MANAGEMENT PLAN

FOR

THE ARKANSAS LAND & FARM

DEVELOPMENT CORPORATION

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Monroe County, Arkansas
Township 4 North; Range 2 West
Section 24: N 1/2 NW 1/4; SE 1/4 NW 1/4
120 Acres more or less

INTRODUCTION

This management plan will cover 120 contiguous acres known as the "Demonstration Forest" and owned by the Arkansas Land and Farm Development Corporation. The Arkansas Land and Farm Development Corporation is located in Fargo, Arkansas which is five miles north of Brinkley, Arkansas in Monroe County. (See Ownership Map page 17). The objectives of this management plan shall include the following: 1) To obtain a current and accurate timber cruise of the area; 2) To take today's timber prices and apply them to the timber cruise data to come up with the total timber value of the entire 120 acres, as of today; 3) To implement the steps of growing the best timber possible for the site that will return the highest revenues; 4) To promote aesthetics, educational uses, and other recreational uses of the area; 5) To provide wildlife habitat while meeting the other objectives.

HISTORY

According to the ownership records, Floyd Brown acquired the land in 1918. In 1950 the State of Arkansas acquired the land and built an all girls school, which became a vo-tech school in 1972. The vo-tech school was vacated and shut down a short time later, and the land remained idle until 1982 when it was purchased by the Arkansas Land and Farm Development Corporation. There has been only one forest harvest of the property since the Arkansas Land and Farm Development Corporation purchased the land in 1982. The harvest took place in 1984 and was a single-tree selection (high-grade) harvest. This harvest removed a high number of the larger pine and hardwood trees from the site, leaving only the poor grade and quality trees of low economic value and the young trees on the site to survive until today.

There was a controlled burn done in 1995 on the westernmost 30 acres of this tract. This burn was done to control the underbrush and open up the understory of this 30 acres. The eastern side of this tract has been burned periodically when fires from surrounding agricultural fields crossed into the forested area. These fires seemed to have reduced the smaller diameter hardwood competition and, at the same time, encouraged good regeneration of pine by removing the woody debris and preparing a suitable seedbed.

SOILS AND TOPOGRAPHY

The soils on this tract consist of either the Foley soil series or the Grenada soil series. The Grenada soil series encompasses approximately 10 acres on the western side of the tract (See Soil Map page 18). The Grenada series consists of moderately well-drained, level to gently sloping upland soils. These soils formed in thick deposits of loess. Grenada soils are medium in natural fertility. Content of organic matter is low. Permeability is slow and available water capacity is moderate. The Grenada soils are well-suited for growing loblolly pine with the site index as high as 85.

The rest of the tract is composed of the Foley soil series, more specifically the Foley-Calhoun-Bonn complex. These areas are characterized by poorly drained, level soils consisting of silt loams, salty clay loams, and fine sandy loams. These soils were formed in thick, loamy deposits of loess and stratified alluvial sediment. The natural fertility of these soils is medium, and organic matter is low. Permeability of water into the soil is very slow to allow a moderate availability of water capacity. The water table is often perched from December through April at a depth of 1-2 feet. The Foley soils will vary greatly, from the real wet areas which will grow primarily cypress to the best drained areas that are better suited for loblolly pine. The ALFDC Demonstration Forest is a good example of this wide variance in Foley soils. It contains the cypress wet areas, as well as the best drained areas which are totally loblolly pine, to the areas in between which are predominantly hardwood. This Demonstration Forest will carry all aspects of Foley soils on this site.

TIMBER CRUISE

A. PURPOSE OF TIMBER CRUISE: To estimate the volumes of pine and hardwood sawtimber and pine and hardwood pulpwood on the 120 acre Demonstration Forest of the ALFDC, which is located in Monroe County, Arkansas, using the methodology and product specifications listed below:

1) Plot Size - One-fifth (1/5) acre fixe radius plot (radius = 52'7.9")

2) Intensity - Timber volumes will be estimated using a 10% cruise with plots based on two (2) chain by using ten (10) chain intervals (2 lines per 40)

3) Tallying - All merchantable timber will be tallied using two inch (2") DBH classes for both sawtimber and pulpwood (e.g., 12"=11.1"-13.0"). Measurements required for each "in-tree" are DBH, species (except for pulpwood), and merchantable height.

B. TIMBER VOLUMES AND VALUES: The timber on the ALFDC Demonstration Forest has a total value of $86,055.00 or $717 per acre. The timber values were taken from recent timber sales in the area for standing timber. The timber values are used only as a reference to arrive at a reasonable value for the timber. The actual value could be more or less,

depending upon the different merits of the tract. The use of these values, along with the cruise results, are illustrated as follows:

Pine Sawtimber	178,000 Bd.Ft. @ $300/MBF =	$53,400.00
Red Oak	32,200 Bd.Ft. @ $250/MBF =	$ 8,050.00
White Oak	13,200 Bd.Ft. @ $200/MBF =	$ 2,640.00
Miscellaneous	24,200 Bd.Ft. @ $100/MBF =	$ 2,420.00
Cypress	101,100 Bd.Ft. @ $100/MBF =	$10,110.00
Pine Pulpwood	64 Cords @ $15/Cord =	$ 960.00
Hardwood Pulpwood	565 Cords @ $15/Cord =	$ 8,475.00
Total Timber Value		$86,055.00

$717 per acre Timber Value

MANAGEMENT RECOMMENDATIONS

The following management recommendations are based on the objectives set forth in the Introduction of this report. These management recommendations are only the first step toward good timber and wildlife management. Good management should have the commitment of the landowner with the understanding that it is a continuous and long-term process that will benefit not only the landowner but the next generation, adjoining lands, and the environment as a whole. This tract has been divided into three (3) compartments. Each compartment should be managed separately and on its own from the other two.

COMPARTMENT 1 - PINE AREA

This compartment has a total of 64 acres and is located south and west of the drain (See Compartment Map page 19). This compartment has year-round access by a gravel road extending from the ALFDC offices to the western boundary of this compartment. Loblolly pine has established itself as the predominant species in this compartment. The hardwood component of this compartment is made up of mostly post oak and sweet gum with some scattered red oaks and white oaks mixed in. The overall grade and quality of the hardwood in this compartment is poor due to the soils, which are not suitable for growing good grade and quality hardwood.

TIMBER CRUISE RESULTS - COMPARTMENT 1

PULPWOOD

SPECIES	# TREES	VOLUME
Loblolly Pine	1500	62 Cords
Hardwood Pulpwood	2770	267 Cords

SAWLOGS

SPECIES	# TREES	VOLUME
Loblolly Pine	3090	156,200 Bd.Ft.
Miscellaneous Hardwood	120	11,000 Bd.Ft.
Red Oak	80	7,200 Bd.Ft.
White Oak	50	3,200 Bd.Ft.

MANAGEMENT RECOMMENDATIONS - COMPARTMENT 1

1) BOUNDARY LINES. Boundary lines along the southern boundary of this compartment need to be established and maintained. This will give notice to all other landowners in the area that this is ALFDC land and it needs to be done to legally post the property. This is also the best defense against timber

theft or occasional timber loss due to uncertainty of where the line is located.

2) 1998 HARVEST. All merchantable hardwood including pulpwood and sawlogs should be removed from this compartment. This harvest will prepare a seedbed, which will allow the existing loblolly pines to naturally regenerate across the entire compartment. The pine and hardwood are presently competing against one another for the nutrients within the soil. This harvest will remove this competition which will allow faster growth of a better grade pine sawlog. With the removal of the hardwood competition, it will provide for a shorter rotation on the pine stand which will also mean more revenues to ALFDC. Special care must be taken during the harvest of the hardwood to protect the existing trails and food plots that are already located on this compartment. The harvest will improve the timber stand by removing unwanted competition and allow the stand to grow for the next seven years at its optimum growth rate. This will put the stand on a regular rotation, which will provide steady income and improve the wildlife habitat, as well as meet the objectives set forth in this report. The harvest of this compartment should generate approximately $6500.00 income to ALFDC.

3) POST HARVEST. Upon completion of all harvesting, maintain and plant grasses on all roads, plant loading areas for wildlife food plots, and leave some tops intact for wildlife cover.

4) PINE RELEASE. In 2000 an aerial application of herbicide should be applied to the entire compartment to kill all hardwood sprouts and woody vegetation that has invaded the site since the 1998 harvest. The herbicide application will release all pine seedlings that have been established since the last harvest, as well as remove all unwanted competition from the site. This pine release is the most important step in establishing a pure pine stand on this compartment. It is imperative that this step be done to ensure a pure pine stand. This type of herbicide application will have to be done approximately every fifteen (15) years to remove unwanted hardwood and brushy competition and to release oncoming pine regeneration. The cost of the first aerial herbicide application should range between $75-$90 per acre.

5) INDIVIDUAL TREE SELECTION HARVEST IN 2005. The individual tree selection harvest allows the landowner to control which trees are growing on the tract and not the logger or timber buyer. The harvest should include a combination of mature trees which need to be harvested before they deteriorate and lose their economic value, along with some lower quality trees that will never reach high economic or wildlife value. This type of harvest will improve the timber stand and allow it to grow for the next seven (7) years without losing the economically-mature trees. This will put the stand on a regular rotation which will provide a steady income and improve the wildlife habitat, as well as meet the objectives set forth. This harvest should remove

a low volume of pine to include some of the seed trees along with some of the poor grade trees, leaving the better grade trees for future crop trees. The harvest will improve the stand so that all future harvests will be removing better grade, better quality trees, and higher volumes from the tract, thus providing higher revenues in the future.

COMPARTMENT 2 - HARDWOOD AREA

This compartment contains 20 acres and is located north and east of the drain of the ALFDC Demonstration Forest. (See Compartment Map page 19) Access to this compartment is somewhat limited due to the fact that the drain must be crossed. This compartment is accessible during late summer and early fall, or the dry months of the year. The soils on this compartment are flatter than the pine area and have a tendency to hold water for longer periods of time. This compartment has a mixture of loblolly pine and hardwood timber currently on it. The predominant species of this compartment is the red oak timber. The loblolly pine located in this compartment is showing signs of stress, which is caused somewhat by the prolonged length of time in which water stands on the area. The miscellaneous hardwood located in this compartment is mostly comprised of hickory, post oaks, and maples scattered throughout the compartment. At least one-half of the hardwood pulpwood located in this compartment is comprised of lesser species such as hickory, post oak, and red maple species. The other half is predominantly red oak with some white oaks mixed in.

TIMBER CRUISE RESULTS - COMPARTMENT 2

PULPWOOD

SPECIES	# TREES	VOLUME
Loblolly Pine	30	2 cords
Hardwood Pulpwood	1140	98 cords

SAWTIMBER

SPECIES	# TREES	VOLUME
Loblolly Pine	160	21,800 Bd.Ft.
Miscellaneous Hardwood	80	7,500 Bd.Ft.
Red Oak	170	16,300 Bd.Ft.

MANAGEMENT RECOMMENDATIONS - COMPARTMENT 2

1) 1998 HARVEST. (Individual Tree Selection Harvest) The individual tree selection harvest allows the landowner to control the species that are growing on the tract. This harvest should include a combination of mature trees, which need to be harvested before they deteriorate and lose their economic value, along with some of the lower quality trees that will never reach high economic

or wildlife value. The loblolly pine should be removed from this compartment and should be replaced by higher quality and grade hardwood species that are more water tolerant such as nutall oak and overcup oak. This timber stand improvement harvest should generate approximately $6900.00 of revenue to ALFDC.

2) POST HARVEST. Upon completion of all harvesting, maintain and plant grasses on all roads, plant loading areas for wildlife food plots, and leave some tops intact for wildlife cover.

3) HARDWOOD PLANTING. The 1998 harvest must be followed up with the planting of nutall and overcup oak in this compartment at a rate of approximately 200 seedlings per acre. The nutall and overcup oak species are the best species for this site, and therefore, they will provide the greatest economic return to the ALFDC in the future. By completing these management recommendations, this will put the stand on a regular rotation (15 years), which will provide steady income, improve the wildlife habitat, and meet the goals of the ALFDC.

COMPARTMENT 3 - CYPRESS SLOUGH AREA

This compartment contains 36 acres and is located between Compartment 1, the pine area, and Compartment 2, the hardwood area. (See Compartment Map page 19). It is composed of the main drain which flows across the ALFDC Demonstration Forest. Approximately 25 acres of this compartment, or the main drain area itself, remains completely saturated and underwater at least nine month out of the year. This 25 acres is comprised mostly of cypress with a few scattered overcup oak on the edges or fringes of this 25 acre wet area. The remaining 11 acres of this particular drain area is composed of other water tolerant species such as overcup oak, nutall oak, and willow oak.

TIMBER CRUSE RESULTS - COMPARTMENT 3

PULPWOOD

SPECIES	# TREES	VOLUME
Hardwood	3,330	200 cords

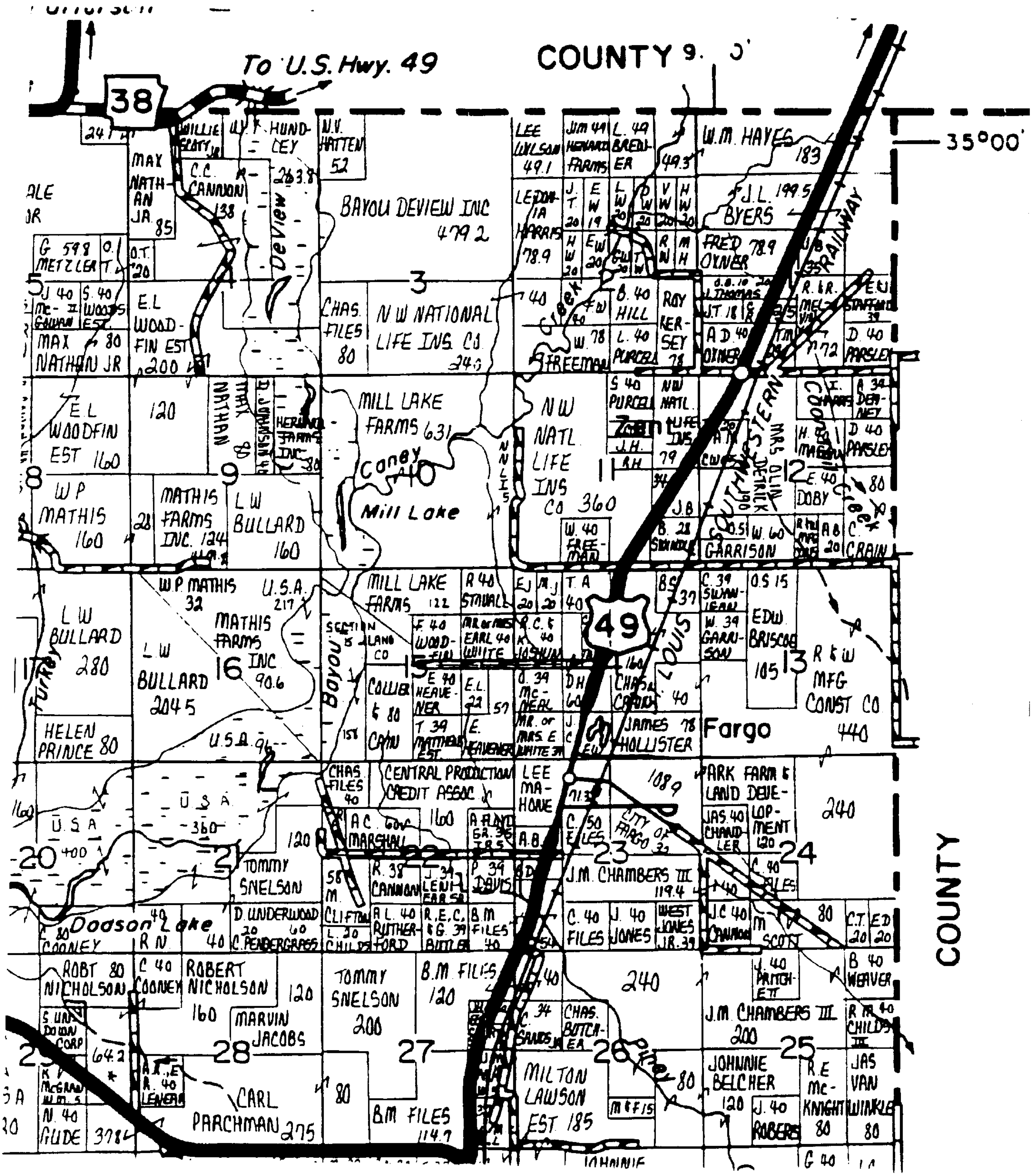
SAWLOGS

SPECIES	# TREES	VOLUME
Cypress	830	101,100 Bd.Ft.
Miscellaneous Hardwood	90	5,700 Bd.Ft.
Overcup Oak	120	10,000 Bd.Ft.
Red Oak	80	1,700 Bd.Ft.

MANAGEMENT RECOMMENDATIONS - COMPARTMENT 3

1) WILDLIFE AND RECREATION. The cypress slough area holds water for long periods of time which is common for this type of environment. The highest priority for management on this compartment should be for wildlife habitat and recreation with timber harvesting for producing revenue as the

least possible or the last priority on this particular compartment. The slough area contains a number of snags and den trees which are beneficial for birds, especially waterfowl, and small mammals. Every effort should be made to secure enough funds to construct a walking bridge to span from the pine area, across the slough, and into the hardwood area. This would greatly enhance the year round teaching and recreational value of the entire Demonstration Forest. It would also allow for better observation of wildlife habitat.



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J.L. BYERS
RAILWAY
E.L. WOODFIN EST 160
W P MATHIS 160
MATHIS FARMS INC. 124
L W BULLARD 160
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U.S.A. 217
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L W BULLARD 204.5
HELEN PRINCE 80
Turkey
Bayou
CENTRAL PRODUCTION CREDIT ASSOC.
LEE MAHONE
JAMES HOLLISTER
Fargo
R & W MFG CONST CO 440
PARK FARM & LAND DEVELOPMENT 120
240
CITY OF FARGO
J.M. CHAMBERS III 119.4
Dodson Lake
TOMMY SNELSON
ROBT NICHOLSON
ROBERT NICHOLSON 160
MARVIN JACOBS
TOMMY SNELSON 200
B.M. FILES 120
CARL PARCHMAN 275
BM FILES 114.7
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J.M. CHAMBERS III 200
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JAS VAN WINKLE 80
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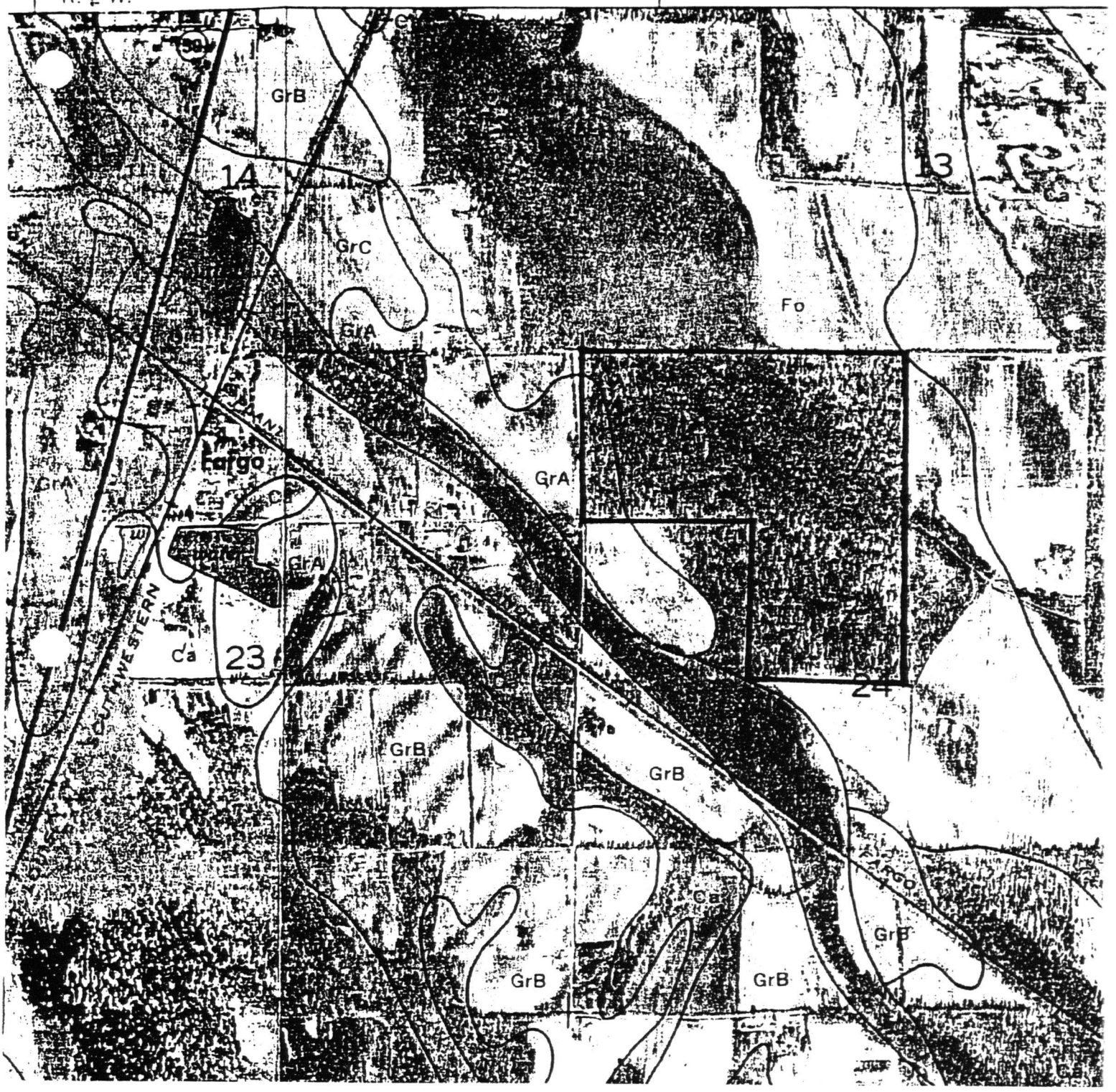

ARKANSAS LAND & FARM DEVELOPMENT CORPORATION

Monroe County, Arkansas
Township 4 North; Range 2 West
Section 24: N1/2 NW1/4; SE1/4 NW1/4
120 Acres more or less