65]

TIMBER INDUSTRY FROM 1872-1960

The virgin timber in Lincoln County began to feel the wrath of man's saw and axe in 1872. Throughout the state of West Virginia, timber became necessary to supply the market which demanded lumber in the construction of the thousands of homes that were being built. This acute demand sent businessmen into the wilderness in search of choice timber to fulfill the needs of these settlers.

Two of the most important timber buyers and shippers in Lincoln County in the late 1800's were Prichard and Lewis who built dams on the tributaries of the Guyandot River and splashed the felled logs out to the main stream. At the mouth of the tributaries the logs were caught and secured in a manner commonly referred to as a raft. The rafts were then steered down the Guyandot River to the town of Guyandotte, in Cabell County, where the rafts were dismantled and the logs were then hauled to the sawmills to be sawed into lumber.

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[65] C. E. Krebs and D. D. Teets, Jr., West Virginia Geological Survey (Wheeling: Allied Printing, 1913), p. 420

A third timber buyer of noted importance was Alexander Henderson. He operated on about the same principle as did Prichard and Lewis, with one exception; he floated his timber rafts to the Ohio River where the logs were loaded aboard river steamers and hauled to other parts of the country. His span of operation was from 1895 to 1897.

Fulton Cummings, a fourth important timber buyer in Lincoln County, operated chiefly in the Mud River section of the county. Using the splash-dam method, Cummings was able to move the timber from the small tributaries of Mud River to the main stream. He then moved the timber down Mud River during the spring floods. He was unable to fashion the logs into a raft due to the narrowness of the stream, so he was forced to send the logs downstream one at a time. This often cost him much time in dislodging the logs that went aground in the floating process.

Mr. Cummings would catch the logs at the mouth of Mud River where it emptied into the Guyandot River at Barboursville, West Virginia, and assemble them into some form of a raft and float them down the Guyandot River to Guyandotte and Huntington, West Virginia. The logs were sold to timber operators at Huntington or Guyandotte.[66]

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[66] C. E. Krebs and D. D. Teets, Jr., loc. cit.

The pioneer settlers of Lincoln County usually constructed their homes of logs that were chosen for uniform size. They would then hew two sides of the log so that when placed atop each other, there would be a minimum space for air to drift into the room. This space was then filled with mud which served as a filler, making the house warmer during the cold winter months. There were instances when the farmers would decide to build a house from boards. This method would require the placing of a log in a manner that would permit the use of a cross-cut saw. A pit was usually dug and the log located in such a manner over the pit, allowing for one of the men to stand beneath the log while the other man stood ontop of the log. They were able to saw the log into boards by an up-down stroke. This method was very hard and very slow, but it was possible for two men working in such a manner to produce two hundred board feet of lumber a day. This method of lumber production was known as the whip-saw operation.

The whip-saw method was soon replaced with water powered sawmills that were located along the streams. Two of the first operators to employ this method were Charles Latin and David Porter. Their mills were located on the Mud River in Lincoln County.

The sawmills that were operated by steam power were

introduced into Lincoln County in 1880. They were brought into this area by the aid of wagons and oxens and/or horses. These sawmills were located at the most accessible points in the county. The timber was felled and hauled to these mills where it was sawed into lumber and then rafted down the Guyandot River to its point of distribution. This practice stopped in 1904, following the completion of the Guyandot Valley Branch of the Chesapeake and Ohio Railroad.[67]

The timber industry suffered a rapid decline following 1900. This was due to the fact that most of the accessible virgin timber had been removed. The timber industry did not start again until around 1930. This period of waiting allowed the young timber that escaped the woodman's axe in the earlier boom to develop into a new stand of timber.

Today there are approximately twenty-five sawmills operating in Lincoln County. The sawmills produce lumber, ties for the railroad, building materials for bridges, and sawed materials for coal mine props. Much of the first grade lumber is hauled from the sawmill location to a market in Huntington, West Virginia.

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[67] C. E. Krebs and D. D. Teets, Jr., Ibid.

REFORESTATION

Many farmers are beginning to realize the need for some form of protection to the young timber in Lincoln County and are undertaking reforestation of areas on their own farms. Some farmers are planting young pine seedlings which they hope will be an early source of income. Many thousands of the young trees are taken each Christmas to market to be sold as Christmas trees, but some of the young pine trees are permitted to stand for future timber trees. This practice is encouraged by the West Virginia Conservation Program.

There are at present two fire towers serving the territory of Lincoln County. One tower is located west of Branchland, on Gartin Knob, bordering on the Lincoln-Wayne County boundary line. The other fire tower is located on Buck Knob, near McCorkle in Lincoln County. These two fire towers are owned and maintained by the State Conservation Commission.

Through the joint action of the United Fuel Gas Company and the Department of Natural Resources, a 5,700 acre tract of land has been designated as a public hunting area. The United Fuel Gas Company, owner of the land, has made this land available to the state of West Virginia for a period of twenty years.

The land that is to be converted into a public recreation area is located on Laurel Creek and Big Branch, in Lincoln County. It is to be developed by the division of game and fish commission. The tenative plan includes, first of all, construction and improvement of access roads of all-weather quality wherever possible. Next there will be the establishment of wildlife food plots, fruit-producing trees, shrubs and vines, and clearing of carpeting brush trees. Trails will be made available to the hunters from different avenues of approach. There will be some planning of wildlife cover along with sufficient openings for sunlight. Camping facilities for the hunters will be provided and will include campsites and drinking water.

This area will be stocked with deer, turkey, bear, and fish in the streams. For this wildlife to survive and propagate in this sanctuary, it will become necessary for all farmers to join hands and assist in the caretaking of the reserve. To this end the farmers will need to convert much of the surrounding lands into a joint undertaking with this plan and they will further need to assist in the controlling of the predatory animals, the spreading of forest fires, and the elimination of poachers.[68]

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[68] The Lincoln Republican, July 20, 1961, p. 1.

CHAPTER VII

TRANSPORTATION AND COMMUNICATION

Lincoln County is lacking in a modern highway network, but its nearness to national highways helps to alleviate the absence of main thoroughfares. Located near the northern boundary of the county is U.S. 60 and 64, and on the west is U.S. 52. Aside from this the county has numerous primary and secondary roads which intersect these main highways.

The county today is making marked progress in communications, in that a new telephone company has located within the county.

It is evident that the welfare of any community depends in large measure on its transportation and communication system. To that end, emphasis will be placed on: (1) transportation; and (2) communication systems.

TRANSPORTATION

Guyandot River served as the main entrance from the north as man penetrated into the interior of the county in search of homesites. As the population began to increase in number, it became necessary for a change in the mode of travel that was prevalent at that time. Many trails bisected the county, but like the rivers the trails

permitted only seasonal traveling. Therefore, before the county could progress, a change from river transportation to land transportation was inevitable.

In discussing the highways of the county, the writer has chosen to identify more closely the State Primary Roads, including in this discussion State Road 10, State Road 3, State Road 37, and State Road 14.

State Road Ten. State Road Ten extends north and south through Lincoln County, joining U.S.60 east of Huntington, West Virginia, and entering Logan County south of Fry. The road is hard surfaced from the Cabell County line to approximately one mile north of Midkiff and is bituminous coated from this point to its terminus at the Logan County line.

The men who made this highway possible were: Albert Black, County Clerk of Lincoln County; A.B.Shelton, E.P. Thorton, and Rush McComas, the three County Court Members; Keenan Toney, Sheriff of the county; Greely Isaacs, Gill Hager, Kirg Hatfield, and June Messinger, laymen of the county. These citizens explained to the residents of the county the necessity for a highway that would connect the two main cities, Huntington and Logan. In 1917 a bond issue of $750,000 was proposed to the voters of the county. The bond issue carried by a large majority of voters, but

the initial construction of the road did not begin until sometime later. This delay was due to the need of a right-of-way from the farmers and the mapping and planning for the roadbed.

At this time the county was forced to build and maintain its road system and this proved too great a burden for the tax payers of the county. It became necessary, therefore, to shift the burden of financing road building projects to the state. This was accomplished in 1923, when a county bond for $150,000 was voted and the total sum was paid to the state of West Virginia in order to shift the maintenance of State Road Ten and other roads to the state. Soon after this transaction State Road Ten was hard surfaced from the Cabell line to Midkiff, Lincoln County, and the remainder of the road to the Logan County line was later surfaced with a bituminous base.[69]

State Road Ten in its course across the county crosses Guyandot River at West Hamlin and Big Harts Creek at Harts Creek. Aside from this there are four smaller steel bridges that span the tributaries that bisect the road. State Road Ten serves as a main artery in transit traffic and also carries the bulk of the heavy machinery

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[69]Sescoe Isaacs, Former Member of the House of Delegates, Lincoln County. West Hamlin, West Virginia.

that is needed in the southern coal fields. The road is also used by the Trailway Bus Company in its transportation of the public from the Huntington terminal through Lincoln County and points south.

State Road Three. The next road of importance in the county is State Road Three, which intersects State Road Ten at West Hamlin and extends into Boone County in a southeasterly direction. The road connects West Hamlin, Hamlin, Griffithsville, and Yawkey. (Figure 21, page 119, shows State Road Three and the towns mentioned). From Yawkey, the road extends in a southeasterly direction and enters Boone County east of Woodville. The road is hard surfaced from West Hamlin to one mile south of Yawkey. From this point to its entrance into Boone County, it is a low type bituminous surface. The road serves as a direct route into Boone and Logan Counties.

State Road Thirty-four. State Road Thirty-four joins State Road Three east of Hamlin and leads in a northerly and easterly direction. The road connects with U.S. 60 west of Hurricane, West Virginia. This road is a hard surfaced road, having been paved in recent years. The road serves as a connecting link between Charleston and Hamlin, the county seat of Lincoln County.

State Road Thirty-seven. This road meets State Road Ten about one mile south of Ranger, West Virginia, and extends into Wayne County, where it joins U.S. 52. The road is of a low type bituminous surface and is said to be one of the best conditioned roads in our county. The road is used mainly as a connecting route between U.S. 52 and State Road Ten.

State Road Fourteen. This road joins with State Road Three one mile south of Yawkey and extends in a northeasterly direction, entering Kanawha County at Alum Creek. It is of a low type bituminous surface and is used mainly as a thoroughfare from the northeastern section of the county to Charleston.

In addition to the state primary roads that have been mentioned, there are several state secondary roads joining with the primary roads, totaling approximately 650 miles.[70] These roads are of a low type bituminous surface. They serve as a network connecting the numerous little villages found throughout the county. (Figure 21, page 119, shows the state primary and main secondary roads within the county.)

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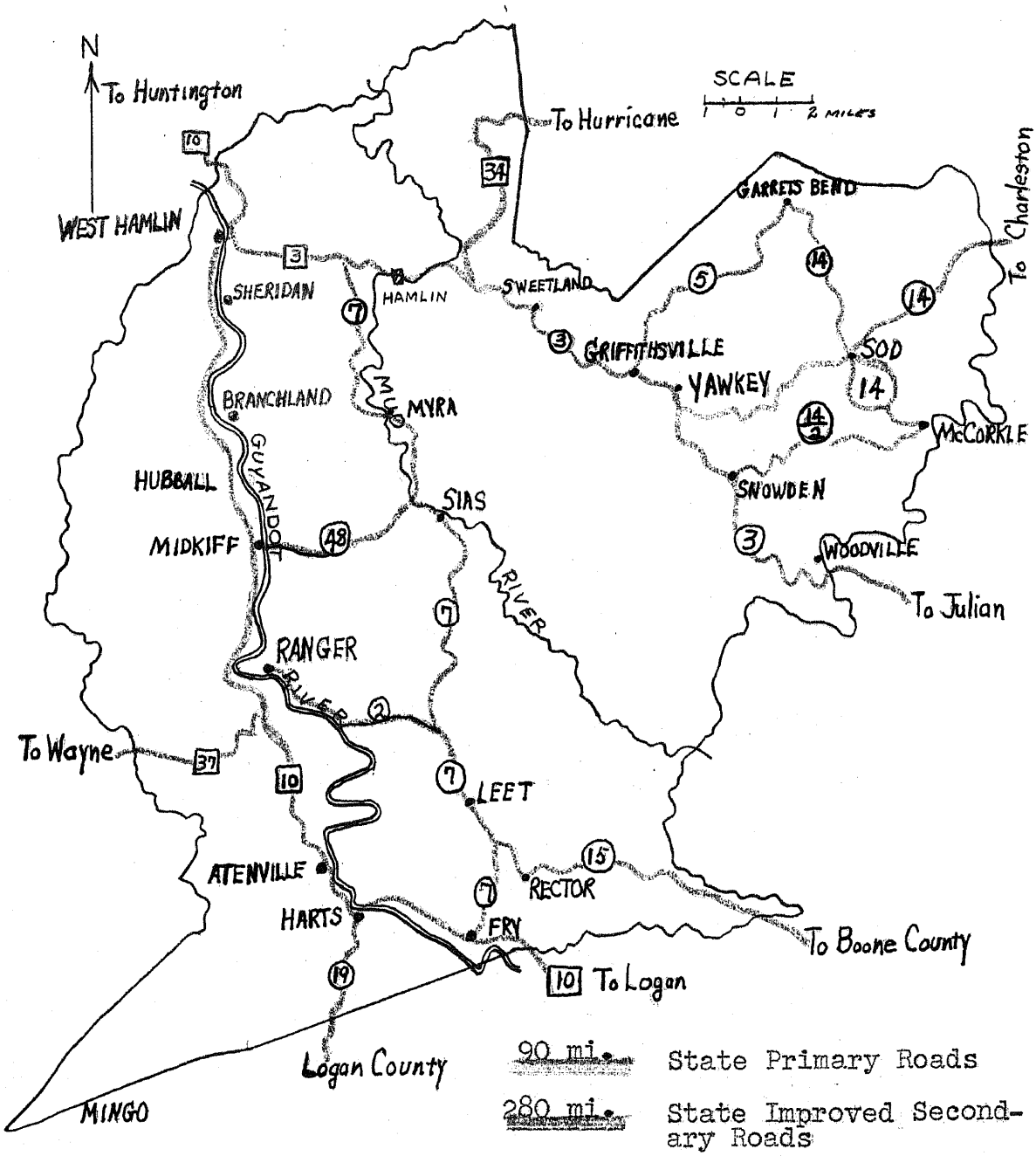
[70]The State Road Commission, General Highway Map of Lincoln County, West Virginia: 1951 (Charleston: Mathews Printing and Lithographing Co.).

LINCOLN COUNTY, WEST VIRGINIA



STATE PRIMARY AND MAIN SECONDARY ROADS IN THE COUNTY*

FIGURE 21

*The State Road Commission of West Virginia, General Highway Map of Lincoln County, West Virginia: 1951. (Charleston: Mathews Printing and Lithographing Co.).

Railroads. The Chesapeake and Ohio Railroad has two branch lines extending across Lincoln County at different locations. The main line, the Guyandot Valley branch, extends from Barboursville south through Lincoln County for approximately thirty-five miles and enters Logan County on the south. The line was completed to Logan in 1904 and has since served as the chief method used in transporting coal from the southern coal fields of Logan County.[71] The line also served as the main artery of transportation for the people traveling between Huntington and Logan. Two daily passenger trains known as Numbers 49 and 51, 50 and 52 made four trips between Huntington and Logan; two trips up Guyandot River to Logan and two trips down Guyandot River to Huntington. This practice was continued until the spring of 1948, at which time the Chesapeake and Ohio Railroad curtailed passenger service and thereafter one trip daily was made between the two cities. On April 25, 1959, Number 51 made its final run. The passenger train was discontinued due to the economic conditions of the coal fields and the added competition given to the trains by highway transportation.[72]

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[71] C.E. Krebs and D.D. Teets, Jr., West Virginia Geological Survey (Wheeling: Allied Printing, 1913), p. 4.

[72] The Hearld-Advertiser, April 25, 1959, p. 1.

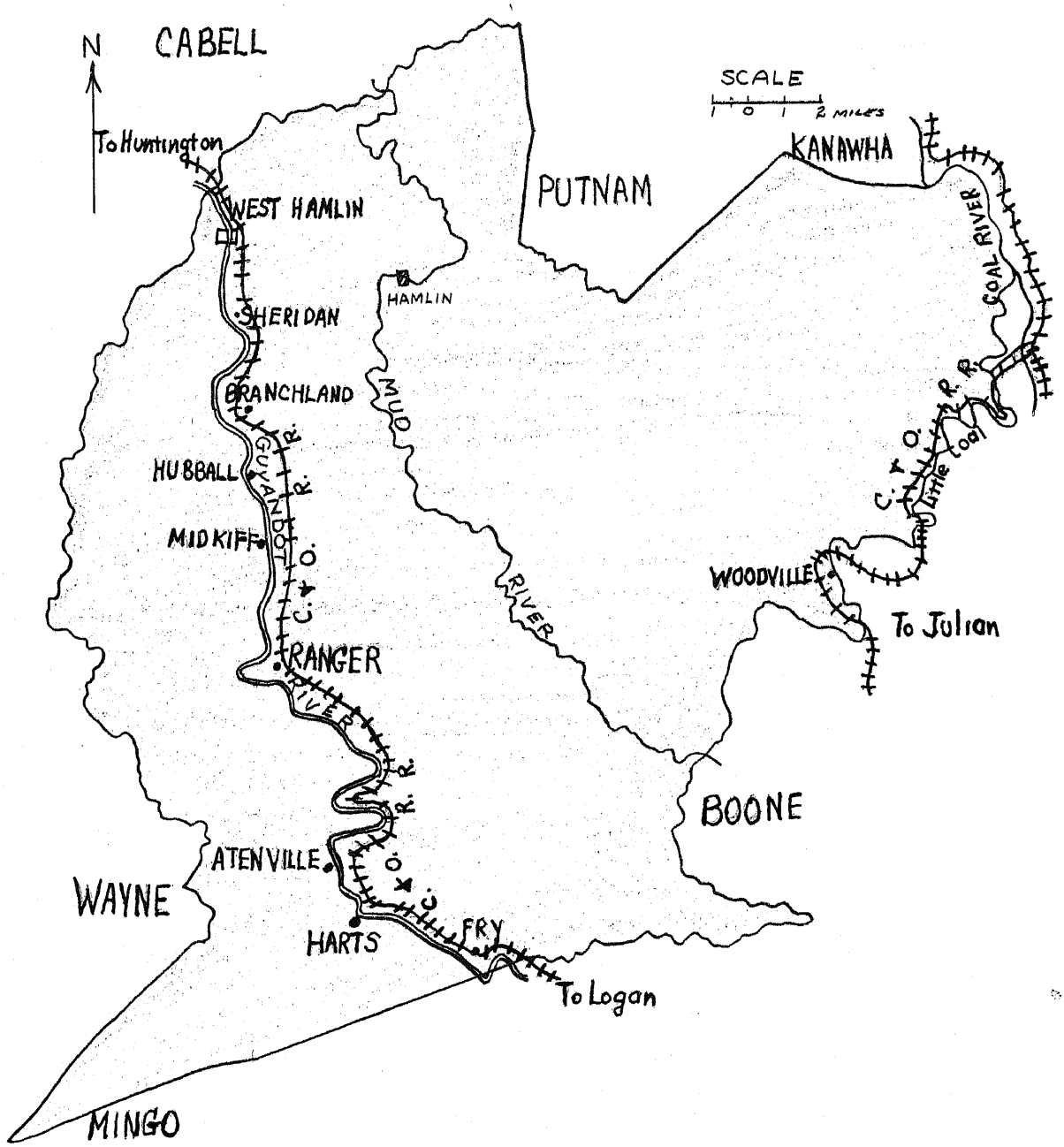
The other branch of the Chesapeake and Ohio Railroad serves the eastern part of the county. The railroad enters the county near Bluetom Tunnel and extends through the county for approximately nine miles. It serves the coal fields of eastern Lincoln County and western Boone County. (Figure 22, page 122, shows the location of the railroads serving Lincoln County.)

COMMUNICATIONS

The telephone system of Lincoln County had its beginning in 1906. The citizens who desired a telephone would organize with as many as eight to twelve comprising a group, and the group would call itself a company. Once each year one member of each company would meet at a prearranged place, and through their joint efforts switchboard operators would be employed. There were four switchboard locations in Lincoln County—Hamlin, Myra, Griffithsville, and Nye. The individual telephones and the wiring necessary to connect the home with the switchboard junction were paid for by the individuals and maintenance expense was divided equally among the individual users. This system dissolved in 1920, due in part to dissatisfaction with the party line system.

Lincoln County was without a telephone system from

LINCOLN COUNTY, WEST VIRGINIA



TWO BRANCHES OF THE CHESAPEAKE AND OHIO RAILROAD SERVING LINCOLN COUNTY*

FIGURE 22

*The State Road Commission of West Virginia, Ibid.

1920 to 1926. There were numerous occasions when individuals would try to encourage the public to correct this situation but the lesson from the first loosely organized telephone system was an unpleasant experience. To this end the desire to form a company for the purpose of establishing a telephone system in Lincoln County could not be gained.

In 1926 C.F. Steed of Lincoln County formed a telephone company which comprised J.D. Smith, Sr., A.W. Hoff, Mrs. C.F. Steed, and Mrs. A.W. Hoff, of which Mr. Steed was president. This company served the area more directly concerned with Hamlin and the immediate vicinity.

In 1948 a group of interested citizens of West Hamlin proposed to form a company known as the West Hamlin Telephone Company. The principal stockholders involved in the formation of this company were: G.O. McClellan, Ralph Jarrells, E.B. McGhee, Tom Kerwood, Russell Pauley, and C.F. Steed. A small cinder block building located near the site of the present West Hamlin Grade School served as an exchange, and this telephone system worked directly with the system located at Hamlin. This system served the town of West Hamlin and in a few instances extended to homes located outside of West Hamlin's city limits. This company continued operations until August 1, 1957, when it was merged with the Hamlin Telephone Company, with the central exchange located at Hamlin. The controlling

interest of this joint operation was held by C.F. Steed.

The Hamlin Telephone Company continued operations until August 1959, when the interest of this company was sold to the Armstrong Telephone Company. At the beginning of operations by the Armstrong Company there were 745 telephones in operation throughout the county. In 1961 the number increased to 985 telephones. The company anticipates 1,000 by the early part of 1962, and over a proposed period of five years the number is expected to reach 1,300. At present the entire system operated by the Armstrong Telephone Company is automatic. By the early part of 1962 all outside calls will be connected with the central office at Huntington, thus eliminating switchboard operators at the Hamlin central office. The United Utilities Company located at Branchland, West Virginia has installed a telephone system which is completely automatic, and by early 1962 this company will unite with the Hamlin system.[73]

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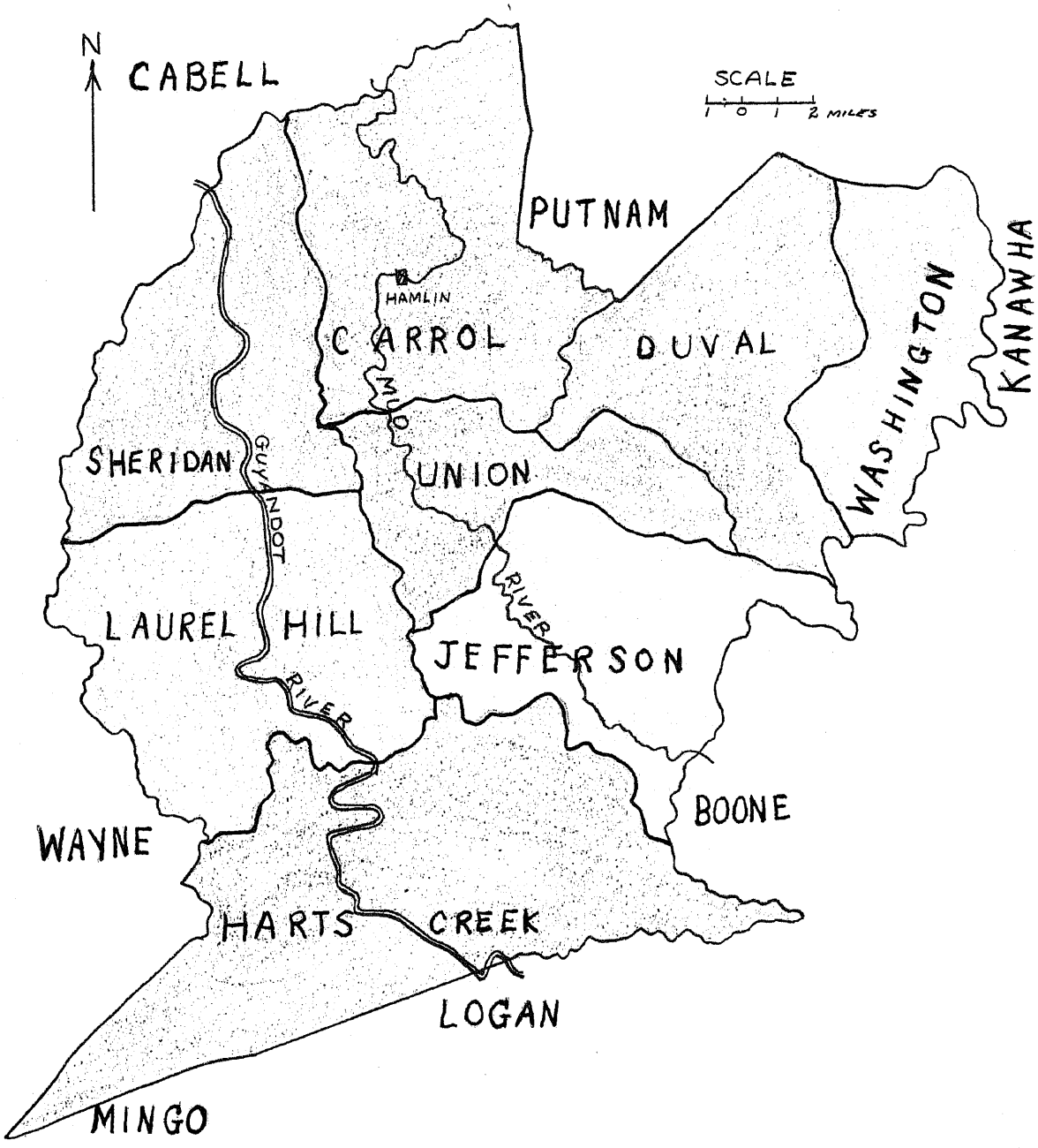
[73] C. F. Steed, Former Owner of the Hamlin Telephone Company, Lincoln County. Hamlin, West Virginia.

LINCOLN COUNTY, WEST VIRGINIA



MAGISTERIAL DISTRICTS OF LINCOLN COUNTY*

FIGURE 23

*The State Road Commission of West Virginia, General Highway Map of Lincoln County, West Virginia: 1951. (Charleston: Mathews Printing and Lithographing Co.).

CHAPTER VIII

POPULATION DISTRIBUTION

The population of Lincoln County has shown a downward trend over the last twenty-year period but more noticeably so in the last decade. This is due to the lack of industry in the county, the depletion of the natural resources, and the fact that the coal fields in Logan County no longer offer employment to the residents of the county. This downward trend in population is shown by Table IV, page 127.

There are homes built in many remote sections of the county; therefore, no area in Lincoln County of any noticeable size is without a homesite. The two main population centers are the towns of Hamlin and West Hamlin, due to the fact that Hamlin is the seat of the county government and that West Hamlin is at the junction of State Roads Ten and Three.

INCORPORATED TOWNS

There are only two incorporated towns in Lincoln County: Hamlin and West Hamlin, and these towns merit discussion.

Hamlin. Hamlin is the county seat of Lincoln County

TABLE III

POPULATION BY MAGISTERIAL DISTRICTS IN LINCOLN COUNTY
1930-1940-1950-1960*

Districts	1930	1940	1950	1960
Carroll	4,027	4,532	4,459	4,152
Duval	3,014	3,085	2,951	2,620
Harts Creek	2,575	3,597	3,902	3,496
Jefferson	1,475	1,719	1,538	1,235
Laurel Hill	2,509	3,239	3,159	2,748
Sheridan	3,410	4,299	4,966	4,876
Union	—	—	1,099	836
Washington	1,919	1,989	2,031	1,942
Totals	19,156	22,886	22,466	20,267

*United States Bureau of the Census, U.S. Census of Population: 1960. Number of Inhabitants, West Virginia. Final Report. (Washington: U.S. Government Printing Office, 1961; 1950), pp. 50-11; 48-10.

and is located on Mud River in Carroll District. It is a small incorporated town with a population of 850.[74] There are two schools of thought as to the naming of the town and the year in which the town received its charter. There are those who believe the town received its charter in 1853 while yet contained in Cabell County. Then there are those who believe the town did not receive its charter until about 1868 after the formation of the county. Along with the charter date of 1868, it is believed by some that the town was named in honor of Leonidas Lent Hamline, prominent Methodist Bishop, while others believe the town was named in honor of Hannibal Hamlin, vice-president of the United States during Abraham Lincoln's first administration.[75]

In addition to containing the County Courthouse, the town has the only bank of the county—The Lincoln National Bank. There are several business firms located in the town: Ford Motor Sales, Chevrolet Motor Sales, Appalachian Power Power Company branch office, Armstrong Telephone central exchange office and numerous retail stores.

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[74] U.S. Bureau of the Census, loc. cit.

[75] Hamill Kenny, West Virginia Place Names (Piedmont: The Place Name Press, 1945), pp. 294-295.

West Hamlin. West Hamlin is the only other incorporated town in the county. The town had a population count of 788 in 1960. It received its charter in 1947.[76] Most residents of this town must seek employment in the surrounding cities or out of state. Those people employed locally work for the privately-owned small businesses; namely, the Guyan Lumber Company, Lincoln Clay Products, the retail stores and the filling stations.

RURAL AREAS

The remainder of the county is considered a rural secondary agricultural region, with numerous small villages located along the primary and secondary roads. These villages which make up the rural area comprise 59.5 per cent of the population of the county.[77] The majority of these small towns have a post office, a school, a church, and stores. These small towns serve as centers for the farmers who live on the nearby farms.

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[76] U. S. Bureau of the Census, op. cit.

[77] Ibid.

CHAPTER IX

SUMMARY AND CONCLUSIONS

The study of this problem has demonstrated that the economy of Lincoln County has strong and weak points. The county offers a typical case of hill-country development, and such a setting presents a number of problems.

Agriculture in the county is relatively weak, and there is little indication that it will be better established in the near future. Grain growing will continue secondary in importance, due to the absence of relatively large areas of rich soil. A special type crop such as tobacco, requiring little acreage, will likely be important from the cash crop viewpoint. Dairying has never been important locally, and truck gardening has not been developed. Lower hillside cultivation, unfortunately, will continue even though soil loss will be appreciable.

Factory type industry is at a low level and will likely continue at this stage for several years. In time a few small plants, probably of the garment making or woodworking types, may be secured. Extractive activities probably will continue at present level for a number of years, since new gas wells and a few oil wells will be drilled over the county. Timber cutting is of secondary importance and will continue as such, since primary and

secondary cuttings have literally robbed the hillsides of good commercial timber suitable for lumber purposes. Pit props and small cuttings for pulp purposes may increase in importance.

Transportation and communication have been at secondary level and there is no great prospect of marked improvement. The railroad transportation has coal carrying as the one remaining field of interest today since passenger transportation has stopped. Highway transportation continues to increase in volume over the state roads listed previously, but there is little prospect of road relocation or widening apparent in state highway planning. River transportation is of no significance whatever. The telephone service through the county is improving, as marked in the previous chapter, so communication is better than in the past.

Population conditions are deteriorating rather than improving. Numbers of young people find it necessary to leave Lincoln County in order to secure better industrial, commercial, and governmental work which is available in urban centers. An appreciable number of people have moved to Huntington the past few years, and a suprising large number of men and women who live in Lincoln County commute five or six days a week by automobile. The trend of declining population in the county will likely continue for

many years, since there is little indication that better employment conditions will be available in the county.

The Federal and State Governments are recognizing the need for conservation of the county's natural resources and to this end a wildlife refuge is being located in the county. This practice is in keeping with the geographical principles in that it enhances the beauty of our topography.

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