DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 4384

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

Exploration Project

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip Cys to USGS, BM, REG. IV

To:	700	Date	7/17/56
To:	(1) Mr. Kielsgard	Date	8/15/56
To:	(2) Mr. Crawford	Date	
To:	(3) Mr. Murphey	Date	
To:	Oper. Com.	Date	8/28/56
To:	D. E. Johnson	Date	8-29-56
To:	Oper. Com	Date	8/30/56
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

INT.-DUP. SEC., WASH., D.C.

July 18-86

DMEA-4384

This appears to be straight prospecting on 20 plots of ground in 5 different locations.

yep.

700

FILE COPY
Surname:
Murphy
Jeffrey
Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

AUG 31 1956

Mr. Arnold V. Widergren
907 North Webster Avenue
Hastings, Nebraska

Re: Docket No. DMEA-4384 (Uranium)
Non-contiguous Leased Lands
Baxter, Boone, Izzard, Marion, and
Van Buren Counties, Arkansas

Dear Mr. Widergren:

Your original application for aid in an exploration project and the amended application limiting the project to the tract of land in Van Buren County, together with other information available to us in Washington concerning the area you propose to explore, have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied. Such denial, however, is made without prejudice to the property. Your proposal appears to be entirely of a prospecting nature to obtain data to support your theory of possible uranium occurrences. Government funds are not made available for this purpose. In the event further work on your part discloses new and more favorable evidence of ore deposition on the property, we shall be pleased to consider a new application.

We wish to thank you for your interest in the Defense Minerals Exploration Program and for bringing your property to our attention.

Sincerely yours,

Frank E. Johnson
ACTING Administrator

FMMurphy/izm 8-29-56 (8-28-56)
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Reg. IV (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

R.C.L.

700

FILE

Surrendered
Murphy
Lois
Land
Williams
Selfridge

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

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Administrator

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Docket

700

Murphy
Ellis

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-4384

Commodity: Uranium

Applicant: Arnold V. Widergren
907 North Webster ~~Street~~ Ave.
Hasting, Nebraska

Property: The original application, dated July 13, 1956, requested aid in drilling various parcels of leased land in Baxter, Boone, Izzard, Marion, and Van Buren Counties, Arkansas.

After our request for additional information of July 25, 1956, the Applicant submitted an amended application, dated August 13, 1956, to apply only to sec. 4, T. 11 N., R. 14 W., Van Burenn County.

Amount of Amended Application: $15,561.50

Work Proposed: (Amended Application)

Drill two (2) holes, each 600 to 800 feet in depth, to explore the lower part of the Hale formation of Pennsylvanian age. The Applicant states the potential ore horizon is a 24-foot thick sandstone bed, also, that the Hale sandstone runs east-west in a narrow belt from Batesville, Arkansas to the Oklahoma Line.

Estimated Costs:

2 holes, 1600' core drilling @ $7.25	$11,600.00	
25 hrs. bulldozing @ $12.50/hr.	312.50	
Geologist, 2 mths. @ $600/mth.	1,200.00	
Supervisor, 2 mths. @ $500/mth.	1,000.00	
Gas, oil, miscellaneous	100.00	
Records, books, etc.	250.00	
Geiger counter probe	1,000.00	
Use allowance for pickup truck	180.00	
Contingencies	100.00	
Payroll tax	44.00	
TOTAL		$15,561.50

Field Team Comments:

In response to the Operating Committee's letter of Jyly 25, C. C. Knox, Executive Officer, Region IV, states in a letter, dated August 24, that a search for information revealed that virtually no

pertinent information was available relating to the area the Applicant proposes to explore. Mr. Knox also stated that unless the Applicant could submit more favorable specific information regarding the project area, he could see no alternative but to issue a denial of the application.

Commodity Members' Comments: (After reviewing amended application)

USGS (excerpts), N. E. Nelson, August 16, 1956:

Mr. Nelson notes that in the revised application the proposed work is centered in one tract about 12 miles south of what the Applicant calls the "Peyton Creek discovery," also, that he has no information on such a discovery and hoped the Applicant could give some.

Mr. Nelson recommends the application be denied as he considers the proposed drilling is prospecting.

USBM, James Paone, August 24, 1956:

Mr. Paone, recommends the application be denied, because, based on the information available relative to the potentialities for uranium in the subject area, it is doubtful that the proposed prospecting is warranted.

Rare & Miscellaneous Metals Div., F. M. Murphy, August 29, 1956:

The target Hale sandstone beds do not appear to crop out any closer than 12 miles from the subject property. Moreover, no specific information has been presented to prove that uranium occurs in the Hale sandstone. Drilling holes approximately 800 feet deep, without data regarding mineralization or trends of mineralization is considered prospecting.

Conclusion and Recommendation:

This Division recommends that the subject application be denied because the proposed work is wildcat drilling based on an unproven geological theory.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

8/27/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri

RECEIVED
AUG 27 1956

August 24, 1956

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4384 (uranium)
Arnold V. Widergren
Application on non-contiguous areas in Van Buren and other north central Counties, Arkansas

Dear Mr. Selfridge:

In response to your July 25 letter concerning the subject application, my search has revealed that virtually no pertinent information is available here other than that covered in the copies you enclosed of the reviews by Messrs. Nelson and Paone.

The Applicant, accompanied by his "geologist", came to this office on April 10 to obtain the DMEA Application Form and suggestions for its preparation. While the simplicity of their geologic theory, explained then in detail, seemed intriguing, they indicated that all Federal and State geologists, including those of A. E. C., working in that area during recent years seemed incapable of understanding it. I tried to explain to them, in effect, that the burden of proof then would be entirely on them to present concrete prospecting evidence to support their exploration proposal in the application. I further explained that DMEA would be very unlikely to approve a uranium exploration project that could not be recommended by geologists of either the State, Federal Geological Survey, or the U. S. Atomic Energy Commission. The Applicant's "geologist" mentioned that 2 or 3 years ago before his theory was fully formulated, he had done some unsuccessful prospecting in the areas, including sinking of a 90-foot shaft.

Despite my efforts, the usual DMEA instructions and regulations which I carefully reiterated to the Applicant, and almost all my suggestions for preparing the application, very obviously were misunderstood. Therefore, unless such a response is received to your July 25 letter to the Applicant, I see no alternative but to issue a denial.

When I met H. S. Stafford and W. B. Meeks (A.E.C.-Denver) on July 16 at Pawnee, Oklahoma, they had just come from Arkansas. Although I recall no specific mention of the alleged Peyton Creek discovery during

our discussions then, and presumably Mr. Paone received no such information for his July 20 review of this application during his discussion with Mr. Hosted, nevertheless, I am under the impression that considerable geologic reconnaissance has been done by A.E.C. men in northern Arkansas.

When I was in Batesville, Arkansas, on August 9, the Bureau of Mines' Engineer there had no information on any uranium discoveries in the Peyton Creek area but said that some interest was being shown in its possible low-grade rock phosphate resources.

My inability to furnish you any helpful information for this application is regretted.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

CCK/enn

cc: DMEA Op.Com.(3)
Laurence,USGS,Knoxville (2) w/4 encl.
4384 file

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
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Laurence,USGS,Knoxville (2) w/4 encl.
4384 file

8/27/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

August 24, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Application for Assistance, DMEA Docket 4384 (Uranium)
Arnold V. Widergren, Archey's Fork Prospect, Van Buren Co., Arkansas

I have reviewed the attached application, DMEA Docket 4384, Arnold V. Widergren, Archey's Fork Prospect, Van Buren Co., Arkansas, dated July 13 and received in this office August 20, 1956. I have also discussed it with Mr. Jack Kratchman, Atomic Energy Commission.

The application originally appeared to be one for straight prospecting on 20 plots of ground in 5 different counties in Arkansas. On August 13, the application was amended to apply only to some property in Van Buren County.

Based on the information available relative to the potentialities for uranium in the subject area, it is doubtful that the proposed prospecting is warranted.

We recommend that the application be denied.

James Paone
James Paone

Attachment

RECEIVED
AUG 27 1956

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DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

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AUG 9 1956

8/17/56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

August 16, 1956

Re: DMEA 4384 (Uranium)
Arnold V. Widergren
Archey's Fork tract
Van Buren Co., Arkansas
Orig. Est. - $45,682.00
Revised Est. - $15,661.50

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of revised application.

The applicant requested assistance in wildcat drilling of several scattered tracts for radioactive material in a deeply buried bed, in which, according to the applicant, a uranium discovery (Peyton Creek) was made in 1955. In the revised application the proposed work is centered in one tract, a tract 12 miles south of the Peyton Creek discovery.

I have no information concerning the reported discovery and had hoped the applicant would give some. If a bona fide discovery has been made, blind drilling in the vicinity might be justified, but the drilling proposed is prospecting.

Denial of the application is in order and is so recommended.

N. E. Nelson

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RECEIVED
AUG 17 1956

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GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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NENelson:iml
G-8/16/56
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

RECEIVED
AUG 17 1956

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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RECEIVED
AUG 17 1956

8/15/56

907 North Webster Ave.
Hastings, Nebraska
August 13th,k956

RECEIVED
AUG 16 1956

United States Department of the Interior
Defense Minerals Exploration
Washington, D.C.

Re: Docket Number DMEA-4384

Gentlemen: Attention : Mr. F.L. Knouse

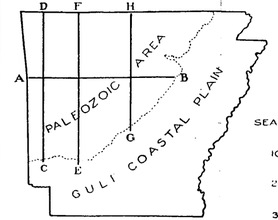
With reference to your letter of July 25th I desire to amend my application to apply only to Section 4, Township 11 north, Range 14 west, Van Buren County, Arkansas. I evidently misconstrued information requested in Form MF103 paragraph 3 (a). A new (Estimate of Costs) Paragraph 6 is submitted herewith.

Our target will be to duplicate the same bed, (The lower part of the Hale formation, which lies a few feet over the top of the Pitkin Limestone, which is of the Mississpian in age.) as found in the Peyton Creek discovery of uranium on the Searcy and Van Buren County line this past year. Our location mentioned above is twelve miles nearly directly south from this Peyton Creek discovery.

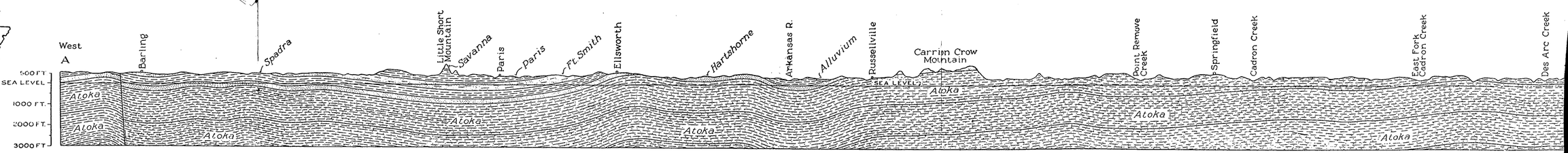
I enclose a structure map that was previously lettered and hard to erase, so will use these letters. (G) is the Peyton Creek discovery. (D) is where a test hole was drilled down through the top of the mountain , and hit the mineralized bed at 460 feet in depth. According to sea level at (B) we should hit the top of the morrow group, The sea level on Archey Creek in Section 4 described above, is approximately 550 feet. The Peyton Creek discovery is 950 feet above sea level. We desire two tests of 600 to 800 feet depth. This allows 1000 feet for the dip south that shows on the map for the twelve mile distance. (A) is where the test will be located at high on the north flank of the anticline that has a northeast to southwest course, and has a dip of 5 to 15 degrees on the south, and 5 to 14 degrees on the north limb. The axis of this anticline is in the SE$\frac{1}{4}$ of the SE$\frac{1}{4}$. The location for the test will be very near to the north side of the SE$\frac{1}{4}$ of the NE$\frac{1}{4}$. We will nearly fully benefit from this fold, to the extent that it has raised the beds to some extent at this point. From (A) down to (B) there are several faults closely spaced. Archeys Fork of the Little Red River runs parallel to the low point at (B) for about a mile, then cuts across the anticline at (A) and leaves a very narrow valley at the foot of two peaks.

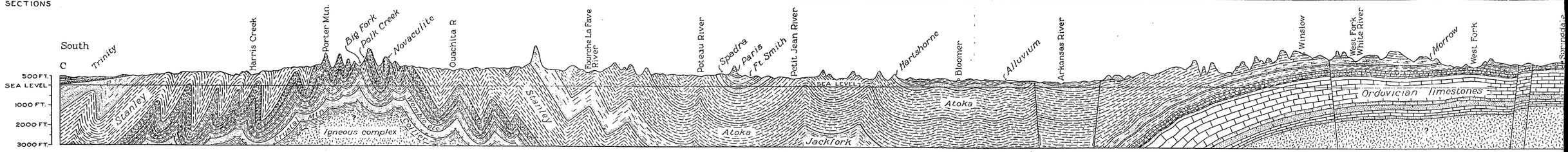
We kindly request your consideration of this new application, and kindly invite your inspection of this area and the above tract.

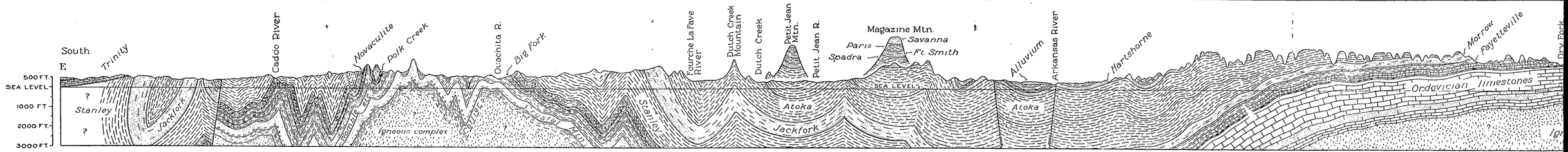
Respectfully,
Arnold V. Widergren
Arnold V. Widergren

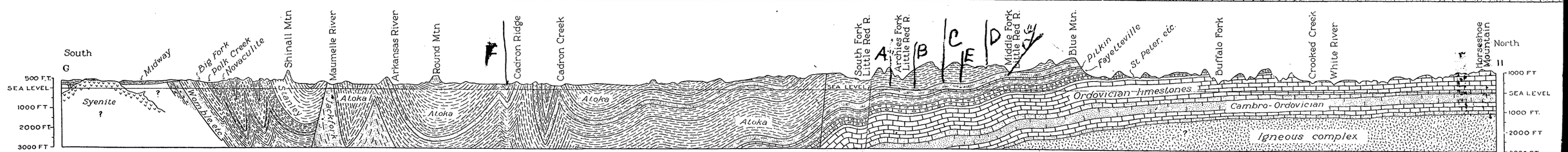


INDEX TO SECTIONS









Submitted by Arnold V. Widergren
907 North Webster Ave.
Hastings, Nebraska

(6) ESTIMATE OF COSTS ($15,561.50)

(A)	Two holes core drilled, not to exceed 800 feet each @$7.25 per foot		$11,600.00
	25 hours bull dozing @$12.50 per hour		312.50
(b)	2 months Geologist Consultant	@$600	1,200.00
	2 months Supervisor	@$500	1,000.00
(c)	Gas,oil, miscellaneous		100.00
	Record Books, etc.		25.00
(d)	Geiger counter with cable and deep hole probe		1,000.00
	Use Allowance of new pick-up or s tation wagon to be purchased		180.00
(e)	None		
(f)	None		
(g)	Payroll Tax		44.00
(h)	Contingencies		100.00
	TOTAL ESTIMATE OF COSTS		$15,561.50

RECEIVED
AUG 15 1956

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RECEIVED
AUG 15 1956

Submitted by Arnold V. Widerstrom
507 North Webster Ave.
Kearney, Nebraska

(8) ESTIMATE OF COSTS ($15,531.50)

(A)	Two holes core drilled, not to exceed 800 feet each $7.25 per foot		$11,600.00
	25 hours mill dozing $12.50 per hour		312.50
(b)	2 months Geologist Consultant	$500	1,000.00
	2 months Supervisor	$500	1,000.00
(c)	Gas, oil, miscellaneous		100.00
	Record Books, etc.		5.00
(d)	Colgor counter with cable and deep hole probe		1,000.00
	Use Allowance of new pick-up or 3 ton wagon to be purchased		100.00
(e)	None		
(f)	None		
(g)	Payroll Tax		66.00
(h)	Contingencies		100.00
	TOTAL ESTIMATE OF COSTS		$15,531.50

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AUG 15 1956

Submitted by [illegible] V. [illegible]
[illegible]
[illegible]

(O) [illegible] OF COSTS ([illegible])

(A)	Two holes core drilled, not to exceed 6 [illegible] feet each [illegible] per foot		[illegible]
	[illegible]		[illegible]
(B)	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]
(C)	[illegible]		200.00
	[illegible]		[illegible]
(D)	Geologist [illegible]		1,000.00
	[illegible]		[illegible]
(E)	[illegible]		[illegible]
	[illegible]		[illegible]
(F)	[illegible]		[illegible]
(G)	Payroll tax		[illegible]
(H)	Contingencies		100.00

TOTAL ESTIMATED COSTS [illegible]

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AUG 15 1956

Surname copy

700

Murphy
Yates
Nelson
Jefferson
Wittenberg

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

JUL 25 1956

Re: Docket No. DMEA-4384 (Uranium)
Non-contiguous Leased Lands
Baxter, Boone, Izard, Marion, and
Van Buren Counties, Arkansas

Dear Mr. Widergren:

The above-referenced application has been reviewed by the Rare and Miscellaneous Metals Division.

We note that you propose to drill one or two diamond drill holes in each of the widely scattered parcels of land, in the above-mentioned counties, that you hold under lease. In our opinion, your proposal is reconnaissance drilling, or prospecting, to determine whether or not the geologic theory which you have presented in regard to possible concentrations of uranium is correct. Under our regulations, exploration funds are not available for such a purpose. (See enclosed "Questions and Answers" booklet.)

If you have a specific area you wish to explore, and can justify the work proposed by submitting sample assay results, geologic structural maps, and other geologic information, showing that you have a definite favorable target area to explore, then this Agency can, within its regulations, consider and act on such a project proposal.

We will hold the subject application in abeyance for a reasonable length of time in order that you may submit a new or modified exploration program if you so desire.

Sincerely yours,

F. L. Knouse, Acting Chief
Rare and Miscellaneous
Metals Division

Enclosure

DMEA Field Team, Region IV (2)
Messrs. JECrawford, Rm. 3643
THKilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

FMMurphy/ai 7-24-56
cc to: Admr. Reading File
Docket
Code 700
Mr. Murphy

700

Murphy
F Murphy
Selfridge
Yopes
Matthews

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Mr. Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV
Bureau of Mines
P. O. Box 431
Joplin, Missouri

JUL 25 1956

Re: Docket No. DMEA-434 (Uranium)
Arnold V. Lidevgren
Non-contiguous leased areas
Baxter, Boone, Izard, Marion, and
Van Buren Counties, Arkansas

Dear Mr. Knox:

Enclosed are copies of memoranda, dated July 20, 1956, by James Paone, USBM, and N. E. Nelson, USGS, relating to the captioned application. Also enclosed are two copies of a self-explanatory letter, of even date, to the applicant from the Rare and Miscellaneous Metals Division.

It appears that the reconnaissance drilling proposed by the Applicant has not been sufficiently justified. However, as it is possible that your office has information regarding the region that we are not aware of, we would appreciate your comments and recommendation in regard to the application.

Sincerely yours,

George C. Selfridge
(By es)
Chairman, Operating Committee

Enclosures:

APPROVED:

P. F. Yopes (By es)
Member, Bureau of Mines

N. E. Nelson (By es)
Member, Geological Survey

FMMurphy/ai 7-24-56
cc to: Docket
Admr. Reading File
Operating Committee
Code 700
Mr. Murphy
Messrs. THKiilsgaard, Rm. 5224
JECrawford, Rm. 3641
JOHosted, Rm. 3210, GSA

RLS

7-23-56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
JUL 23 1956

July 20, 1956

Re: DMEA 4384
Arnold V. Widergren
Archey's Fork prospect
Van Buren Co., Ark.
$45,682.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicant requests assistance in prospecting by core (diamond) drilling the Hale formation (Pennsylvania), which according to his theorizing should be a trap in which lodged uranium minerals washed from eroding older rocks.

In support of the request and the theory the applicant mentions a Peyton Creek discovery concerning which I have no information, and as no mention is made of sampling the importance of the discovery cannot be judged.

The proposed drill holes are expected to cut the Hale formation at a depth of "close to 600 feet." This appears possible, but, if so, the statement that the Hale formation outcrops at the Peyton Creek discovery appears less probable. Only with the aid of a topographical map of the areas could the depths be safely estimated.

The latest geologic map of Arkansas at hand, (Branner 1929 and 1949) shows no east-west faults crossing Van Buren County. The map is said to include work of Carey Croneis.

A total lack of discoveries on the large acreage under lease by the applicant, makes the proposed drilling prospecting. However the opinions of the Field Team and others intimately acquainted with the geologic factors involved should be sought.

Referral to the Field Team for such is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

RECEIVED
JUL 23 1956

July 20, 1956

Re: DMEA 4384
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Van Buren Co., Ark
$45,682.00 - Uranium

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Referral to the Field Team for such is recommended.

NENelson:btr
G 7/20/56
cc: J. E. Crawford, Rm. 3641
J. O. Hosted, Rm. 3210
Director's reading file (4212)
Branch reading file (4212)
DMEA (3)
Chron. file. Docket file

N. E. Nelson

7/23/56

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED
JUL 23 1956

July 20, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Application for Assistance, DMEA Docket 4384 (Uranium)
Arnold V. Widergren, 907 North Webster Street, Hastings, Nebraska

I have reviewed the attached application, DMEA Docket 4384, Arnold V. Widergren, 907 North Webster Street, Hastings, Nebraska, dated July 13 and received in this office July 17, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant has requested Federal assistance to explore for uranium on property in Baxter, Boone, Izzard, Marion, and Van Buren Counties, Arkansas. The proposed exploration work includes 5000 feet of core drilling at a unit cost of $7.25; the total estimated cost of the project if $45,682.

The applicant has presented little supporting information for such an ambitious program. It would be desirable to have data showing geologic features, drill sites, etc.

Should the applicant be unable to provide such data, it is recommended that the project be denied without prejudice inasmuch as it represents pure prospecting.

James Paone

James Paone

Attachment

July 17, 1956

Mr. Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

Subject: DMEA-4384
Re: Exploration Assistance

Dear Mr. Widergren

The receipt of your application dated July 13, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4384 and referred to the Rare & Misc. Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

July 17, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region IV.

DMEA
-4384 Arnold V. Widergren

Robert E. Adams
Chief, Operation's Control
and Statistics Division

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
JUL 16 1956

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4384
Metal or Mineral Uranium
Date Received 7-16-56
Estimated Cost $45,682
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

See separate sheet 3 (A)

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

16—66551-1

See separate Sheet 4

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore

See separate 5 (a) thru (d)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

See separate 6 (a) thru (h)

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

See separate 7 (a) and (b)

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 13, 1956

Arnold V. Widergren
(Applicant)

By .....

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

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Sheet 3 (B) thru (F)

3 (B) None.

(C) Lessee.

(D) Lease form under which leases were taken submitted herewith.

(E) Non-owner.

(F) All property in leases patemted.

Submitted by Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

Sheet 4 (a) thru (c)

4 (a) None.

(b) None.

(c) See sperate 4(C) Pages one and two.

(d) There are access roads to each property, and railroad fscilities near to each. Residence points are reasonably near.

(e) Manpower, materials, supplies, equipment, water and power are easily available to each lease.

Submitted by Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

The deposit is of the bedded type and was built up from the Pennsylvania formation eroding away. The source for this uranium in the beginning,was the old land mass of Llanoria,whence i consider that the uranium departed from it's igneous home. The land mass of Llanoria was unusual in the Pennsylvania period, in that it rose on a faster scale than it did in any other geologic period of the Paleozic epoch. This fastness in which the Llanoria rose and weathered down to fill the Ouchita geosyncline was the cause for a higher content of uranium to be laid down around the border of the Pennsylvania sea, than the average content of sedimentary rocks. The Ouchita geosyncline confined it's sinking border to immediatly north of the Arkansas river, which shows there had to be a border on northward until the sea encroached and submerged the Ozark dome in southeastern Missouri. My field evidence indicates that a content of uranium was laid down to the very uppermost part of the Pennsylvania formation, for as soon as the normal faults came into existence, this uranium content began to rework downward into a older formation, which I consider is the very lowest of the Ordovician beds, or the upper half of the Cambrian formation. The bed that was picked to redeposit, surely must be chemically favorable, as I have today a reaction in these faults where they intersect a stream bed, which indicates high temperature at the level of redeposition. This reaction has prevented these faults from sealing up with clayey gouge. There are places where a stream has changed it's course and shut off the enrichment entirely, as evidenced in the Arkansas valley and can be observed today in action.

There are numerous conditions that existed and came into existence at the right time to make this reworking possible. Will cite just one instance, as space will not permit a detailed explanation of all in northern Arkansas. In Pennsylvania time there was considerable iron and pyrite ores laid down with the Pennsylvania beds. The pyrite ores made it possible for the uranium to go into solution. Since the major streams of northern Arkansas head at least on Pennsylvania rocks today, makes it probable for the deposits that started to build up over 200 million years ago, to be active today in going under enrichment, as the source is still abundant here on the surface. It would be very hard to find another locality in the United States that would compare in time length, plus other conditions that exist here,such as that the beds are lying undisturbed, and about in the position in which they were laid down in the seas that covered this area. If the Ozark mountains of Arkansas had been folded intenseively like the Ouchita mountains of Arkansas, this would have cut down the source that I establish behind each location I make, before considering it a deposit of commercial type. Where the beds have been folded to high angles like they are in the Ouachita's, you would only have the thickness of such formation to furnish the source to build up a deposit at depth.

My comparison between the two mountain ranges is that the Ouachita lessened the source up to one-half, by their highly folded beds and the reverse faulting made it impossible for any deposits to get started to build at any time. I consider the northern parts of the Ouchita's and parts of eastern Oklahoma to be effected with the mentioned content that was laid down in the Pennsylvania sea. In my estimation this content will have no great value, but it has caused a lot of excitent in the last year in the State of Arkansas. With the exception of the number of places that have been found to be more radioactive, I consider these to be certain porous beds that acted as traps which caught some of the uranium as it was freed from above beds. It is possible that a limited amount of commercial ore will be found this way.

(Do not return)

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Erosion has removed all of the mineralized bed on the

Those that I have examined thus far, fail to have a sufficient source because of being to near to the head of a stream, or the stream too small to build up a deposit. On two occasions like at Peyton Creek and near Norfork, Arkansas, the beds seem to have been favorable to stop some ore, yet at both places, erosion has removed the beds fifty feet to a guarter mile , back away from the stream that built them up. This discovery on Peyton Creek, in Van Buren County, about mid-year of 1955, is supposed to be the richest ore of uranium content, found at that date in the State of Arkansas. The bed that the ore was trapped in, is the basal part of the Hale formation of the Pennsylvania age. The mineralized depth is approximately twenty four feet of the Hale sandstone. The ore is confined closely to a fault zone that crosses Peyton Creek at right angles. This creek has cut through the mineralized bed ~~and~~ is now 20 ft below some. north side of the creek, and for 20 to 50 feet on the south side, so I consider that up to one-half of the richest ore here has eroded away before civilization came along.

The outcrop of the Hale Sandstone runs east and west in a narrow belt from [redacted] Batesville, Arkansas to the Oklahoma line, and crosses butbfew streams with a drainage area large enough for a good deposit to be built up.

Our first test will be located on Archey's fork of Little Red River, which has a drainage area about four times as much as the Peyton Creek drainage. The same bed that the ore is in on the surface in the Peyton Creek deposit, will be close to six hundred feet in depth on our location, and the whole deposit will be in tact with none releached out, or eroded away, plus the probability of three times richer ore. The limitations will be the depth in the area, as all beds dip to the south from Peyton Creek on a steeper angle than is common, and in addition two east and west faults in Van Buren County has down-throwed the beds twice in close distance. This is shown on the Carey Croneis structure map in his book entitled," Geology of the Arkansas Paleozoic Area." published in 1930.

There is sufficient evidence surrounding the Peyton Crek discovery that shows the Hale sandstone member was some favorable in stopping the uranium as it passed down by it, as for several miles from the Peyton Creek outcrop the same bed shows more radioactivity than it would generally have, considering it to be the original source bed, and wherever a stream has cut through it you are apt to find it heavier mineralized.

We desire to explore these sites for the geologic probability of making a signifcant uranium discovery.

Signed- Carl Walker
Geologist

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Arnold V. Widergren
Applicant

SEPARATE 5

(5)(a) I wish to explore principally for uranium. However manganes e may be encountered.

(b) I propose to have a total of approximately 5000 feet of core drilling of from 500 to 800 feet depths,not to exceed two tests on any one lease.

(c) The work will begin within 90 days and be completed within 12 months from the date of an exploration project contract.

(d) I,the applicant will personally supervise this operation. I have had a five year contract with the government F.P.H.A. , and had twenty three employees under my supervision, in this operation.

SEPARATE 6

(a) Independent Contracts		
5000 feet core drilling @$7.25 per foot		$36,250.00
50 hours Bull Dozer @$12.50 per hour		625.00
(b) Labor,Supervision, Consultants		
Geologis t Consultant 6 mos. @$600 per mo.		3,600.00
Supervision and accounting 6 mos . @$500 per m.		3,000.00
(c) Operating Material and Supplies		
Gas, Oil, etc. us ed for transportaion 200		200.00
Record Books, etc.		25.00
(d) Operating Equipment:Geiger counter with deep hole probe		
(Use-allowance on new pick up or station		1000.00
wagon to be purchased)		750.00
(e) Rehabilitation and repairs		none
(f) New buildings,improvements,installations		none
(g) Miscellaneous		
Pay Roll Tax		132.00
(h) Contingencies		
Varied		100.00
	Total	$45,682.00

SEPARATE 7

(a) I am prepared to furnish my 25% participation ofmthe project cost.

(b) Above share will be furnis hed by money.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

Legal Description of lands leased for exploration in

BAXTER COUNTY ,ARKANSAS & Boone County

Van Buren

RECEIVED

JUL 16 1956

(1)

The southeast frl. of Section 19, Township 19 north, Range 14 west, containing 121 acres, and part of the northeast frl. of Section 30, Township 19 (nineteen) north, Range 14 west, Collectively containing 206 acres more or less.

(2)

Part of the south frl. one half of Section 11, Township 19 north, Range 15 west; part of the south fractional half, Section 12, west one half of the northwest quarter of Section 13, the north half of the northeast quarter, the north half of the southeast of the northeast quarter, the southwest quarter of the northeast quarter, the northwest quarter of the southeast quarter, the northeast quarter of the southwest quarter, part of the northwest quarter of the southwest quarter, and part of the northwest quarter frl. of Section 14, Township 19 north, Range 15 west, collectively containing 696 acres more or less.

(3)

Part of the southwest quarter of the southwest quarter of Section 18, part of the northwest frl. Section 19, Township 19 north, Range 14 west, the south frl. one half of the southwest frl. Section 13, part of the southeast quarter, Section 13, Township 19 north, Range 15 west. the north one half of the southwest quarter of the southeast quarter, the east part of the south half of the southwest quarter of the southeast quarter, the southeast quarter of the southeast quarter, Section 14, Township 19 north, Range 15 west, the east of the northeast frl. Section 23, two parts of the northeast frl, the northeast frl. of the northeast frl. of Section 24, Township 19 north, Range 15 west, collectively containing 343 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

SHEET 3 (a)

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

BOONE COUNTY, ARKANSAS

(1)

South half of the northeast quarter of the southeast quarter containing 20 acres; south part of the northwest quarter of the southeast quarter containing 8 acres; the southwest quarter of the southeast quarter containing 40 acres; a part of the southeast quarter of the southeast quarter containing 15 acres; all in Section 32, Township 19 north, Range 19 West. Also fractional northwest quarter of the northeast quarter in Section 5, Township 18 north, Range 19 west, containing collectively 123 acres more or less,

(2)

The north 25 acres of the northwest quarter of the southwest quarter of Section 32, Township 19, Range 19 ; the southeast quarter of the southeast quarter; the north part of the north half of the southeast quarter; the south part of the north half of the southeast quarter; part of the northeast quarter of the southeast quarter; Section 31, Township 19, Range 19, the southeast quarter of the northeast quarter; the northeast quarter of the northeast quarter fr., of Section 6, Township 18, range 19, and the north half of the southwest quarter and the west 15 acres of the southwest quarter of the northwest quarter of Section 5, Township 18, Range nineteen, containing collectively 265 acres more or les s.

RECEIVED
JUL 16 1956

(3)

Beginning at the s outheast corner of northwest quarter of the southeast quarter, thence north to a fence at bottom of the hill, then west one quarter to the southwest quarter of the northeast quarter, containing 20 acres more or less. Also three acres more or less in the northwest corner of the southwest quarter of the southeast quarter, des cribed as follows: beginning on the west boundary line of said quarter six feet south of where old rail fence stood, running parallel with old fence in a northeasternly direction to a point on the north boundary line of said forty to a point in the center of Crooked Creek, then following the creek to the west boundary line, then follow west boundary line to the place of beginning, of Cection 4, Township 18 North, Range 18 West, containing collectively 23 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

BOONE COUNTY, ARKANSAS LEASES.

(4)

A part of the west half of the southeast quarter of Section 4, Township 18 north, Range 18 west, described as follows: beginning at the quarter section corner on the south side of said section 4, Township 18 north, Range 18 west, run thence north 628 feet to within 6 feet of a fence at the foot of the hill, thence with the meanderings of the foot of the hill 68 degrees east 138 feet, thence north 40 degrees east 211 feet, thence north 27 degrees east 157 feet, thence north 23 degrees east 160 feet, thence north 20 degrees east 162 feet, thence north 10 degrees east 190 feet, to the center of Crooked Creek, thencewith the meanderings of said creek down stream north 50 degrees east 129 feet, thence north 31 degrees east 232 feet, thence north 22 degrees east 249 feet, thence north 14 degrees west 179 feet, thence north 32 degrees west 96 feet, thence north 50 degrees west 503 feet, thence north 40 degrees west 50 feet to the north line of the northwest quarter of the southeast quarter, 300 feet east of the center of Section 4, Township 18 north, Range 18 west, thence east 1020 feet, thence south 2640 feet, thence west 1320 feet, to the place of beginning, containing 68 acres more or less.

(5)

The northwest quarter of the northwest quarter and the southwest quarter of the northwest quarter, Section 2, Township 20, Range 22 west, containing 80 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Sheet 3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

IZARD COUNTY, ARKANSAS

(1) The southwest quarter of the northwest quarter of Section 33, Towns hip 17 , Range 10 west, containing 40 acres more or less.

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Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Sheet 3 (a)

Legal Description of lands leased for exploration in

MARION COUNTY, ARKANSAS

(1)

The southeast quarter of the southeast quarter, Section 27, Township 20 north Range 15 west, and the northeast quarter of the northeast quarter of Section 34 Township 20 N Range 15 west, containing 80 acres more or less.

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Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

(1)

The west 35 acres of the southeast quarter of the northeast quarter, the southwest quarter of the northeast quarter, the southeast quarter of the northwest quarter, the north 30 acres of the northeast quarter of the southwest quarter, the west 20 acres of the northwest quarter of the southeast quarter, the west 35 acres of the southwest quarter of the southeast quarter of Section 12, Township 11 north, Range 14 west and containing 200 acres more or less.

(2)

That part of the southeast quarter of the southwest quarter, Section 24, described as beginning at a point 3.49 chains south of the northeast corner thereof from which point run south 16.51 chains or to the s outheast corner of said sub-division, thence west 5.74 chains to a stone, and thence in a northeasternly direction 17.32 chains or to a point of beginning, and containing 5 acres more or less. Also the southwest quarter of the southeast quarter of Section 24, and the west one half of the northeast quarter of Section 25, all in Township 12 north, Range 15 west, and containing 125 acres more or less.

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JUL 16 1956

(3)

The southwest quarter of the northwest quarter, except a lot conveyed to school district No. 11, described as folows, To Wit; Beginning at a point 6.59 chains south of the northwest corner of said forty, thence east 9 rods, thence south 13 rods, thence in a northwesterly direction in a straight line 16 rods to point of beginning. Also except a church lot, described as beginning at a point 9 rods eastand 6.50 chains south of the northwest corner of said forty, thence east 4 chains, thence south 2.5 chains, thence west 4 chains, thence north 2.5 chains to the point of beginning. (2) Also a part of the southeast quarter of the southwest quarter, described as follows; Beginning at a point 3.41 chains south of the northeast corner thereof, thence north 3.41 chains to said northeast corner, thence west one-fourth mile, thence south one-fourth mile, thence east 14.26 chains to a stone, thence in a northeasternly direction 17.32 chains to place of beginning. (3) Also the northwest quarter of the southwest quarter, and north one-half of the southwest quarter of the southwest quarter, and part of the northeast quarter of the southwest quarter, described as folows To Wit: Beginning at the southeast corner of said forty, thence north 45 degreeswest, to northwest corner of said sub-division, thence south one-fourth mile, thence east one-fourth mile to place of beginning, all in Section 24, Township 12 north, Range 15 west, containing in the aggregate exclusive of exceptions, 153.5 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) Cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS SHHET 2

(4)

The west one-half of the southeast quarter of Section 33, Township 12 north, Range 14 west, and containing 80 acres more or less.

(5)

A part of the southwest quarter of the northeast quarter, Section 22, Township 11 north, Range 14 west, described as beginning at the north-east corner of s aid sub-division from which point run west 254-1/3 yards, thence south 70 yards, thence east 82-1/6 yards, thence south 280 yards, thence west 82-1/6 yards, to the south line of said sub-division, thence east 254-1/3 yards, and thence north 440 yards to point of beginning, and containing 19 acres more or less.

(6)

That part of the southeast northeast of Section 29 lying south of Little Red River containing 2 acres more or less. That part of the northeast of the southeast of Section 29 ,lying south and west of Little Red River containing 32 acres more or less, and the southeast of the southeast, Section 29, containing 40 acres more or less. Also the following described lands in Section 28; The south one-half of the southwest quarter, the southwest quarter of the southeast quarter, that part of the northwest of the southwest quarter, containing 8 acres more or less, that part of the northeast of the southwest lying south and east of Little Red River, containing 25 acres more or less, that part of the southeast of the northwest quarter lying south and east of Little Red River containing 15 acres more or less, all in Section above mentioned, Township 11 north, Range 13 west, and containing collectively 242 acres more or less.

(7)

The north one-half of the southeast quarter Section 19, and the north one-half of the southwest quarter of Section 20, and the northeast quarter of the northeast quarter of Section 27, all in Township 12, Range 12, and containing 200 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

Sheet 3

(8)

The northeast quarter of the southwest quarter, the northeast quarter of the northeast quarter, the southeast quarter, Part of the northwest quarter of the southwest quarter, Part of the southeast quarter of the northwest quarter,Part of the southwest quarter of the northeast quarter, part of the southeast quarter of the northeast quarter, Section 21, Township 12 north,Range 12 west. The west half of Section 22, Township 12 north,Range 12 west. The south half of the northeast quarter, The northwest quarter of the northeast quarter, the northwest quarter, Section 27, Township 12 north, Range 12 west. Part of the northeast quarter of the northeast quarter, Part of the northwest quarter of the northeast quarter, Part of the southwest quarter of the northeast quarter, Section 25, Township 12 north, Range 13 west, collectively containing 947 acres more or less.

(9)

All that part of the north half of the southwest quarter of section 2, lying south and east of Little Red River, also all that part of the southeast quarter of the northwest quarter of Section 2 lying south and east of Little Red River in Township 10 north, Range 13 west, of the fifth principal meridian, also all that part of the west half of the northwest quarter of Section 3 lying south and west of Little Red River;all that part of the north-half of the southwest quarter of Section 3 lying south and west of Little Red River, also that part of the north half of the southeast quarter of Section 3 lying south of Little Red River in Township 10 north, Range 13 west of the fifth principal meridian, also the west one-half of the northeast quarter of Section 4,The southeast quarter of the northeast quarter of Section 4, the northeast quarter of the northwest quarter of Section 4, The northwest quarter of the southeast quarter of Section 4, The northeast quarter of the northeast quarter of Section 4,The northeast quarter of the southeast quarter of Section 4, Township 10 north, Range 13 west of the fifth principal meridian; also the south half of the southeast quarter of Section 33, and all that part of the northwest quarter of the southeast quarter of section 33 lying west of Little Red River in Township 11 north, Range 13 west of the fifth principal meridian, also the s outhwest quarter of the southwest quarter west of the Little Red River of Section 34, Township 11 north, Range 13 west of the fifth principal meridian. Subject to all public and private roadways or easements as now located.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

Sheet 4

(10)

The north half of the southwest quarter of Section 3; the northeast quarter of the southeast quarter, the southeast quarter of the northeast quarter, and the west half of the northeast quarter of Section 4; A part of the southwest quarter of the southwest quarter of Section 3, and a part of the southeast quarter of the southeast quarter of Section 4 described as follows: Beginning at a point 3.80 chains west of the northeast corner of the southwest quarter of the southwest quarter of Section 3, and run thence south 11 chains, thence west 4.50 chains, or to base of hill, thence in a northwesterly direction with base of hill to a point 6.24 chains south of the north boundary line of said southwest quarter of the southwest quarter, thence south 75 degrees west 25 chains, or to west side of the southeast quarter of the southeast quarter, Section 4, thence north to the northwest corner of the southeast quarter of the southeast quarter of said section 4, and thence east to point of beginning, all in Township 11 north, Range 14 west, and containing in the aggregate 274 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (D)

MINERAL AND ORE LEASE

RECEIVED JUL 16 1956

This agreement, made and entered into the.....day of....., 19....., by and between

.....

hereinafter called lessor, (whether one or more) and _____ Arnold V. Widergren 907 North Webster St. Hastings, Nebraska _____ hereinafter called lessee.

WITNESSETH:

1. Lessor, for and in consideration of..... ONE DOLLAR ..... cash in hand paid, the receipt of which is hereby acknowledegd, and of the royalties herein provided for, and of the covenants and agreements hereinafter contained, has demised, granted, leased, and let and by these presents do demise, grant, lease, and let, exclusively unto the said Lessee the land hereinafter described, with the sole and exclusive right to the Lessee to do geological, geophysical and electrical work, investigate, sample, test, explore, prospect, mine, drill for, produce, extract, process, take, treat, care for and remove other minerals whether similar or dissimilar and to store same upon said land during the term hereinafter provided, with the right of entry therein at all times, and to construct, erect, maintain, use, repair and replace thereon and to remove therefrom all storage tanks, buildings, pumps, shafts, hoists, machines, pump stations, boilers, engines, telephone and telegraph lines, roads, bridges, canals, basins, terminals, docks, power houses, pressure maintenance and treating plants or other plants, residences, offices, shops, machinery, equipment and fixtures for drilling, mining, processing, producing, storing, treating and caring for such products, housing its employees and any and all other rights and privileges necessary, incident to or convenient for the economical operation of said land and adjoining or neighboring lands operated by Lessee, its affiliates or subsidiaries for the production of uranium or other minerals, whether similar or dissimilar. The possession of said land by Lessee shall be sole and exclusive, excepting only that Lessor reserves the right to occupy said land or to lease the same for grazing, agricultural or horicultural uses, which shall be carried on subject to, and with no interference with the rights or operations of the Lessee. Lessee shall have the right at any time, or within one year after termination of this lease, to remove any or all of above mentioned items placed on said premises.

The land which is the subject of this lease is situated in the County of....., State of.....,

and more particularly described as follows, to-wit:.....

of Section..... Township..... Range.....and containing.....acres more or less.

2. For the purpose of determining the amount of any money payment hereunder, said land shall be considered to comprise.....acres, even though it actually comprises more or less, but it is Lessor's intention to lease, and Lessor does hereby demise, grant, lease, and let, in addition to the land above described, all of the land and interests in land owned or claimed by Lessor adjoining the above described land whether owned or claimed by inheritance, deed, gift, limitation or otherwise, and Lessor expressly agrees to deliver to Lessee any supplemental instrument deemed necessary or required by Lessee for more complete or accurate description of the land and interests thus intended to be leased herewith.

3. It is agreed that this lease shall remain in force for a term of TEN YEARS from date hereof (herein called "primary term"), and as long thereafter as uranium, or other minerals whether similar or dissimilar, or any of them is produced from said land, or the Lessee's obligations in lieu of production thereof are fulfilled, or drilling or other operations are continued by Lessee as provided for herein. Notwithstanding anything in this lease contained to the contrary, it is expressly agreed and covenanted that if the lessee shall commence drilling or mining at any time while this lease is in force, this lease shall remain in force and effect, and the term and life shall continue as to the entire acreage described herein, so long as such operations are prosecuted, and if production results from such operations, then as long thereafter as such production continues.

4. This lease shall be subject to all federal and state laws, executive orders, rules or regulations, and to all orders, rules, regulations or recommendations of all federal or state officers, agencies, boards, commissions or committees which in any way directly or indirectly, relate to or affect performance of any of the express or implied covenants of this lease, and this lease shall not be forfeited or terminated in whole or in part, nor shall lessee be liable in damages, for failure to comply with any of the express or implied covenants of this lease, if such compliance is prevented by, or if such failure results from compliance with any such law, order, rule, regulation or recommendation.

5. Lessor agrees, covenants and warrants, as follows:

5A. To defend the title to the lands herein described, and agrees that the Lessee shall have the right at any time to redeem for Lessor by payment, any mortgage, taxes or other liens on the above described lands, in the event of default of payment by Lessor, and be subrogated to the rights of the holder thereof. In case of payment of any such mortgage, taxes or other liens by Lessee, in addition to the right of subrogation herein granted, Lessee shall also have the right to retain any royalties, or other payments which may become due Lessor hereunder and to repay itself therefrom, and the rentention of such royalties or other payments by Lesee shall have the same effect as if paid to the Lessor in whose behalf payment of any mortgage, taxes or other liens was made. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in said land less than the entire fee simple estate, then the royalties or other payments herein provided shall be paid Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee. In the event Lessor's title is disputed by suit or otherwise, Lessee shall have the right to withhold payment of rentals and royalties or to deposit same in the registry of Court until final determination of Lessor's rights, and during such period each and every obligation imposed by this lease shall stand suspended and the time consumed shall not be counted against Lessee. If ten or more parties become entitled to royalty or other payments hereunder, Lessee may withhold payment thereof until furnished with a recordable instrument executed by all such parties designating an agent to receive payment for all. The privilege to Lessee to issue liens on Lessee's interest of the property, or any production thereof is hereby expressly given.

Note consent to lien.

5B. To pay Lessor's proportionate part of any taxes assessed or levied by the State in which said lands are located or any subdivision thereof, or by the Federal Government against the uranium or other ores and/or concentrates produced from the lands covered hereby.

5C. The privilege of assigning in whole or in part is hereby expressly allowed, and if the estate of either party hereto is assigned, the covenants hereof shall extend to their heirs, executors, administrators, successors, and assigns, but no change in the ownership of the land or assignments of royalties or other payments shall be binding on the Lessee until after the Lessee has been furnished with a certified copy of a recorded assignment or deed evidencing such change in ownership thereof; and it is hereby agreed in the event Lessee shall assign a part or parts of the above described lands and the Assignee or Assignees of such part or parts shall fail or make default in any requirement of this lease or in the payment of the proportionate part of any royalties, rentals, or other payments due from said Assignees, such default shall not operate to defeat or affect this lease insofar as it covers the parts of said land with respect to which all the requirements of this lease shall have been fulfilled and the rentals or other payments have been paid. No assignment hereunder shall be construed to enlarge or multiply the obligations of the Lessee under this lease and Lessee may continue to operate the leased premises and pay and settle royalties therefrom as an entirety and the mineral ownership shall be consolidated and automatically spread over this entire lease in the proportion which each interest owned bears to the total acreage. This commencement of drilling operations and the prosecution thereof or the production of minerals, or the making of the payments in lieu of such production, either by the Lessee or any Assignee hereunder, shall cause this lease, as a whole, to remain in full force and effect. In the event any part of the land herein leased is now, or by assignment or otherwise hereafter becomes segregated from any other part, commencement of operations, and/or the production of minerals on any part of the above land shall retain and hold under this lease all tracts of said land whether segregated or not.

5D. That all ores mined from the lands covered hereby may be cleaned and prepared for market on this or other lands within or without the local area within which the lands covered hereby are located, as may be deemed desirable by Lessee, as an independent operation, or in a mill or mills in which other ores are being treated, commonly referred to as a central concentrating plant and that such plant or plants may be located on these lands, with the right to treat ores from other lands therein. If said central concentrating plant shall be equipped with automatic weighing and sampling devices, then such ores shall be weighed, assayed, treated, handled and concentrates determined, sold and accounted for in the manner which is now or may hereafter be established as standard method and practice thereat. If said central plant shall not be equipped with automatic weighing and sampling devices, then the ores mined from the lands covered hereby shall not be commingled with ores from other lands before or during milling, nor shall any concentrates recovered therefrom be commingled with the concentrates recovered from ores from other lands, and said concentrates shall be sold and accounted for separately from any other concentrates.

5E. If ores mined and raised from the lands herein leased are treated and cleaned at a central concentrating plant, whether located on this or other lands, separately or with other ores, as above provided, the tailings, sands, rock and other by-products resulting from the treatment of said ores shall thereupon become the sole property of and belong to the owner of the land upon which same are deposited by Lessee; that is to say, if ores and rock from the lands covered hereby are milled on other lands the tailings, rock and other by-products resulting therefrom shall belong to the owner of such other lands or the lands upon which same are deposited, and if ores and rock from this or other lands are milled upon the lands covered hereby all such materials shall belong to Lessor, provided however Lessee shall at all times during the life of this lease have the right to remill said tailings and other by-product materials, and during the period of such remilling operation Lessee shall be relieved from the obligation to conduct drilling or mining operations.

5F. That Lessee may, at any time and/or from time to time, execute and deliver to Lessor or to the depository herein named or place of record a release or releases covering any portion or portions of the above described premises and thereby surrender this lease as to such portion or portions and be relieved of all obligations as to the acreage surrendered, and thereafter the rentals payable hereunder shall be reduced in the proportion that the acreage covered hereby is reduced by said release or releases. The failure or refusal of any party herein named as one of the Lessors or of any other party owning an interest in the lands above described to execute this agreement or the failure of title to any portion of said lands, whether by foreclosure or otherwise, shall in no manner affect the validity or effectiveness of this agreement, which shall cover and and apply to the tract or tracts of land hereinabove described in so far as and to the extent that such tract or tracts are owned from time to time by the parties so executing, their heirs, successors and assigns; and in case of any such failure or refusal to execute or failure of title, the rentals and royalties payable hereunder shall be adjusted accordingly.

5G. That Lessee may at any time, if he desires to do so, pay all royalties or rentals then due, surrender and terminate this lease by giving seven days' written notice and thereupon shall be relieved from all obligations hereunder with like effect as if this lease had not been made, by executing and recording at lessee's expense a proper release of this mining lease.

6. In consideration of the premises the said Lessee covenants and agrees as follows:

6A. To commence prospecting, drilling, and/or mining operations on said land herein described within.....year.... from date hereof.

6B. To pay as rent or royalty to the Lessor, ten per cent of the market value of all ores mined and sold, to be paid from the receipts of the preceding month, on or before the tenth of each month. This payment shall be paid or tendered unto the Lessor, or to the Lessor's credit in the

..... Bank of..... .....or successors.

6C. Statement showing amount and kind of ore sold, the weight thereof, to whom sold, and the price received for same, shall be furnished Lessor.

6D. To keep records of all transfers of this lease, or part or parts thereof, and a correct account of minerals mined, the kind and weight thereof, to whom sold, and the price received. These reports shall be open for inspection to the Lessor at reasonable times.

6E. To pay for damage, caused by operation to growing crops on said land, per crop market value.

6F. To mine said land in a miner-like and workman-like manner, when commenced, shall be carried on in good faith continuously, except for unavoidable accidents, strikes, or other conditions beyond the control of the Lessee, and/or for as long a period as may be necessary, in the event that the market price of the ore produced does not provide a necessary profit for said Lessee.

6G. If, at the expiration of.....year.... from the date hereof no Uranium, or other minerals, or any of them, is being produced by the Lessee under the terms hereof, or if Lessee has not, or is not then engaged in drilling operations under the terms hereof, this lease shall then terminate as to both parties, unless Lessee on or before said date shall pay or tender to Lessor or to the credit of Lessor in the

.....Bank at ....

(which bank is Lessor's Agent), the sum of.....Dollars ($.....) (hereinafter called rental) which shall extend for twelve months the time within which drilling or mining operations may be commenced or resumed hereunder. Thereafter, annually, in like manner and upon like payments or tenders the commencement or resumption of drilling or mining operations may be further deferred for periods of twelve months during the primary term. The payments or tenders of rentals may be made by check or draft of Lessee, mailed or delivered to Lessor, or to said bank, on or before such date of payment. Notwithstanding any devolution, change or division in the ownership of said land, the payments or tenders of rentals in the manner herein provided shall be binding on Lessor and the successors, assigns or legal representatives of Lessor. If such successor bank should fail, liquidate or be succeeded by another bank or should refuse to accept such payment or tenders and credit the account of Lessor, Lessee shall not be held in default for failure to make such payments or tenders until thirty days after Lessor shall deliver to Lessee an instrument in writing, duly executed and acknowledged, naming another bank as agent to receive such payments or tenders. Any charge or fee made by said bank for accepting and crediting Lessor with the payments or tenders made by Lessee, shall be borne by Lessor and said bank may deduct such fees or charges from the rental payments made hereunder, crediting the balance thereof to the account of Lessor. It is agreed that the down cash payment is adequate consideration for this lease according to its terms and shall not be allocated as mere rental for a period.

7. The obligations hereinabove mentioned, as well as all implied obligations hereunder, are agreed to be covenants and not conditions or limitations and the breach of same, in whole or in part, will not work a forefeiture, abandonment or termination of this lease, or cause a termination or reversion of the estate created by this lease, except those specifically required hereinabove to extend the primary term hereof. In the event it should be determined that any sentence, phrase, clause, paragraph or provision of this lease is void or unenforceable for any reason whatsoever it is expressly agreed that this shall not affect the validity of the remainder of this agreement, but this lease shall stand in full force and effect to the same extent as if such sentence, phrase, clause, paragraph or provision had not been included herein.

8. And I..... wife of the said ..... for and in consideration of the said sum of money, paid as a consideration for the foregoing, do hereby release and relinquish unto and in favor of the said [redacted] all my rights of dower and homestead in and to the above described land to the extent of the rights hereinabove set forth.

9. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, legal representatives and assigns of the parties hereto.

IN TESTIMONY WHEREOF, we sign, this the.....day of....., A. D. 19.....

WITNESSES:

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

ACKNOWLEDGMENTS

(UNMARRIED PERSON)

STATE OF..... } ss.
COUNTY OF.....

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, ...

to me well known to be the person whose name appears as lessor in the foregoing instrument, and stated that .....he..... had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this..... day of....., 19.....
My Commission Expires:

....., 19..... .....
(SEAL) Notary Public

(HUSBAND AND WIFE)

STATE OF..... } ss.
COUNTY OF.....

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, ...
to me well known to be the persons whose names appear as lessors in the foregoing instrument, and stated that they had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said wife of the said.....
to me well known, and, in the absence of her said husband...., declared that she had, of her own free will, executed the foregoing instrument and signed and sealed the relinquishment of dower and homestead therein expressed, for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this..... day of....., 19.....
My Commission Expires:

....., 19..... .....
(SEAL) Notary Public

No.....

MINERAL AND ORE LEASE

FROM

.....

TO

.....

.....

Date..... 19.....

Section..... Twp..... Rge.....

No. of Acres..... Term.....

..... County.....

.....

.....

STATE OF..... } ss.
County of.....

This instrument was filed for record on the

.....day of..... 19.....

at..... o'clock.....M., and duly recorded

in Book..... Page..... of

the records of this office.

.....
Circuit Clerk and Recorder

By .....

When recorded, return to.....

.....

.....

TRIBUNE GRAPHIC ARTS, HASTINGS, NEBRASKA

STATE OF ..... } ss.
County of .....

CERTIFICATE OF RECORD

I, ...Circuit Clerk and Ex-Officio Recorder for the county aforesaid, do hereby certify that the annexed and foregoing Mineral and Oil Lease was filed for record in my office on the..... day of..... A. D., 19..... , at.....o'clock.....M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in "Record Book.....," Page.....

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said court, this..... day of....., 19.....

.....
Circuit Clerk and Ex-Officio Recorder.

By....., D. C.

7/17/56

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

RECEIVED
JUL 13 1956

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4384
Metal or Mineral Uranium
Date Received 7-16-56
Estimated Cost $45,682
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

see seperate Sheet 3

(*b*) State any mine name by which the property is known.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

16—66551-1

See seperate Sheet 4.

5. *The exploration project.*—(a) State the mineral or minerals for which you wish to explore See separate 5 (a) thru (d)

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs. See separate 6 (a) thru (h)

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs? See separate 7 (a) and (b)

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated July 13, 1956

Arnold V. Nidiffer
(Applicant)

By .....

.....

.....

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Sheet 3 (B) thru (F)

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3 (B) None.

(C) Lessee.

(D) Lease form under which leases were taken submitted herewith.

(E) Nonownwer.

(F) All property in leases patemted.

Submitted by Arnold V. Widergren
907 No. Webster Street
Hastings, Nebraska

Sheet 4 (a) thru (c)

4 (a) None.

(b) None.

(c) See seperate 4(c) Pages one and two.

(d) There are access roads to each property, and railroad facilities near to each. Residence points are reasonably near.

(e) Manpower, materials, supplies, water, power and equipment are easily available to each lease.

Submitted by Arnold V. Widergren
907 North Webster Street
Hastings, Nebraska

The deposit is of the bedded type and was built up from the Pennsylvania formation eroding away. The source for this uranium in the beginning, was the old land mass of Llanoria, whence I consider that the uranium departed from it's igneous home. The land mass of Llanoria was unusual in the Pennsylvania period, in that it rose on a faster scale than it did in any other geologic period of the Paleozic epoch. This fastness in which the Llanoria rose and weathered down to fill the Ouchita geosyncline was the cause for a higher content of uranium to be laid down around the border of the Pennsylvania sea, than the average content of sedimentary rocks. The Ouchita geosyncline confined it's sinking border to immediatly north of the Arkansas river, which show there had to be a border on northward until the sea encroached and submerged the Ozark dome in southeastern Missouri. My field evidence indicates that a content of uranium was laid down to the very uppermost part of the Pennsylvania formation, for as soon as the normal faults came intomexistence, this uranium content began to rework downward into a older formation, which I consider is the very lowest of the Ordovician beds, or the upper half of the Cambrian formation. The bed that was picked to redposit, surely must be chemically favorable, as I have today a reaction in these faults where they intersect a stream bed, which indicates high temperature at the level of redeposition. This reaction has prevented these faults from sealing up with clayey gouge. There are places where a stream has changed it's course and shut off the enrichment entirely, as evidenced in the Arkansas valley and can be observed today in action.

There are numerous conditions that existed and came into existence at the right time to make thisreworking possible. Will cite just one instance, as space will not permit a detailed explanation of all in northern Arkansas. In Pennsylvania time there was considerable iron and pyrite ores laid down with the Pennsylvania beds. The pyrite ores made it possible for the uranium to go into solution. Since the major streams of northern Arkansas head at least on Pennsylvania rocks today, makes it probable for the deposits that started to build up over 200 million years ago, to be active today in going under enrichment, as the source is still abundant here on the surface. It would be very hard to find another locality in the United States that would compare in time-length, plus other conditions that exist here, such as that the beds are lying undisturbed,and about in the position in which they were laid down in the seas that covered this area. If the Ozark mountains of Arkansas had been folded intensively like the Ouchita mountains of Arkansas, this would have cut down the source that I establish behind each location I make, before considering it a deposit of commercial type. Where the beds have been folded to high angles like they are in the Ouachita's, you would only have the thickness of such formation to furnish the source to build up a deposit at depth.

My comparison between the two mountain ranges is that the Ouchita lessened the source up to one-half, by their highly folded beds and the reverse faulting made it impossible for any deposits to get started to build at any time. I consider the northern parts of the Ouchita's and parts of Eastern Oklahoma to be effected with the mentioned content that was laid down in the Pennsylvania sea. In my estimation this content will have no great value, but it has caused a lot of excitement in the last year in the State of Arkansas. With the exception of the number of places that have been found to be more radioactive, I consider these to be certain porous beds that acted as traps which caught some of the uranium as it was freed from above beds. It is possible that a limited amount of commercial ore will be found this way.

(Do not return)

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Those that I have examined thus far, fail to have sufficient source because of being to near to the head of a stream, or the stream too small to build up a deposit. On two occasions like at Peyton Creek and near Norfork, Arkansas, the beds seem to have been favorable to stop some ore, yet at both places, erosion has removed the beds fifty feet to a quarter mile, back away from the stream that built them up. This discovery on Peyton Creek, in Van Buren County, about mid-year of 1955, is supposed to be the richest ore of uranium content, found at that date in the State of Arkansas.The bed that the ore was trapped in,is the basal part of the Hale formation of the Pennsylvania age. The mineralized depth is approximately twenty four feet of the Hale sandstone. The ore is confined closely toaa fault zone that crosses Peyton Creek at right angles. This creek has cut through the mineralized bed and is mow twenty feet below same. Erosion has removed all of the mineralized bed on the north side of the creek, and from 20 to 50 feet on the south side, so I consider that up to one-half of the richest ore here has eroded away before civilization came along.

The outcrop of the Hale sandstone runs east and west in a narrow belt from Batesville, Arkansas to the Oklahoma line, and crosses but few streams with a drainage area large enough for a good deposit to be built up.

Our first test will be located on Archey's fork of Little Red River, which has a drainage area bout four times as much as the Peyton Creek drainage.The same bed that the ore is in on the surface in the Peyton Creek deposit, will be close to six hundred feet on our location, and the whole deposit will be intact with none releached out, or erode d away, plus the probability of three times richer ore. The limitations will be the depth in the area, as all beds dip to the south from Peyton Creek on a steeper angle than is common, and in addition two east and west faults in Van Buren County has down-throwed the beds twice in close distance. This is shown on the Carey Croneis structure map in his book entitled, " Geology of the Arkansas Palepzoic Area." published in 1930.

There is sufficient evidence surrounding the Peyton Creek discovery that shows the Hale sandstone member was somewhat favorable in stopping the uranium as it passed down by it, as for several miles from the Peyton Creek outcrop, the same bed shows more radioactivity than it would generally have,considering it to be the original source bed, and wherever a stream has cut through it, you are apt to find it heavier mineralized.

We desire to explore these sites for the geologic probability of making a significant uranium discovery.

Signed Carl Walker
Geologist

Arnold V. Widergren
Applicant

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

[illegible]

(C) (G) [illegible]

(D) [illegible]

(E) [illegible]

(F) [illegible]

[illegible] 8

(A) [illegible]

(B) [illegible]

(C) [illegible]

(D) [illegible]

(E) [illegible]

(F) [illegible]

(G) [illegible]

(H) [illegible]

[illegible]

(A) [illegible]

(B) [illegible]

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

BAXTER COUNTY, ARKANSAS

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(1)

The southeast frl. of Section 19, Township 19 north, Range 14 west, containing 121 acres, and partnof the northeast frl. of Section 30 Township 19 north, Range 14 west, collectively containing 206 acres more or less .

(2)

Part of the south frl. one half of Sec. 11, Township 19 North, Range 15 west; part of the south fractional half, Section 12; west one half of the northwest quarter of Section 13; the north half of the northeast quarter,the north half of the s outheast of the northeast quarter, the s outhwest quarter of the northeast quarter,the northwest quarter of the southeast quarter, the northeast quarter of the southwest quarter, part of the northwest quarter of the southwest quarter, and part of the northwest quarter frl. of Section 14, Township 19 north, Range 15 west, collectively containing 696 acres more or less.

(3)

Part of the southwest quarter of the southwest quarter of Section 18, part of the northwest frl. Section 19, Township 19N, Range 14 west, the south frl. one half of the southwest frl Section 13, part of the southeas t quarter, Section 13, Township 19 north, Range 15 west. the north onehalf of the southwest quarter of the southeast quarter, the east part of the south half of the s outhwest quarter of the southeast quarter, the southeast quarter of the southeast quarter, Section14,Township 19 north, Range 15 west; the east of the northeast frl. Section 23, two parts of the northeast frl, the northeast frl. of the northeast frl. of Section 24, Township 19 north,Range 15 West, collectively containing 343 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

BAXTER COUNTY, ARKANSAS

(1)

The southeast frl. of Section 19, Township 19 north, Range 14 west, containing 121 acres, and part of the northeast frl. of Section 30 Township 19 north, Range 14 west, collectively containing 206 acres more or less .

(2)

Part of the south frl. one half of Sec. 11, Township 19 North, Range 15 west; part of the south fractional half, Section 12; west one half of the northwest quarter of Section 13; the north half of the northeast quarter, the north half of the s outheast of the northeast quarter, the s outhwest quarter of the northeast quarter, the northwest quarter of the southeast quarter, the northeast quarter of the southwest quarter, part of the northwest quarter of the southwest quarter, and part of the northwest quarter frl. of Section 14, Township 19 north, Range 15 west, collectively containing 696 acres more or less.

(3)

Part of the southwest quarter of the southwest quarter of Section 18, part of the northwest frl. Section 19, Township 19N, Range 14 west, the south frl. one half of the southwest frl Section 13, part of the southeas t quarter, Section 13, Township 19 north, Range 15 west, the north onehalf of the southwest quarter of the southeast quarter, the east part of the south half of the s outhwest quarter of the southeast quarter, the southeast quarter of the southeast quarter, Section14,Township 19 north, Range 15 west; the east of the northeast frl. Section 23, two parts of the northeast frl, the northeast frl. of the northeast frl. of Section 24, Township 19 north,Range 15 West, collectively containing 343 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

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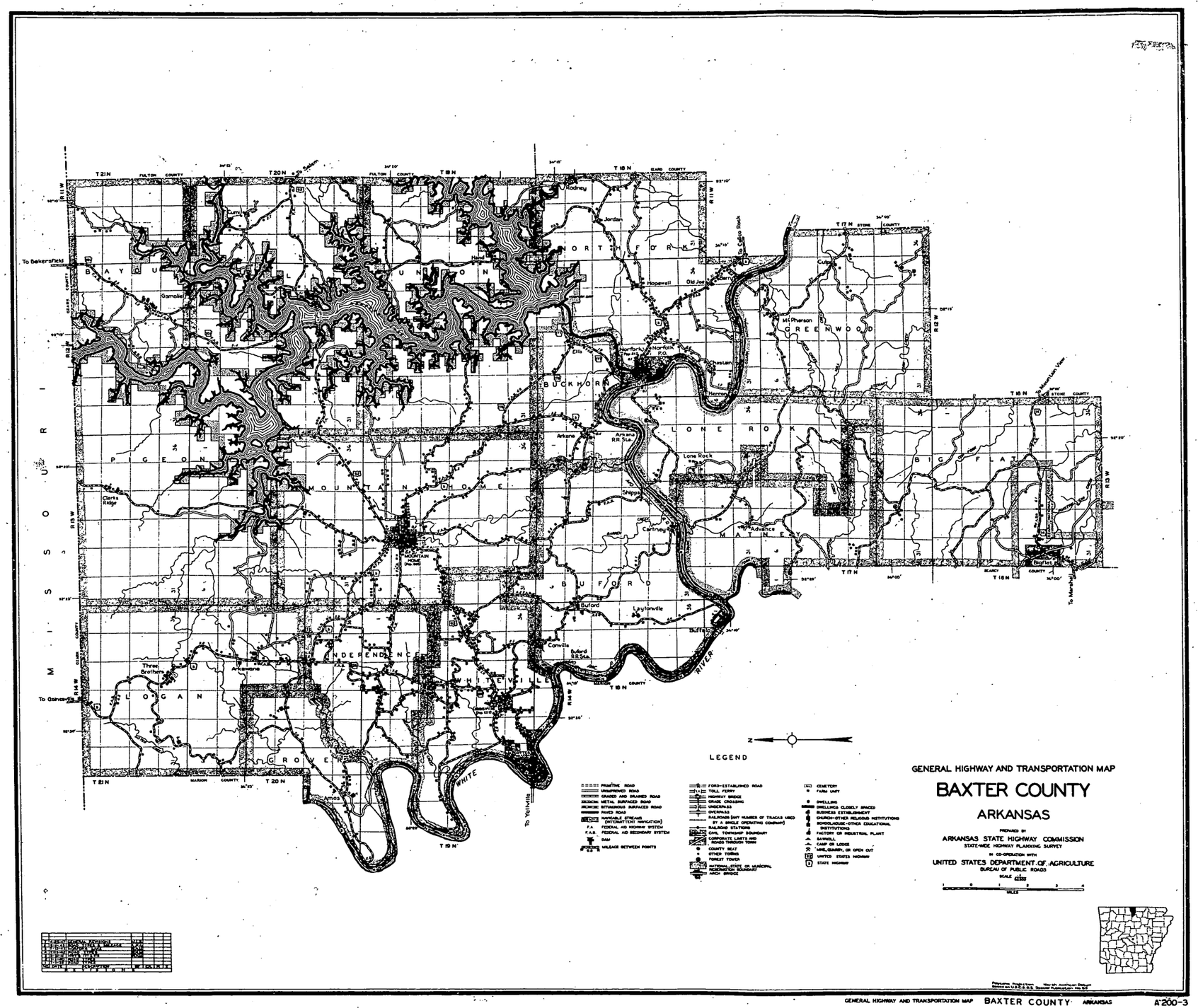

SHEET 3 (a)

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

BOONE COUNTY, ARKANSAS

(1)

South half of the northeast quarter of the southeast quarter containing 20 acres; south part of the northwest quarter of the southeast quarter containing 8 acres; the southwest quarter of the southeast quarter containing 40 acres; a part of the southeast quarter of the southeast quarter containing 15 acres; all in Section 31, Township 19 north, Range 19 West. Also fractional northwest quarter of the northeast quarter in Section 5, Township 18 north, Range 19 west, containing collectively 123 acres more or less,

(2)

The north 25 acres of the northwest quarter of the southwest quarter of Section 32, Township 19, Range 19 ; the southeast quarter of the southeast quarter; the north part of the north half of the southeast quarter; the south part of the north half of the southeast quarter; part of the northeast quarter of the southeast quarter; Section 31, Township 19, Range 19, the southeast quarter of the northeast quarter; the northeast quarter of the northeast quarter fr., of Section 6, Township 18, range 19, and the north half of the southwest quarter and the west 15 acres of the southwest quarter of the northwest quarter of Section 5, Township 18, Range nineteen, containing collectively 265 acres more or less.

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(3)

Beginning at the southeast corner of northwest quarter of the southeast quarter, thence north to a fence at bottom of the hill, then west one quarter to the southwest quarter of the northeast quarter, containing 40 acres more or less. Also three acres more or less in the northwest corner of the southwest quarter of the southeast quarter, described as follows: beginning on the west boundary line of said quarter six feet south of where old rail fence stood, running parallel with old fence in a northeasternly direction to a point on the north boundary line of said forty to a point in the center of Crooked Creek, then following the creek to the west boundary line, then follow west boundary line to the place of beginning, of Section 4, Township 18 North, Range 18 West, containing collectively 23 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Sheet 3 (a)

Legal Description of lands leased for exploration in

MARION COUNTY, ARKANSAS

(1)

The southeast quarter of the southeast quarter, Section 27, Township 20 north Range 15 west, and the northeast quarter of the northeast quarter of Section 34 Township 20 N Range 15 west, containing 80 acres more or less.

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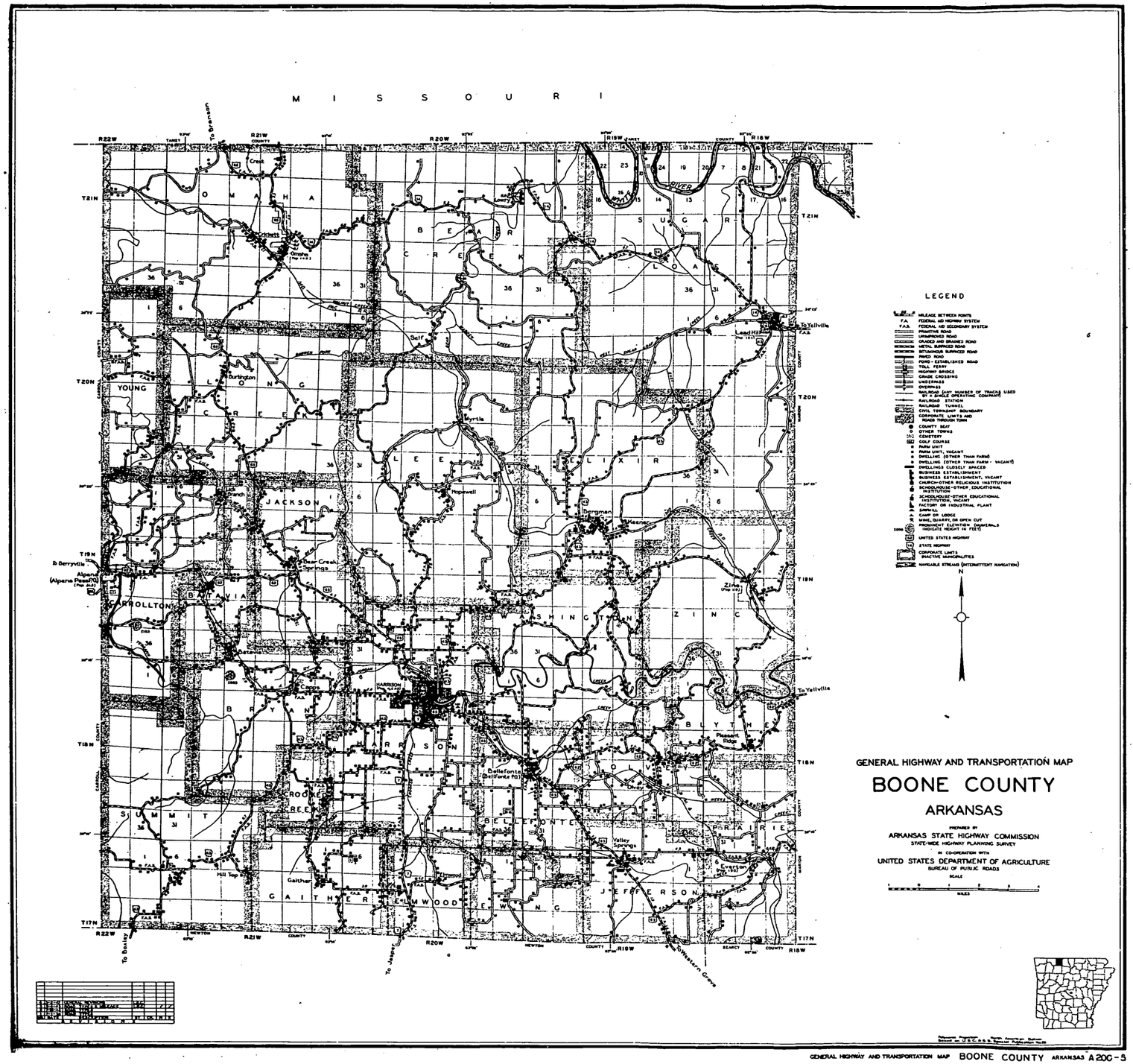

Sheet 3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

IZARD COUNTY, ARKANSAS

(1) The southwest quarter of the northwest quarter of Section 33, Township 17 , Range 10 west, containing 40 acres more or less.

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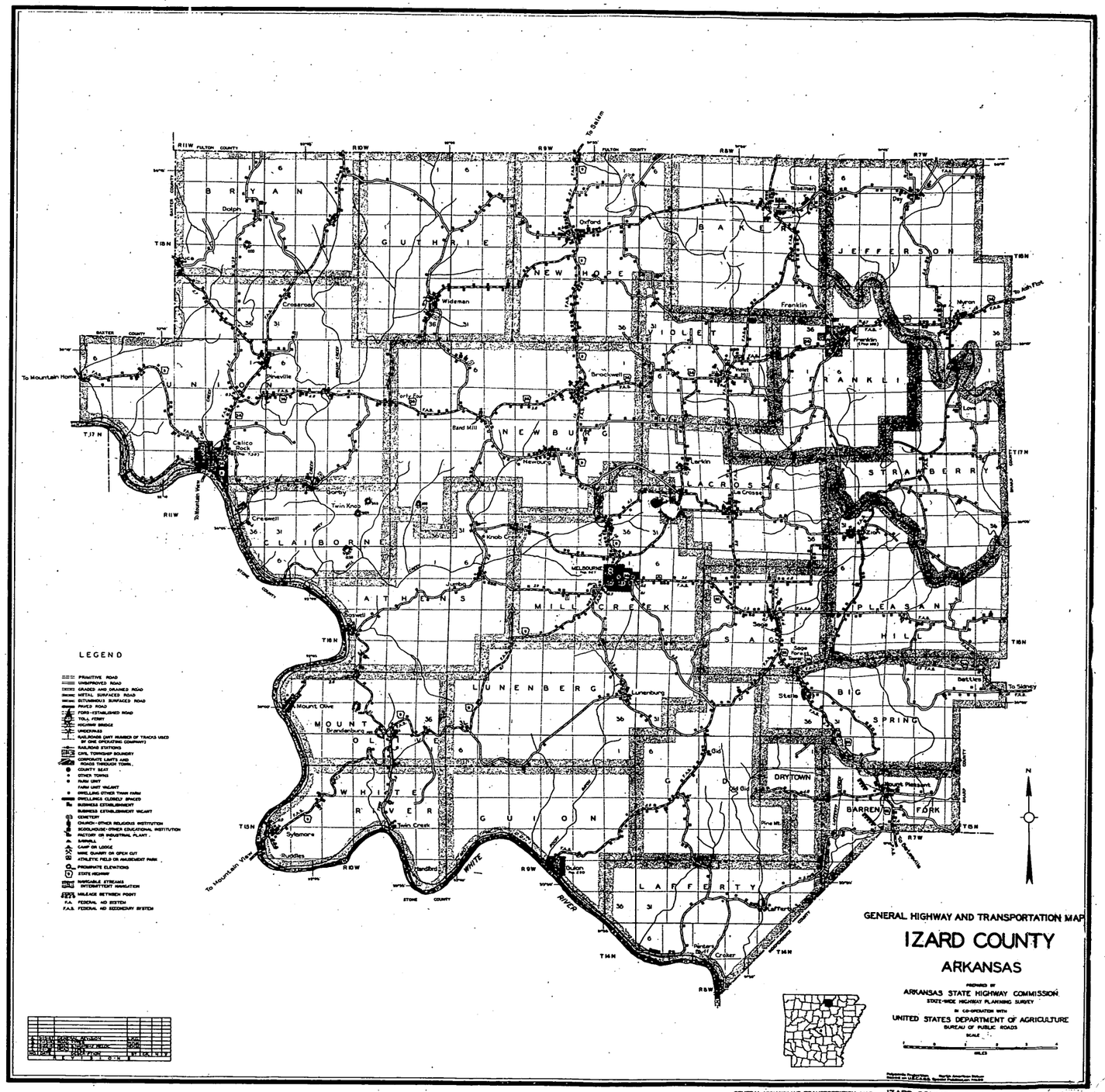

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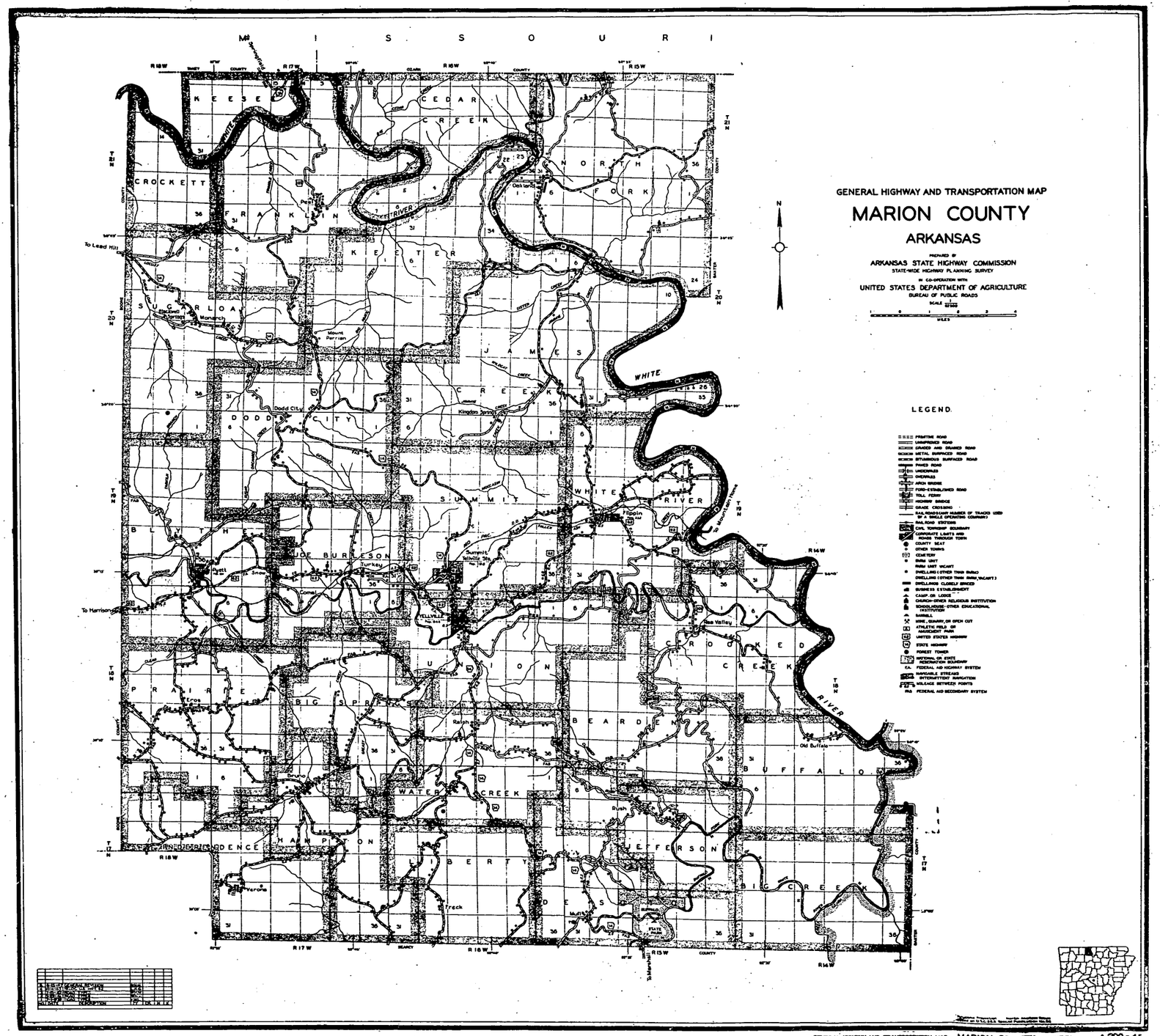

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

(1)

The west 35 acres of the southeast quarter of the northeast quarter, the southwest quarter of the northeast quarter, the southeast quarter of the northwest quarter, the north 30 acres of the northeast quarter of the southwest quarter, the west 20 acres of the northwest quarter of the southeast quarter, the west 35 acres of the southwest quarter of the southeast quarter of Section 12, Township 11 north, Range 14 west and containing 200 acres more or less.

(2)

That part of the southeast quarter of the southwest quarter, Section 24, described as beginning at a point 3.49 chains south of the northeast corner thereof from which point run south 16.51 chains or to the southeast corner of said sub-division, thence west 5.74 chains to a stone, and thence in a northeasternly direction 17.32 chains or to a point of beginning, and containing 5 acres more or less. Also the southwest quarter of the southeast quarter of Section 24, and the west one half of the northeast quarter of Section 25, all in Township 12 north, Range 15 west, and containing 135 acres more or less.

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(3)

The southwest quarter of the northwest quarter, except a lot convoyed to school district No. 11, described as folows, To Wit; Beginning at a point 6.59 chains south of the northwest corner of said forty, thence east 9 rods, thence south 13 rods, thence in a northwesterly direction in a straight line 16 rods to point of beginning. Also except a church lot, described as beginning at a point 9 rods east and 6.50 chains south of the northwest corner of said forty, thence east 4 chains, thence south 2.5 chains, thence west 4 chains, thence north 2.5 chains to the point of beginning. (2) Also a part of the southeast quarter of the southwest quarter, described as follows; Beginning at a point 3.41 chains south of the northeast corner thereof, thence north 3.41 chains to said northeast corner, thence west one-fourth mile, thence south one-fourth mile, thence east 14.36 chains to a stone, thence in a northeasternly direction 17.32 chains to place of beginning. (3) Also the northwest quarter of the southwest quarter, and north one-half of the southwest quarter of the southwest quarter, and part of the northeast quarter of the southwest quarter, described as folows To Wit: Beginning at the southeast corner of said forty, thence north 45 degrees west, to northwest corner of said sub-division, thence south one-fourth mile, thence east one-fourth mile to place of beginning, all in Section 24, Township 12 north, Range 15 west, containing in the aggregate exclusive of exceptions, 153.5 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) Cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

SHEET 2

(4)

The west one-half of the southeast quarter of Section 33, Township 12 north, Range 14 west, and containing 80 acres more or less.

(5)

A part of the southwest quarter of the northeast quarter, Section 22, Township 11 north, Range 14 west, described as beginning at the northeast corner of said sub-division from which point run west 154-1/3 yards, thence south 70 yards, thence east 82-1/6 yards, thence south 380 yards, thence west 82-1/6 yards, to the south line of said sub-division, thence east 154-1/3 yards, and thence north 440 yards to point of beginning, and containing 19 acres more or less.

(6)

That part of the southeast northeast of Section 29 lying south of Little Red River containing 2 acres more or less. That part of the northeast of the southeast of Section 29, lying south and west of Little Red River containing 34 acres more or less, and the southeast of the southeast, Section 29, containing 40 acres more or less. Also the following described lands in Section 28; The south one-half of the southwest quarter, the southwest quarter of the southeast quarter, that part of the northwest of the southwest quarter, containing 8 acres more or less, that part of the northeast of the southwest lying south and east of Little Red River, containing 25 acres more or less, that part of the southeast of the northwest quarter lying south and east of Little Red River containing 15 acres more or less, all in Section above mentioned, Township 11 north, Range 13 west, and containing collectively 242 acres more or less.

(7)

The north one-half of the southeast quarter Section 19, and the north one-half of the southwest quarter of Section 20, and the northeast quarter of the northeast quarter of Section 27, all in Township 12, Range 12, and containing 200 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS Sheet 3

(8)

The northeast quarter of the southwest quarter, the northeast quarter of the northeast quarter, the southeast quarter, Part of the northwest quarter of the southwest quarter, Part of the southeast quarter of the northwest quarter, Part of the southwest quarter of the northeast quarter, part of the southeast quarter of the northeast quarter, Section 21, Township 12 north, Range 13 west. The west half of Section 22, Township 12 north, Range 13 west. The south half of the northeast quarter, The northwest quarter of the northeast quarter, the northwest quarter, Section 27, Township 12 north, Range 13 west. Part of the northeast quarter of the northeast quarter, Part of the northwest quarter of the northeast quarter, Part of the southwest quarter of the northeast quarter, Section 25, Township 12 north, Range 13 west, collectively containing 947 acres more or less.

(9)

All that part of the north half of the southwest quarter of section 2, lying south and east of Little Red River, also all that part of the southeast quarter of the northwest quarter of Section 3 lying south and east of Little Red River in Township 10 north, Range 13 west, of the fifth principal meridian, also all that part of the west half of the northwest quarter of Section 3 lying south and west of Little Red River; all that part of the north-half of the southwest quarter of Section 3 lying south and west of Little Red River, also that part of the north half of the southeast quarter of Section 3 lying south of Little Red River in Township 10 north, Range 13 west of the fifth principal meridian, also the west one-half of the northeast quarter of Section 4, The southeast quarter of the northeast quarter of Section 4, the northeast quarter of the northwest quarter of Section 4, The northwest quarter of the southeast quarter of Section 4, The northeast quarter of the northeast quarter of Section 4, The northeast quarter of the southeast quarter of Section 4, Township 10 north, Range 13 west of the fifth principal meridian; also the south half of the southeast quarter of Section 33, and all that part of the northwest quarter of the southeast quarter of section 33 lying west of Little Red River in Township 11 north, Range 13 west of the fifth principal meridian, also the s outhwest quarter of the southwest quarter west of the Little Red River of Section 34, Township 11 north, Range 13 west of the fifth principal meridian. Subject to all public and private roadways or easements as now located.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

3 (a) cont.

LEGAL DESCRIPTION OF LANDS LEASED FOR EXPLORATION IN

VAN BUREN COUNTY, ARKANSAS

Sheet 4

(10)

The north half of the southwest quarter of Section 3; the northeast quarter of the southeast quarter, the southeast quarter of the northeast quarter, and the west half of the northeast quarter of Section 4; A part of the southwest quarter of the southwest quarter of Section 3, and a part of the southeast quarter of the southeast quarter of Section 4 described as follows: Beginning at a point 3.80 chains west of the northeast corner of the southwest quarter of the southwest quarter of Section 3, and run thence south 11 chains, thence west 4.50 chains, or to base of hill, thence in a northwesterly direction with base of hill to a point 6.24 chains south of the north boundary line of said southwest quarter of the southwest quarter, thence south 75 degrees west 25 chains, or to west side of the southeast quarter of the southeast quarter, Section 4, thence north to the northwest corner of the southeast quarter of the southeast quarter of said section 4, and thence east to point of beginning, all in Township 11 north, Range 14 west, and containing in the aggregate 274 acres more or less.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

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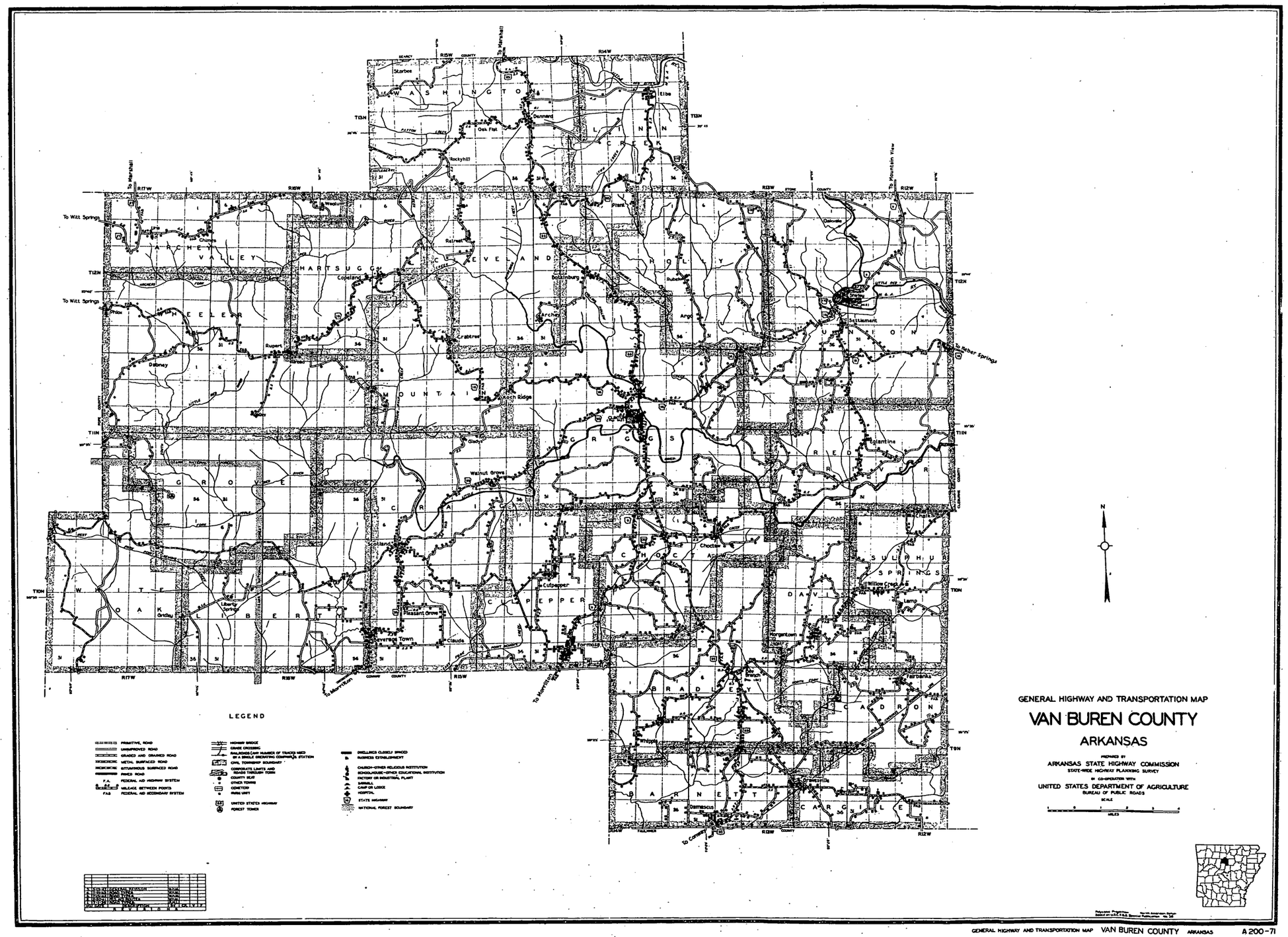


3 (D)

MINERAL AND ORE LEASE

RECEIVED JUL 16 1956

This agreement, made and entered into the.....day of....., 19....., by and between

.....

hereinafter called lessor, (whether one or more) and Arnold V. Widergren, 907 North Webster St. Hastings, Nebraska hereinafter called lessee.

WITNESSETH:

1. Lessor, for and in consideration of..... ONE DOLLAR ..... cash in hand paid, the receipt of which is hereby acknowledegd, and of the royalties herein provided for, and of the covenants and agreements hereinafter contained, has demised, granted, leased, and let and by these presents do demise, grant, lease, and let, exclusively unto the said Lessee the land hereinafter described, with the sole and exclusive right to the Lessee to do geological, geophysical and electrical work, investigate, sample, test, explore, prospect, mine, drill for, produce, extract, process, take, treat, care for and remove other minerals whether similar or dissimilar and to store same upon said land during the term hereinafter provided, with the right of entry therein at all times, and to construct, erect, maintain, use, repair and replace thereon and to remove therefrom all storage tanks, buildings, pumps, shafts, hoists, machines, pump stations, boilers, engines, telephone and telegraph lines, roads, bridges, canals, basins, terminals, docks, power houses, pressure maintenance and treating plants or other plants, residences, offices, shops, machinery, equipment and fixtures for drilling, mining, processing, producing, storing, treating and caring for such products, housing its employees and any and all other rights and privileges necessary, incident to or convenient for the economical operation of said land and adjoining or neighboring lands operated by Lessee, its affiliates or subsidiaries for the production of uranium or other minerals, whether similar or dissimilar. The possession of said land by Lessee shall be sole and exclusive, excepting only that Lessor reserves the right to occupy said land or to lease the same for grazing, agricultural or horicultural uses, which shall be carried on subject to, and with no interference with the rights or operations of the Lessee. Lessee shall have the right at any time, or within one year after termination of this lease, to remove any or all of above mentioned items placed on said premises.

The land which is the subject of this lease is situated in the County of....., State of.....,

and more particularly described as follows, to-wit:.....

of Section..... Township..... Range.....and containing.....acres more or less.

2. For the purpose of determining the amount of any money payment hereunder, said land shall be considered to comprise.....acres, even though it actually comprises more or less, but it is Lessor's intention to lease, and Lessor does hereby demise, grant, lease, and let, in addition to the land above described, all of the land and interests in land owned or claimed by Lessor adjoining the above described land whether owned or claimed by inheritance, deed, gift, limitation or otherwise, and Lessor expressly agrees to deliver to Lessee any supplemental instrument deemed necessary or required by Lessee for more complete or accurate description of the land and interests thus intended to be leased herewith.

3. It is agreed that this lease shall remain in force for a term of TEN YEARS from date hereof (herein called "primary term"), and as long thereafter as uranium, or other minerals whether similar or dissimilar, or any of them is produced from said land, or the Lessee's obligations in lieu of production thereof are fulfilled, or drilling or other operations are continued by Lessee as provided for herein. Notwithstanding anything in this lease contained to the contrary, it is expressly agreed and covenanted that if the lessee shall commence drilling or mining at any time while this lease is in force, this lease shall remain in force and effect, and the term and life shall continue as to the entire acreage described herein, so long as such operations are prosecuted, and if production results from such operations, then as long thereafter as such production continues.

4. This lease shall be subject to all federal and state laws, executive orders, rules or regulations, and to all orders, rules, regulations or recommendations of all federal or state officers, agencies, boards, commissions or committees which in any way directly or indirectly, relate to or affect performance of any of the express or implied covenants of this lease, and this lease shall not be forfeited or terminated in whole or in part, nor shall lessee be liable in damages, for failure to comply with any of the express or implied covenants of this lease, if such compliance is prevented by, or if such failure results from compliance with any such law, order, rule, regulation or recommendation.

5. Lessor agrees, covenants and warrants, as follows:

5A. To defend the title to the lands herein described, and agrees that the Lessee shall have the right at any time to redeem for Lessor by payment, any mortgage, taxes or other liens on the above described lands, in the event of default of payment by Lessor, and be subrogated to the rights of the holder thereof. In case of payment of any such mortgage, taxes or other liens by Lessee, in addition to the right of subrogation herein granted, Lessee shall also have the right to retain any royalties, or other payments which may become due Lessor hereunder and to repay itself therefrom, and the rentention of such royalties or other payments by Lesee shall have the same effect as if paid to the Lessor in whose behalf payment of any mortgage, taxes or other liens was made. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in said land less than the entire fee simple estate, then the royalties or other payments herein provided shall be paid Lessor only in the proportion which Lessor's interest bears to the whole and undivided fee. In the event Lessor's title is disputed by suit or otherwise, Lessee shall have the right to withhold payment of rentals and royalties or to deposit same in the registry of Court until final determination of Lessor's rights, and during such period each and every obligation imposed by this lease shall stand suspended and the time consumed shall not be counted against Lessee. If ten or more parties become entitled to royalty or other payments hereunder, Lessee may withhold payment thereof until furnished with a recordable instrument executed by all such parties designating an agent to receive payment for all. The privilege to Lessee to issue liens on Lessee's interest of the property, or any production thereof is hereby expressly given.

Note consent to lien.

5B. To pay Lessor's proportionate part of any taxes assessed or levied by the State in which said lands are located or any subdivision thereof, or by the Federal Government against the uranium or other ores and/or concentrates produced from the lands covered hereby.

5C. The privilege of assigning in whole or in part is hereby expressly allowed, and if the estate of either party hereto is assigned, the covenants hereof shall extend to their heirs, executors, administrators, successors, and assigns, but no change in the ownership of the land or assignments of royalties or other payments shall be binding on the Lessee until after the Lessee has been furnished with a certified copy of a recorded assignment or deed evidencing such change in ownership thereof; and it is hereby agreed in the event Lessee shall assign a part or parts of the above described lands and the Assignee or Assignees of such part or parts shall fail or make default in any requirement of this lease or in the payment of the proportionate part of any royalties, rentals, or other payments due from said Assignees, such default shall not operate to defeat or affect this lease insofar as it covers the parts of said land with respect to which all the requirements of this lease shall have been fulfilled and the rentals or other payments have been paid. No assignment hereunder shall be construed to enlarge or multiply the obligations of the Lessee under this lease and Lessee may continue to operate the leased premises and pay and settle royalties therefrom as an entirety and the mineral ownership shall be consolidated and automatically spread over this entire lease in the proportion which each interest owned bears to the total acreage. This commencement of drilling operations and the prosecution thereof or the production of minerals, or the making of the payments in lieu of such production, either by the Lessee or any Assignee hereunder, shall cause this lease, as a whole, to remain in full force and effect. In the event any part of the land herein leased is now, or by assignment or otherwise hereafter becomes segregated from any other part, commencement of operations, and/or the production of minerals on any part of the above land shall retain and hold under this lease all tracts of said land whether segregated or not.

5D. That all ores mined from the lands covered hereby may be cleaned and prepared for market on this or other lands within or without the local area within which the lands covered hereby are located, as may be deemed desirable by Lessee, as an independent operation, or in a mill or mills in which other ores are being treated, commonly referred to as a central concentrating plant and that such plant or plants may be located on these lands, with the right to treat ores from other lands therein. If said central concentrating plant shall be equipped with automatic weighing and sampling devices, then such ores shall be weighed, assayed, treated, handled and concentrates determined, sold and accounted for in the manner which is now or may hereafter be established as standard method and practice thereat. If said central plant shall not be equipped with automatic weighing and sampling devices, then the ores mined from the lands covered hereby shall not be commingled with ores from other lands before or during milling, nor shall any concentrates recovered therefrom be commingled with the concentrates recovered from ores from other lands, and said concentrates shall be sold and accounted for separately from any other concentrates.

5E. If ores mined and raised from the lands herein leased are treated and cleaned at a central concentrating plant, whether located on this or other lands, separately or with other ores, as above provided, the tailings, sands, rock and other by-products resulting from the treatment of said ores shall thereupon become the sole property of and belong to the owner of the land upon which same are deposited by Lessee; that is to say, if ores and rock from the lands covered hereby are milled on other lands the tailings, rock and other by-products resulting therefrom shall belong to the owner of such other lands or the lands upon which same are deposited, and if ores and rock from this or other lands are milled upon the lands covered hereby all such materials shall belong to Lessor, provided however Lessee shall at all times during the life of this lease have the right to remill said tailings and other by-product materials, and during the period of such remilling operation Lessee shall be relieved from the obligation to conduct drilling or mining operations.

5F. That Lessee may, at any time and/or from time to time, execute and deliver to Lessor or to the depository herein named or place of record a release or releases covering any portion or portions of the above described premises and thereby surrender this lease as to such portion or portions and be relieved of all obligations as to the acreage surrendered, and thereafter the rentals payable hereunder shall be reduced in the proportion that the acreage covered hereby is reduced by said release or releases. The failure or refusal of any party herein named as one of the Lessors or of any other party owning an interest in the lands above described to execute this agreement or the failure of title to any portion of said lands, whether by foreclosure or otherwise, shall in no manner affect the validity or effectiveness of this agreement, which shall cover and and apply to the tract or tracts of land hereinabove described in so far as and to the extent that such tract or tracts are owned from time to time by the parties so executing, their heirs, successors and assigns; and in case of any such failure or refusal to execute or failure of title, the rentals and royalties payable hereunder shall be adjusted accordingly.

5G. That Lessee may at any time, if he desires to do so, pay all royalties or rentals then due, surrender and terminate this lease by giving seven days' written notice and thereupon shall be relieved from all obligations hereunder with like effect as if this lease had not been made, by executing and recording at lessee's expense a proper release of this mining lease.

6. In consideration of the premises the said Lessee covenants and agrees as follows:

6A. To commence prospecting, drilling, and/or mining operations on said land herein described within.....year.... from date hereof.

6B. To pay as rent or royalty to the Lessor, ten per cent of the market value of all ores mined and sold, to be paid from the receipts of the preceding month, on or before the tenth of each month. This payment shall be paid or tendered unto the Lessor, or to the Lessor's credit in the

..... Bank of..... .....or successors.

6C. Statement showing amount and kind of ore sold, the weight thereof, to whom sold, and the price received for same, shall be furnished Lessor.

6D. To keep records of all transfers of this lease, or part or parts thereof, and a correct account of minerals mined, the kind and weight thereof, to whom sold, and the price received. These reports shall be open for inspection to the Lessor at reasonable times.

6E. To pay for damage, caused by operation to growing crops on said land, per crop market value.

6F. To mine said land in a miner-like and workman-like manner, when commenced, shall be carried on in good faith continuously, except for unavoidable accidents, strikes, or other conditions beyond the control of the Lessee, and/or for as long a period as may be necessary, in the event that the market price of the ore produced does not provide a necessary profit for said Lessee.

6G. If, at the expiration of.....year.... from the date hereof no Uranium, or other minerals, or any of them, is being produced by the Lessee under the terms hereof, or if Lessee has not, or is not then engaged in drilling operations under the terms hereof, this lease shall then terminate as to both parties, unless Lessee on or before said date shall pay or tender to Lessor or to the credit of Lessor in the

.....Bank at ....

(which bank is Lessor's Agent), the sum of.....Dollars ($.....) (hereinafter called rental) which shall extend for twelve months the time within which drilling or mining operations may be commenced or resumed hereunder. Thereafter, annually, in like manner and upon like payments or tenders the commencement or resumption of drilling or mining operations may be further deferred for periods of twelve months during the primary term. The payments or tenders of rentals may be made by check or draft of Lessee, mailed or delivered to Lessor, or to said bank, on or before such date of payment. Notwithstanding any devolution, change or division in the ownership of said land, the payments or tenders of rentals in the manner herein provided shall be binding on Lessor and the successors, assigns or legal representatives of Lessor. If such successor bank should fail, liquidate or be succeeded by another bank or should refuse to accept such payment or tenders and credit the account of Lessor, Lessee shall not be held in default for failure to make such payments or tenders until thirty days after Lessor shall deliver to Lessee an instrument in writing, duly executed and acknowledged, naming another bank as agent to receive such payments or tenders. Any charge or fee made by said bank for accepting and crediting Lessor with the payments or tenders made by Lessee, shall be borne by Lessor and said bank may deduct such fees or charges from the rental payments made hereunder, crediting the balance thereof to the account of Lessor. It is agreed that the down cash payment is adequate consideration for this lease according to its terms and shall not be allocated as mere rental for a period.

7. The obligations hereinabove mentioned, as well as all implied obligations hereunder, are agreed to be covenants and not conditions or limitations and the breach of same, in whole or in part, will not work a forefeiture, abandonment or termination of this lease, or cause a termination or reversion of the estate created by this lease, except those specifically required hereinabove to extend the primary term hereof. In the event it should be determined that any sentence, phrase, clause, paragraph or provision of this lease is void or unenforceable for any reason whatsoever it is expressly agreed that this shall not affect the validity of the remainder of this agreement, but this lease shall stand in full force and effect to the same extent as if such sentence, phrase, clause, paragraph or provision had not been included herein.

8. And I..... wife of the said ..... for and in consideration of the said sum of money, paid as a consideration for the foregoing, do hereby release and relinquish unto and in favor of the said [redacted] all my rights of dower and homestead in and to the above described land to the extent of the rights hereinabove set forth.

9. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, legal representatives and assigns of the parties hereto.

IN TESTIMONY WHEREOF, we sign, this the.....day of....., A. D. 19.....

WITNESSES:

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

..... } .....(Seal)
.....

ACKNOWLEDGMENTS

(UNMARRIED PERSON)

STATE OF..... } ss.
COUNTY OF.....

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, ...

to me well known to be the person whose name appears as lessor in the foregoing instrument, and stated that .....he..... had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this..... day of....., 19.....
My Commission Expires:

....., 19..... .....
(SEAL) Notary Public

(HUSBAND AND WIFE)

STATE OF..... } ss.
COUNTY OF.....

On this day personally appeared before the undersigned, a Notary Public in and for the county and state aforesaid, duly qualified, commissioned and acting, ...
to me well known to be the persons whose names appear as lessors in the foregoing instrument, and stated that they had executed the same for the consideration, uses, and purposes therein mentioned and set forth.

And on the same day also voluntarily appeared before me in person the said wife of the said.....
to me well known, and, in the absence of her said husband...., declared that she had, of her own free will, executed the foregoing instrument and signed and sealed the relinquishment of dower and homestead therein expressed, for the purposes and consideration therein contained and set forth, without compulsion or undue influence of her said husband.

IN WITNESS WHEREOF, I have hereunto set my hand and seal as such Notary Public on this..... day of....., 19.....
My Commission Expires:

....., 19..... .....
(SEAL) Notary Public

No.....

MINERAL AND ORE LEASE

FROM

.....

TO

.....

.....

Date..... 19.....
Section..... Twp..... Rge.....
No. of Acres..... Term.....
..... County.....

.....

.....

STATE OF..... } ss.
County of.....

This instrument was filed for record on the
.....day of..... 19.....
at..... o'clock....M., and duly recorded
in Book..... Page..... of
the records of this office.

..... Circuit Clerk and Recorder
By .....

When recorded, return to.....

.....

.....

TRIBUNE GRAPHIC ARTS, HASTINGS, NEBRASKA

CERTIFICATE OF RECORD

STATE OF ..... } ss.
County of .....

I, ...Circuit Clerk and Ex-Officio Recorder for the county aforesaid, do hereby certify that the annexed and foregoing Mineral and Oil Lease was filed for record in my office on the..... day of..... A. D., 19..... , at.....o'clock.....M., and the same is now duly recorded, with the acknowledgments and certificates thereon, in "Record Book.....," Page.....

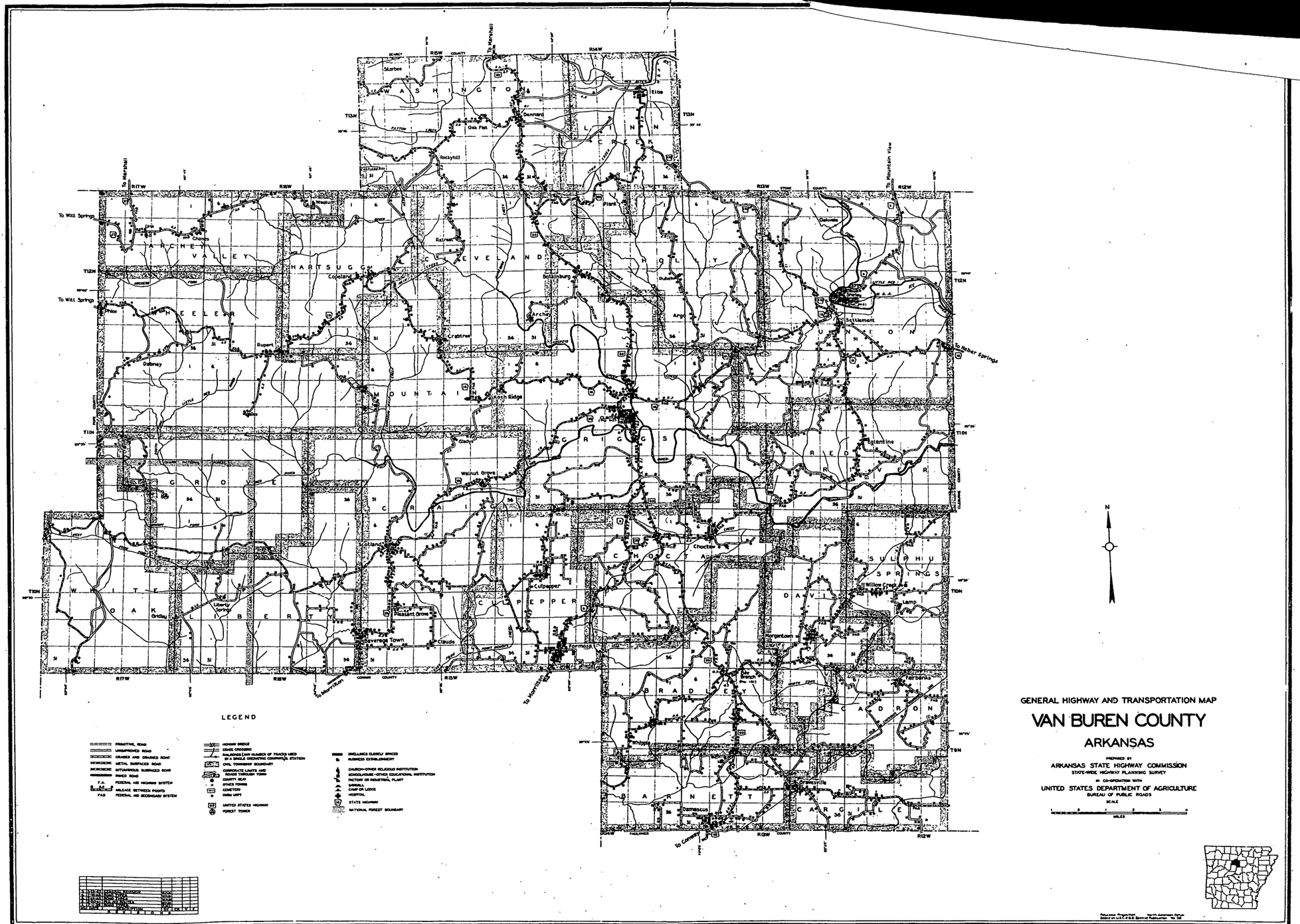
IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said court, this..... day of....., 19.....

.....
Circuit Clerk and Ex-Officio Recorder.

By....., D. C.

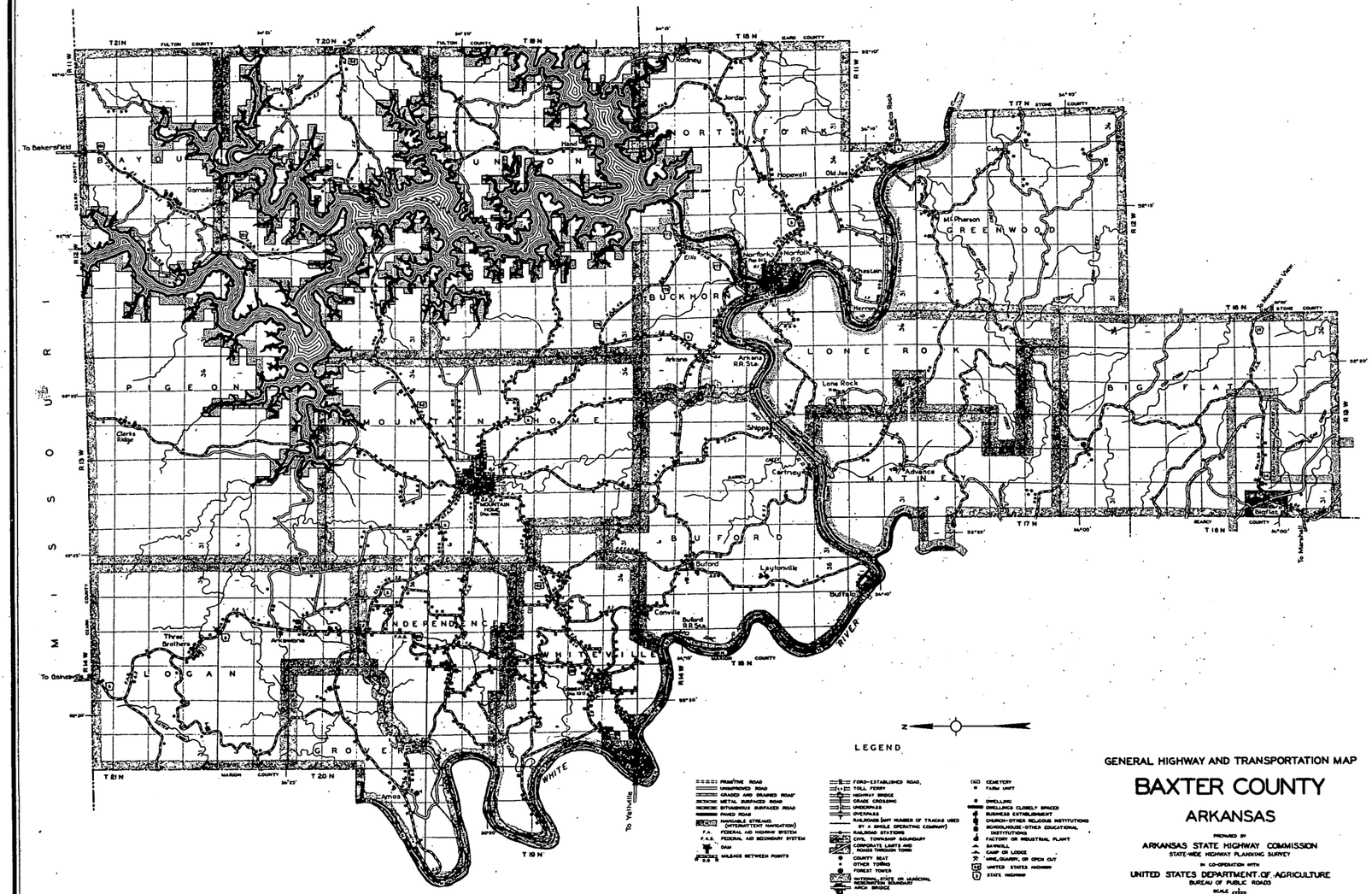
Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

RECEIVED
JUL 16 1955



Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska

RECEIVED
JUL 16 1956



LEGEND

- PRIMITIVE ROAD
- UNIMPROVED ROAD
- GRADED AND DRAINED ROAD
- MODERN METAL SURFACED ROAD
- MODERN BITUMINOUS SURFACED ROAD
- PAVED ROAD
- NAVIGABLE STREAMS (WITHOUT FEDERAL NAVIGATION)
- F.A. FEDERAL AID HIGHWAY SYSTEM
- F.A.S. FEDERAL AID SECONDARY SYSTEM
- DAM
- 0.0 MILEAGE BETWEEN POINTS
- FORD-ESTABLISHED ROAD
- TOLL FERRY
- HIGHWAY BRIDGE
- GRADE CROSSING
- UNDERPASS
- OVERPASS
- RAILROADS (ANY NUMBER OF TRACKS USED BY A SINGLE OPERATING COMPANY)
- RAILROAD STATIONS
- CIVIL TOWNSHIP BOUNDARY
- CORPORATE LIMITS AND ROADS THROUGH TOWN
- COUNTY SEAT
- OTHER TOWNS
- FOREST TOWER
- NATIONAL, STATE OR MUNICIPAL RESERVATION BOUNDARY
- ARCH BRIDGE
- CEMETERY
- FARM UNIT
- DWELLING
- DWELLINGS CLOSELY SPACED
- BUSINESS ESTABLISHMENT
- CHURCH-OTHER RELIGIOUS INSTITUTIONS
- SCHOOLHOUSE-OTHER EDUCATIONAL INSTITUTIONS
- FACTORY OR INDUSTRIAL PLANT
- SAWMILL
- CAMP OR LODGE
- MINE, QUARRY, OR OPEN CUT
- UNITED STATES HIGHWAY
- STATE HIGHWAY

GENERAL HIGHWAY AND TRANSPORTATION MAP

BAXTER COUNTY

ARKANSAS

PREPARED BY
ARKANSAS STATE HIGHWAY COMMISSION
STATE-WIDE HIGHWAY PLANNING SURVEY
IN CO-OPERATION WITH
UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS

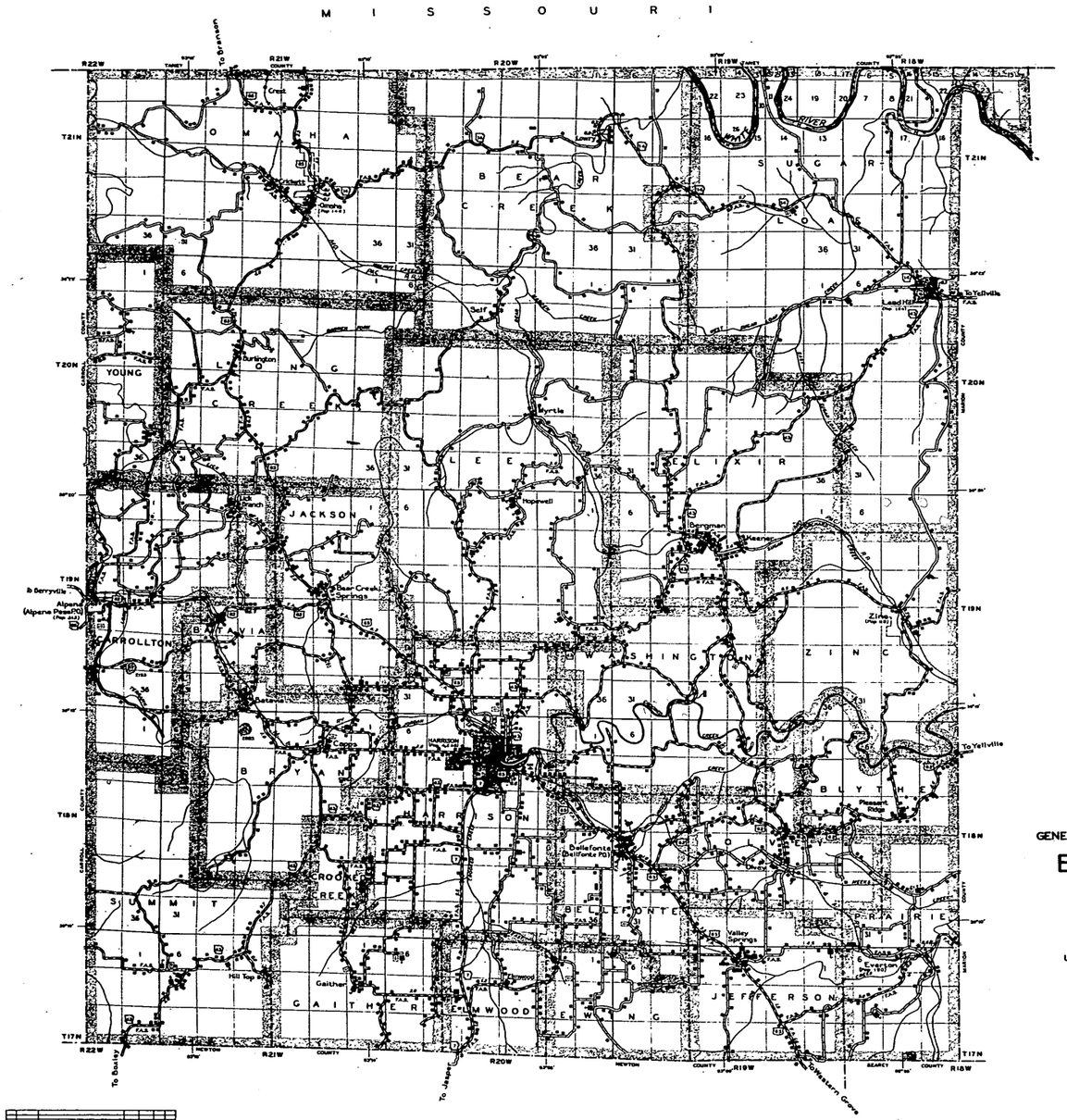
SCALE 1/125000

1 0 1 2 3 4
MILES

1-27-51	GENERAL REVISION	
1-15-52	GENERAL REVISION	
1-15-53	GENERAL REVISION	
1-15-54	GENERAL REVISION	
1-15-55	GENERAL REVISION	
1-15-56	GENERAL REVISION	
NO. DATE	DESCRIPTION	BY

Polyconic Projection Used
Based on U.S.C.&G.S. Special Publication No. 94
North American Datum

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska



LEGEND

- MILEAGE BETWEEN POINTS
- F.A. FEDERAL AID HIGHWAY SYSTEM
- F.A.S. FEDERAL AID SECONDARY SYSTEM
- PRIMITIVE ROAD
- UNIMPROVED ROAD
- GRADED AND DRAINED ROAD
- METAL SURFACED ROAD
- BITUMINOUS SURFACED ROAD
- PAVED ROAD
- FORD - ESTABLISHED ROAD
- TOLL FERRY
- HIGHWAY BRIDGE
- GRADE CROSSING
- UNDERPASS
- OVERPASS
- RAILROAD (ANY NUMBER OF TRACKS) USED BY ALL RAILROADS (WHETHER CONTINUOUS OR NOT)
- RAILROAD TUNNEL
- CIVIL TOWNSHIP BOUNDARY
- CORPORATE LIMITS AND ROADS THROUGH TOWN
- COUNTY SEAT
- OTHER TOWNS
- CEMETERY
- GOLF COURSE
- FARM UNIT
- FARM UNIT, VACANT
- DWELLING (OTHER THAN FARM)
- DWELLING (OTHER THAN FARM - VACANT)
- DWELLINGS CLOSELY SPACED
- BUSINESS ESTABLISHMENT
- BUSINESS ESTABLISHMENT, VACANT
- CHURCH-OTHER RELIGIOUS INSTITUTION
- SCHOOLHOUSE-OTHER EDUCATIONAL INSTITUTION
- SCHOOLHOUSE-OTHER EDUCATIONAL INSTITUTION, VACANT
- FACTORY OR INDUSTRIAL PLANT
- MINE
- CAMP OR LODGE
- MINE, QUARRY, OR OPEN CUT
- MONUMENT ELEVATION (NUMERALS INDICATE HEIGHT IN FEET)
- UNITED STATES HIGHWAY
- STATE HIGHWAY
- CORPORATE LIMITS INACTIVE MUNICIPALITIES
- NAVIGABLE STREAMS (INTERMITTENT NAVIGATION)

N

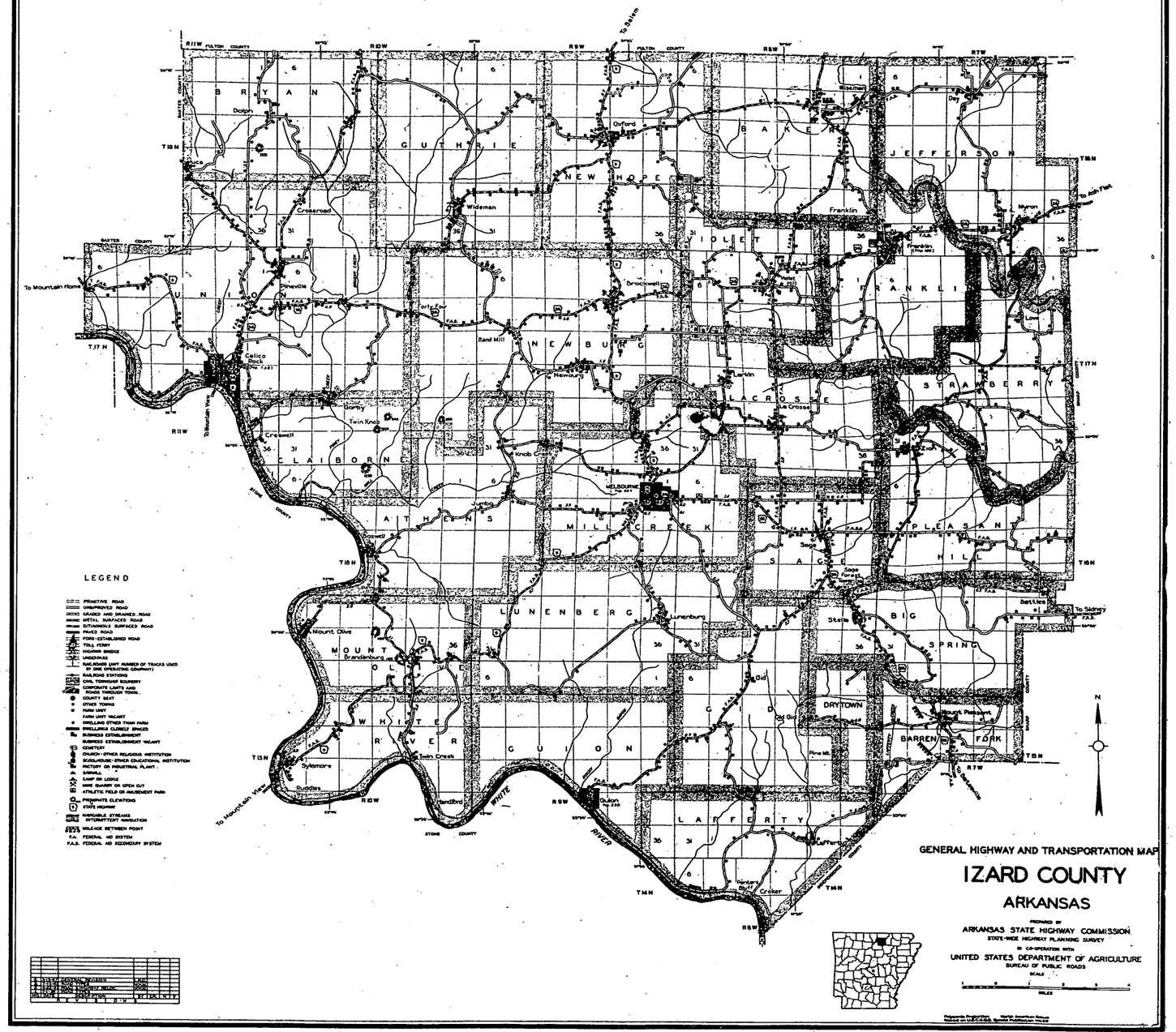
GENERAL HIGHWAY AND TRANSPORTATION MAP
BOONE COUNTY
ARKANSAS

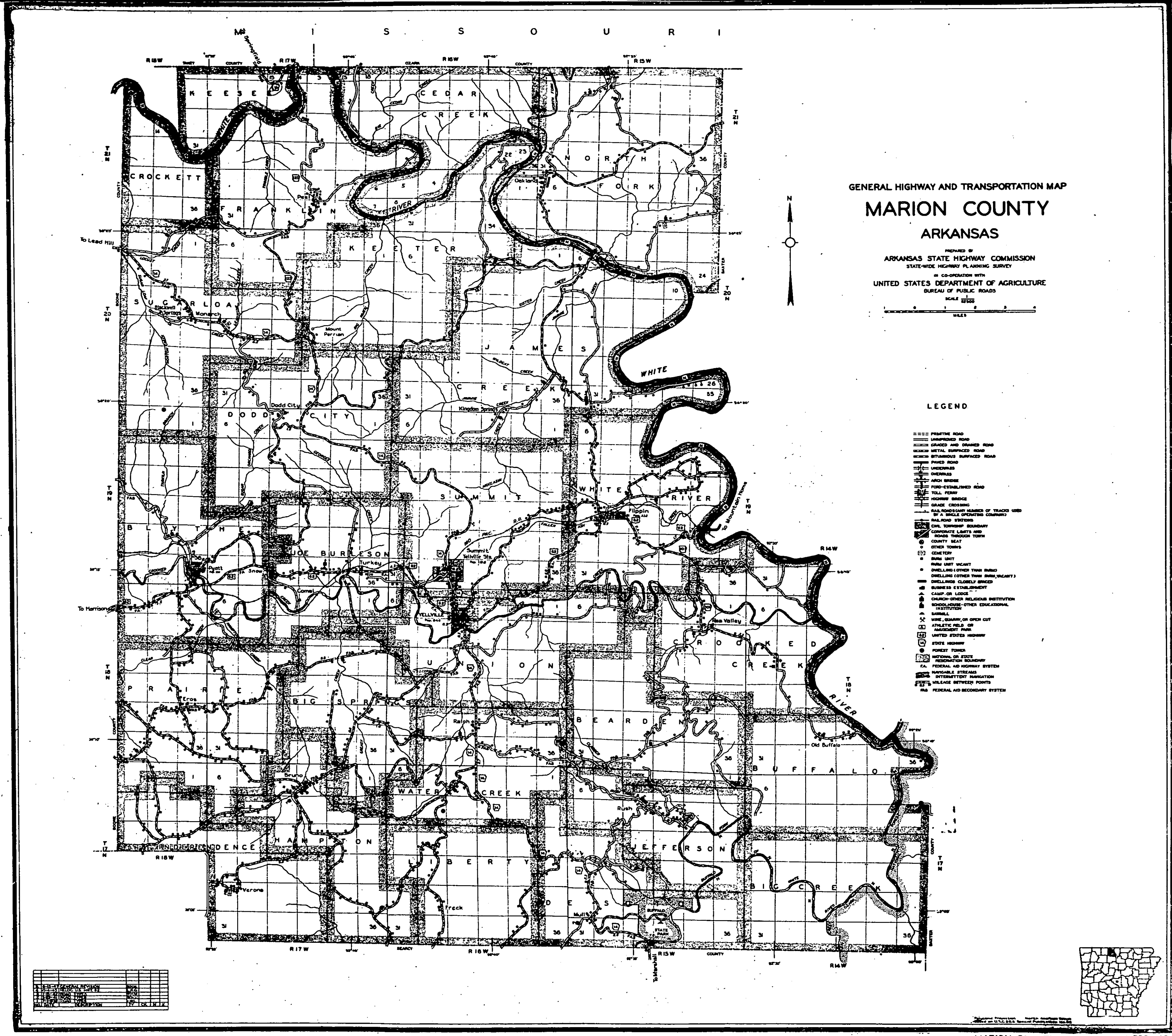
PREPARED BY
ARKANSAS STATE HIGHWAY COMMISSION
STATE-WIDE HIGHWAY PLANNING SURVEY
IN CO-OPERATION WITH
UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS

SCALE
1 0 1 2 3 4
MILES

Publication Production
Bureau of Public Roads, Region Information Services
Department of H.E.W. & Department of Commerce, Washington, D.C.

Arnold V. Widergren
907 North Webster St.
Hastings, Nebraska




GENERAL HIGHWAY AND TRANSPORTATION MAP
MARION COUNTY
ARKANSAS
PREPARED BY
ARKANSAS STATE HIGHWAY COMMISSION
STATE-WIDE HIGHWAY PLANNING SURVEY
IN CO-OPERATION WITH
UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
MILES
N
LEGEND
PRIMITIVE ROAD
UNIMPROVED ROAD
GRADED AND DRAINED ROAD
METAL SURFACED ROAD
BITUMINOUS SURFACED ROAD
PAVED ROAD
UNDERPASS
OVERPASS
ARCH BRIDGE
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HIGHWAY BRIDGE
GRADE CROSSING
RAILROADS (ANY NUMBER OF TRACKS USED BY A SINGLE OPERATING COMPANY)
RAILROAD STATIONS
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CORPORATE LIMITS AND ROADS THROUGH TOWN
COUNTY SEAT
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FARM UNIT
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DWELLING (OTHER THAN FARM)
DWELLING (OTHER THAN FARM, VACANT)
DWELLINGS CLOSELY SPACED
BUSINESS ESTABLISHMENT
CAMP OR LODGE
CHURCH-OTHER RELIGIOUS INSTITUTION
SCHOOLHOUSE-OTHER EDUCATIONAL INSTITUTION
SAWMILL
MINE, QUARRY, OR OPEN CUT
ATHLETIC FIELD OR AMUSEMENT PARK
UNITED STATES HIGHWAY
STATE HIGHWAY
FOREST TOWER
NATIONAL OR STATE RESERVATION BOUNDARY
FEDERAL AID HIGHWAY SYSTEM
NAVIGABLE STREAMS
INTERMITTENT NAVIGATION
MILEAGE BETWEEN POINTS
FEDERAL AID SECONDARY SYSTEM
MISSOURI
R 18 W
R 17 W
R 16 W
R 15 W
R 14 W
T 21 N
T 20 N
T 19 N
T 18 N
T 17 N
TANEY COUNTY
OZARK COUNTY
BOONE COUNTY
BAXTER COUNTY
SEARCY COUNTY
KEESEE
CEDAR CREEK
CROCKETT
FRANKLIN
NORTH FORK
KEETER
SUGARLOAF
JAMES CREEK
DODD CITY
SUMMIT
WHITE RIVER
BLYTHE
JOE BURLESON
UNION
CROOKED CREEK
PRAIRIE
BIG SPRINGS
BEARDEN
BUFFALO
WATER CREEK
HAMPTON
INDEPENDENCE
LIBERTY
JEFFERSON
DES
BIG CREEK
WHITE RIVER
To Springfield
To Lead Hill
To Harrison
To Mountain Home
To Marshall
Oakland
Peel
Blackwell Springs
Monarch
Mount Perrian
Dodd City
Kingdom Springs
Flippin
Summit
Yellville Sta.
Pyatt
Snow
Turkey
Comal
YELLVILLE
Rea Valley
Eros
Ralph
Bruno
Old Buffalo
Rush
Verona
Freck
Mull
STATE PARK
BUFFALO

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BUREAU OF MINES
DMEA - Box 431
Joplin, Mo.

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Department of the Interior
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Washington 25, D. C.