



WATER-RIGHT DOCKET

Theodore Roosevelt National Park

Docket No: 11

SPRINGS AND SEEPS

Preliminary Docket Information

00-00-0000: outline of assembly

Theodore Roosevelt National Memorial Park

Water Right Docket No. 1

Ten Springs

Outline of Assembly

1. Topographic Base Map.
2. Memorandum of January 22, 1953, from Park Warden:
 - Spring 1.
 - Spring 2.
 - Spring 3.
 - Spring 4.
 - Spring 5 - Formerly developed.
 - Spring 6 - Used by trespass stock.
 - Spring 7.
 - Spring 8. Near picnic area. S.U.P. 14-10-232-22 (1410-232-17)
authorizes Stephen W. Chase to graze 186 AUM.
 - Spring 9. Subject to flooding.
 - Spring 10.

Other Supporting Information

H.R. Gage.

May 5, 1969.

Madame Roosevelt.

<u>T. & R.</u>	<u>Sec.</u>	<u>1/4</u>	<u>Name or Number</u>	<u>Source of Info.</u>
14ON, 100W	31	NE	3	Reid, 1953
	31	NE	3 Olsen Seeps	Lane 1955
	31	SNE	22 Olsen Seeps	1960 map
	32	SE	7	Reid 1953
	32	SE	7 SE Corner	Lane 1955
	32	NWSE	SE Corner	Morey 1955
	32	NWSE	16 SE Corner	1960 map
	32	NWSE	SE Corner	1968 map
14ON, 101W	2	SW	5	Reid, 1953
	2	SW	5 Boicourt	Lane 1955
	2	NWSW	Boicourt	Morey 1955
	2	NESW	12 Boicourt	1960 map
	2	NWSW	Boicourt	1968 map
	12	SW	2	Reid, 1953
	12	SW	2	Lane 1955
	12	NESW	Sheep Butte	Morey 1955
	12	NESW	13 Sheep Butte	1960 map
	12	SWNW	Sheep Butte	1968 map
	14	SESW	Talkington Pond	Morey 1955
	14	SESW	14 Talkington Pond No.1	1960 map
	21	NWSW	15 Talkington Pond No.2	1960 map
	35	SW	10	Reid 1953
	35	SW	10 Painted Canyon	Lane 1955
	35	SW	23 Painted Canyon	1960 map
14ON, 102W	1	SE	Beef Corral Roadside	Lane 1955
	1	SENE	32 Beef Corral Roadside	1960 map
	2	SE	4	Reid 1953
	2	SE	4 Big Plateau	Lane 1955
	2	NESE	Big Plateau	Morey 1955
	2	NESE	7 Big Plateau	1960 map
	2	NESE	Big Plateau	1968 map
	3	SW	9	Reid 1953
	3	SW	9 Knutson Creek	Lane 1955
	3	SW	A Petrified Plateau	Lane 1955
	3	SWSW	30 Krudson Creek	1960 map
	16	NW	8	Reid 1953
	16	NW	8 W. Entrance Picnic Site (Silted in)	Lane 1955
	16	SENW	34 W. Entrance Picnic Site	1960 map

<u>T. & R.</u>	<u>Sec.</u>	<u>1/4</u>	<u>Name or Number</u>	<u>Source of Info.</u>
141N, 101W	19	NW	C - V.A. Bottom	Lane 1955
	19	SESW	25 V.A. Bottom	1960 map
	31	NWSW	Petrified Forest Plateau	Morey 1955
	31	NWSW	4 Petrified Forest Plateau	1960 map
	31	SWSW	Petrified Plateau	1968 map
	35	SW	6	Reid 1953
	35	SW	6 Jules Creek	Lane 1955
	35	SWSW	24 Jules Creek	1960 map
	36	NW	1	Reid 1953
	36	NW	1 Wannigan Seeps	Lane 1955
141N, 102W	36	NWNE	Wannigan Seeps	Morey 1955
	25?		5 Wannigan Seeps	1960 map
	36	SWSW	17 Lone Tree	1960 map
	36	NWSW	Lone Tree	1968 map



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

154

Theodore Roosevelt National Memorial Park
Medora, North Dakota

January 4, 1960

Memorandum

To: Regional Director, Region Two
From: Acting Superintendent, Theodore Roosevelt NMP
Subject: Water Survey Investigations, Theodore Roosevelt NMP

Attached in duplicate is informational data on existing artesian wells and springs in Theodore Roosevelt National Memorial Park. Also included are maps of the North and South Units showing locations of the respective water sources and development sites.

This information was requested by Hydraulic Engineer, William A. Mott, when Superintendent Jay visited at the Omaha Office upon returning from the Visitor Services Conference during late 1959.

Robert J. Murphy
Acting Superintendent

In duplicate ✓

Attachments: (4)

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The following is a list of the existing artesian wells in the South Unit of Theodore Roosevelt National Memorial Park. Also are listed their depth, the year that they were drilled, and some information on their respective water flows as indicated by the year that the measurements were made. The well number refers to that on the map.

<u>Number</u>	<u>Name</u>	<u>Depth(ft.)</u>	<u>Year Drilled</u>	<u>Flow (Avg)</u> <u>(gal/min)</u>	
				<u>1947</u>	<u>1955</u>
1	Chase Well	366	1939	-	2.0
2	CCC Camp Well	364	1936	-	1.5
3	Tomamichel Well	640	1928	-	0.1
6	V. A. Bottom Well	Unknown	Unknown	-	0.083
8	Peaceful Valley Picnic Area	424	1941	4.95	6.0
9	Halliday Well	593	1924	-	2.0
10	Jones Creek Well	443	1939	-	6.0
11	Mike Aune Well	350	1914	-	3.0
18	Medora Headquarters Well	1042	1957	-	-
19	Peaceful Valley Ranch Well	420	1914	5.48	4.0
20	Cottonwood Campground Well	782	1956	-	-
21	Rasmussen Well	360	1914	4.92	-

Medora Hdqtrs. Well, 1957 - 75 to 85 gpm
Cottonwood Campground

Well, 1956- 5½ gpm
1959- 4½ gpm

L54

The following is a list of the known springs and seeps which have received some protective development in the South Unit of the memorial park.

<u>Number</u>	<u>Name</u>	<u>Flow, gpm, Aug. 1955</u>
4	Petrified Forest Plateau Spring	1.0
5	Wannigan Seeps	0.083
7	Big Plateau Spring	0.285
12	Boicourt Spring	0.25
13	Sheep Butte Spring	0.50
14	Talkington Pond	---
16	South East Corner Spring	0.083
17	Lone Tree Spring	No Data

The water development areas in the North Unit of the memorial park areas follows.

<u>Number</u>	<u>Name</u>	<u>Well Depth(ft)</u>	<u>Year Drilled</u>	<u>Flow(gpm)</u>
18	Residential and Utility Area Well	393	1935	None(Pumped)
19	Squaw Creek Campground Well	372	1956	None(Pumped)
20	Achenbach Spring	<i>spring</i>	---	0.5

August 12, 1955

CONSERVATION OF SPRINGS AND ARTESIAN WELLS
in
THEODORE ROOSEVELT NATIONAL MEMORIAL PARK

Protection and development of the existing artesian wells and springs within the exterior boundaries of the memorial park should receive prior consideration in the Soil and Moisture Program of the park.

Water of any kind is at a premium. It would seem highly desirable that each water source, artesian wells and springs, should be protected by a fenced enclosure, and the water piped from the well or spring to a tank at the edge of the enclosure where it can be utilized by both humans and wildlife, and for fire protection purposes.

Trampling and other misuse by livestock in trespass in the past has badly damaged all of our water sources of these types, and in some instances they have destroyed them entirely.

The following is a list of the existing artesian wells in the South Unit of the park; also listed are their depth, the year they were drilled, and some information on the water flow of each from the date the wells were completed to the present time.

<u>Name</u>	<u>Depth</u>	<u>Year</u>	<u>Artesian Wells</u> (Gal. per min.)	
			<u>Flow</u> <u>1947</u>	<u>Aug.</u> <u>1955</u>
1. Headquarters	420'	1914	5.48 gal.	4 gal.
2. Cottonwood	360'	1914	8 gal.	4.92 gal. No-test
3. Jones Creek (CCC Camp)	443'	1939	8 gal.	- 6 gal.
4. Picnic Site (East Ent.)	424'	1941	7½ gal.	4.95 gal. 6 gal.
5. Mike Auney	350'	1914	-	- 3 gal.
6. Halliday	593'	1924	-	- 2 gal.
7. Chase	366'	1939	-	- 2 gal.
8. West Ent. (CCC Camp)	364'	1936	-	- 1½ gal.
9. Tomamichel	640'	1928	-	- 1 gal.-10 min.

<u>Name</u>	<u>Depth</u>	<u>Year</u>	<u>(Gal. per min.)</u>	
			<u>Flow</u> <u>1947</u>	<u>Aug.</u> <u>1955</u>
10. V. A. Bottom (2 wells)	No data			1 gal.-12 min.
11. Ekblom	400'	1914 -	-	1 gal.-4 min.
12. Johnson Plateau	759'	1922 -	Had to be pumped-water 240' down	

At the present time all of these artesian wells are unprotected, undeveloped and still being abused by trespass livestock except wells 1, 2, 3, 6 and 12. Well #12 can be classed as unusable since the well had to be pumped and the casing is now plugged with rocks. Wells 1, 2, 3 and 6 are protected, and water from 1, 2 and 3 is being used for domestic purposes.

Springs and Seeps - South Unit

Known springs and large seeps which have or should receive protective development are listed as follows:

<u>Name</u>	<u>Flow - Aug. 1955</u>	<u>Location</u>
*1. Wannigan seeps (Dam Site)	1 gal.-12 minutes	NW $\frac{1}{4}$, S.36, T.14N, R.102W 101W
2. Sec. 12, N. E. Corner	To be developed	SW $\frac{1}{4}$, S.12, T.14N, R.102W
3. Olsen Seeps	Not recommended	NE $\frac{1}{4}$, S.31, T.14N, R.102W
*4. Big Plateau	1 gal.-3 $\frac{1}{2}$ minutes	SE $\frac{1}{4}$, S. 2, T.14N, R.102W
*5. Boisecourt	1 gal.-4 minutes	SW $\frac{1}{4}$, S. 2, T.14N, R.101W
6. Jules Creek	To be investigated	SW $\frac{1}{4}$, S.35, T.14N, R.101W
*7. S. E. Corner	1 gal. each 12 min.	SE $\frac{1}{4}$, S.32, T.14N, R.102W
8. West Ent. Picnic Site	Silted in - no good	NW $\frac{1}{4}$, S.16, T.14N, R.102W
9. Knutson Creek	6-10 gal. per min.- No development needed	SW $\frac{1}{4}$, S. 3, T.14N, R.102W
10. Painted Canyon	To be investigated	SW $\frac{1}{4}$, S.35, T.14N, R.101W
*A. Petrified Plateau	1 gal. per minute	SW $\frac{1}{4}$, S. 3, T.14N, R.102W
B. Beef Corral Roadside	1 gal. per 11 min.	SE $\frac{1}{4}$, S. 1, T.14N, R.102W
C. V. A. Bottom	To be developed, Est. 1 gal. each 16 min.	NW $\frac{1}{4}$, S.19, T.14N, R.101W

*Springs or seeps have or are now being protected and developed with Soil and Moisture Funds.

For purposes of clarification, when comparing the above information on springs with Mr. Reid's report, "Springs of the South Unit" of January 22, 1953, the same numbers are used.

Artesian Well Development

All of these wells are accessible by Jeep and most of them can be reached with the fire truck. The Jeep is mounted with a slip-on-tank unit. Accessibility to these wells is important because there are very few opportunities in finding safe approaches to the Little Missouri River or to the water holes in the creeks.

It is recommended that wells 4, 5, 6, 7 and 8 should be provided with rail fences (corrugated type) construction 16' square with a rustic type gate. Since the water is palatable, faucets for human use should be provided at the well head, and the overflow caught, piped and stored in 200-300 gallon circular tanks at the edge of the enclosure for wildlife and fire protection use.

Wells 4 and 6 lie within a quarter of a mile of park headquarters and their tanks of water would materially increase the rather meager supply available for fire protection purposes there.

The overflow from wells 5, 6 and 8 have cut deep ravines from the well casing to the creek banks. Considerable fill material will have to be hauled in to fill these cuts within and adjacent to the enclosures.

Wells 9, 10 and 11 should be protected with 16' square enclosures of posts and barbed wire, because of trespass livestock use. They would seldom be used by visitors, however, there should be faucets at the well casing for human use, and storage tanks of 200-300 gallon capacity for wildlife and fire protection use. Wells 9 and 10 are strategically located from the stand point of fire protection, and their tanks of water would come in very handy in case of fires adjacent to these wells.

Well #11 is across the river and west from park headquarters. This well is inaccessible except by Jeep fording of the river. A fifty-five gallon drum with head removed would serve the wildlife using this well, since it is inaccessible for fire protection purposes.

Springs and Seep Development

Protection and development of the springs and larger seeps of the South Unit are recommended because they occur in isolated sections of the park and at the fringe of the upland prairies and high plateaus. These springs are accessible by Jeep mounted with a slip-on-tank unit for fire protection purposes, and are vitaly important as watering places for the park's wildlife.

To date, five of these springs and seeps have been protected and developed with funds under the Soil and Moisture Program. It is essential that the same protective treatment be given the other springs and seeps as recommended in the above list.

The Olsen Seep (3) at this time appears to be a boggy depression with very little seep or spring activity, and it is highly charged with soluble salts. The comparatively level terrain does not lend itself to development. The West Entrance Picnic Site Spring (8) has silted in and there is no longer any surface indications of the spring location. The Knutson Creek Spring (9) is the largest yet located in the park; but its location, at the base of a bluff on the far bank of Knutson Creek, prevents its ready use for fire protection purposes. It is not subject to trampling by livestock, therefore no development is recommended for it at the present time. The Jules Creek (6), and Painted Canyon Spring (10) Sites have not been investigated, but their development if advisable would lend a better overall coverage for both wildlife and fire protection purposes.

Dug Wells and Ponds

There are two dug wells in the park. One is usable for fire protection. Well #2 is located near the old Talkington Ranch house in the interior of the park. This well was pumped by a windmill and the water level is so low at the present time that it cannot be reached. Well #1 is located in a long up-land draw on the Carl Olsen place. The water in this well can be easily reached by a suction hose for fire protection use.

There are three water filled ponds in the park. Ponds 1 and 2 can be reached by Jeep mounted with fire equipment. Pond #1 was constructed in 1954 with Soil and Moisture Funds, and ponds 2 and 3 were built several years ago by the Talkingtons.

Spring, seep and artesian well projects are being developed to give maximum protection to the spring outlet or well casing; and to eliminate trampling, and at the same time allow the springs to produce a more constant and efficient flow of water.

The value of the development of these springs and wells for the park wildlife and fire protection purposes is very high. Every effort should be directed towards accomplishing these improvements for the conservation of water in the memorial park.

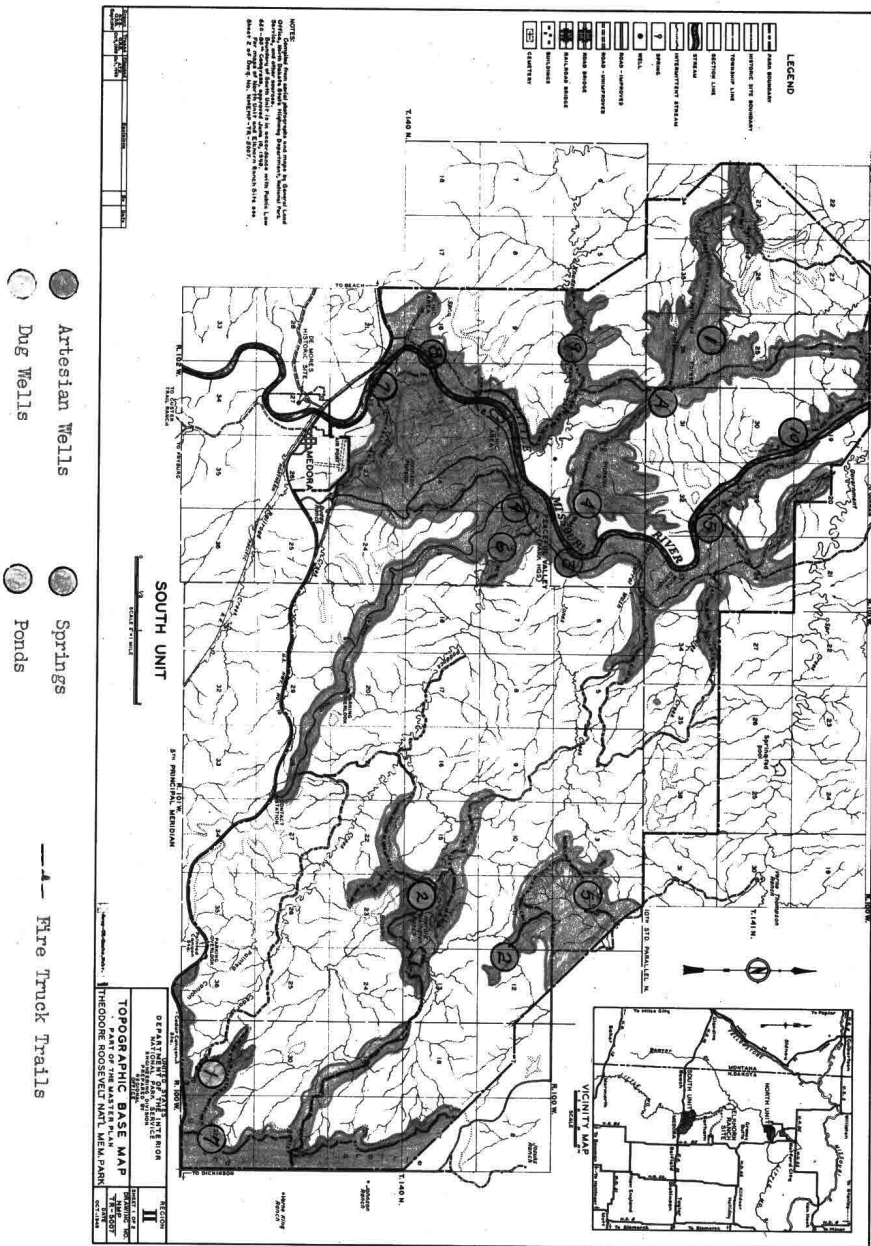
The attached charts show the location of the artesian wells, springs, dug wells and ponds that have been located to-date. The second chart shows the water sources which should receive consideration for maximum development in the wildlife and fire protection planning for the park. The chart in red coloration represents the area that the wells and springs can serve for fire fighting purposes. Water could be hauled from these sources along the fire truck trails by our Jeep mounted slip-on-tank unit to all but the most inaccessible places in the park.

Loren E. Lane

Loren E. Lane
Chief Ranger



Important Water Sources For Fire Protection



C O P Y

Theodore Roosevelt National Memorial Park

January 22, 1953

Subject: Springs of South Unit

The South Unit of Theodore Roosevelt National Memorial Park supports ten springs of importance to wildlife. These springs, with the exception of two- the Knudson Creek and Jules Creek springs, receive their water from the upland prairie surrounding the badlands or from extensive remnants of the upland prairie within the badlands. The location of nearly all of the memorial park springs are, therefore, in close proximity to the park boundaries.

Development of any one or all of these springs would definitely increase their usefulness to wildlife, by presenting a more permanent supply of drinking water. At present all of the springs are receiving moderate to heavy usage by wildlife and trespass stock- cattle and horses. This usage has impaired in most cases the rate of flow of the individual springs. Continued "misuse" of the springs may eventually lead to permanent damage to these areas by trampling, accelerated erosion, etc.

Funds are contained in the 1954 Final Budget Estimates for the development of four springs in the South Unit of the memorial park. Below is a priority listing of the springs of the South Unit with a brief statement of their significance to wildlife.

1. Location; T 141 N, R 102 W, NW $\frac{1}{4}$ Sec. 36. This spring, located in the center of the Petrified Forest Plateau, offers the only water source in the northwest corner of the park. The adjacent upland prairie contains some of the best grazing lands within the park. This spring was utilized by beaver at one time; the water now collects in the abandoned beaver dam area, however, extensive use of the spring by cattle and horses has reduced the flow.
2. Location; T 140 N, R 101 W SW $\frac{1}{4}$ Sec. 12. This spring in the northeast corner of the park serves an extensive sagebrush flat and grassland area. At present it shows signs of heavy use by horses, deer and cattle. The spring is located near the top of the upland prairie; without impairing its accessibility, the water could be piped down onto the sagebrush flat.
3. Location; T 140 N, R 100 W, NE $\frac{1}{4}$ Sec. 31. This spring is situated in a long draw on the upland prairie in the southeast corner of the park. It is being used extensively by approximately 65 antelope- both in summer and winter. It is also adjacent to and utilized by one of the park's largest concentrations of Mule Deer.
4. Location; T 140 N, R 102 W SE $\frac{1}{4}$ Sec. 2. This spring, located

in the southwest corner of Big Plateau, is utilized by Whitetail Deer, Mule Deer, Antelope and domestic stock. The spring is actually a cluster of three springs; utilization of all three of these sources in development should produce a considerable flow.

5. Location; T 140 N, R 101 W, SW $\frac{1}{4}$ Sec. 2. This spring was at one time developed, but at present, through neglect and misuse, it is greatly reduced in flow. Spring No. 5 is approximately 1 $\frac{1}{2}$ miles northwest of spring no. 2, and with development will supplement that spring. Presently horses and cattle utilize this water source in numbers, as do a few deer.
6. Location; T 141 N, R 101 W, SW $\frac{1}{4}$ Sec. 35. This spring empties into Jules Creek and serves a large area of low, rolling, grass covered buttes. It is extremely important to trespass stock now residing within the park; wild game would probably find the spring equally as useful.
7. Location; T 140 N, R 100 W, SE $\frac{1}{4}$ Sec. 32. This spring, located in the extreme southeastern corner of the memorial park is important in the economy of the park antelope herd and used extensively by Mule Deer.
8. Location; T 140 N, R 102 W, NW $\frac{1}{4}$ Sec. 16. This spring, except for a few deer and domestic cattle, is not considered extremely important at this time; there is a flowing artesian well within $\frac{3}{4}$ of a mile of this spring.
9. Location; T 140 N, R 102 W, SW $\frac{1}{4}$ Sec. 3. This spring is located in the bottom of Knudson Creek; the flow is quite strong and a natural pool below the spring protects to some extent the spring outlet. Development of this spring would, due to periodic flooding of Knudson Creek be unwise.
10. Location; T 140 N, R 101 W, SW $\frac{1}{4}$ Sec. 35. This spring area near Highway #10 offers shelter and water to both Mule and Whitetail Deer. The removal of trespass stock from the memorial park will probably prove to be sufficient in conserving this area at present.

The first four springs on the priority list are those that will be developed during the 1954 fiscal year. In considering these springs the location, present condition- rate of flow, trampling, etc., and the importance to our present wildlife populations have been considered.

The priority ratings of the remaining six springs may be altered to fit the changing conditions of the park's soil and moisture conservation program.

There are a number of small springs along the Little Missouri River, where development would be impracticable. Also there are a few seeps and small springs whose location and volume of flow would not warrant development.

Over grazing of the memorial park grasslands by domestic cattle and horses is the most critical problem in the park's soil and moisture conservation. Alleviation of this problem will, in time, allow the range to recover and thereby supply a more plentiful and steady source of water for the existing springs. Development of the springs will be carried out in such a way as to protect the spring outlet from detrimental trampling while at the same time allow the springs to produce a more constant and efficient flow.

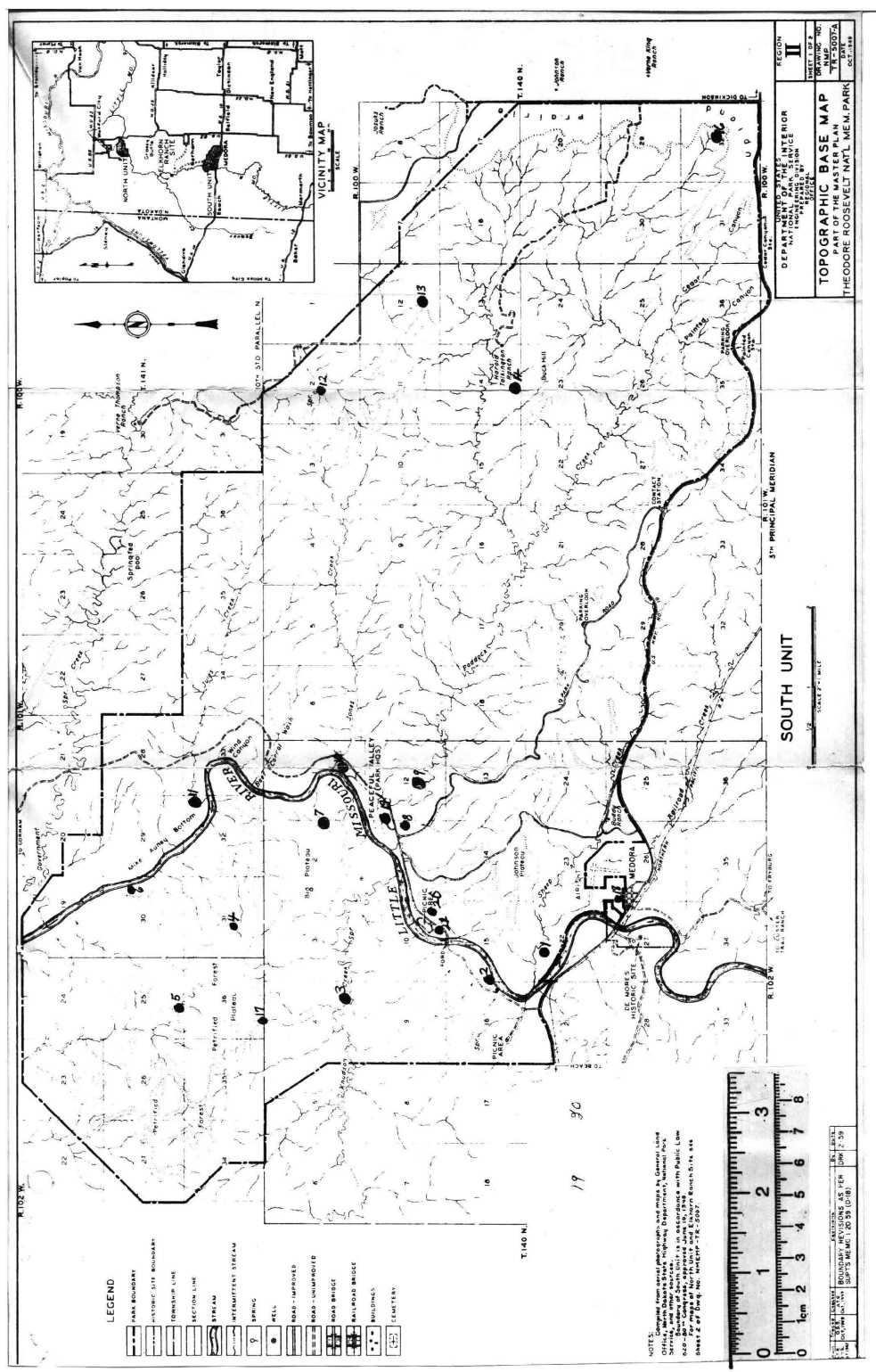
Development of springs in the memorial park area is directed towards supplying the optimum water requirements of the area's wildlife. All of the wildlife species, with the possible exception of the Whitetail Deer, can meet their minimum water requirements through dew and/or succulence alone. However, in this area of little dew and frequent drought conditions, open water is an absolute essential in proper game management. Besides offering free drinking water, the springs and seeps of the area are utilized indirectly by wildlife through increased plant cover and succulent food.

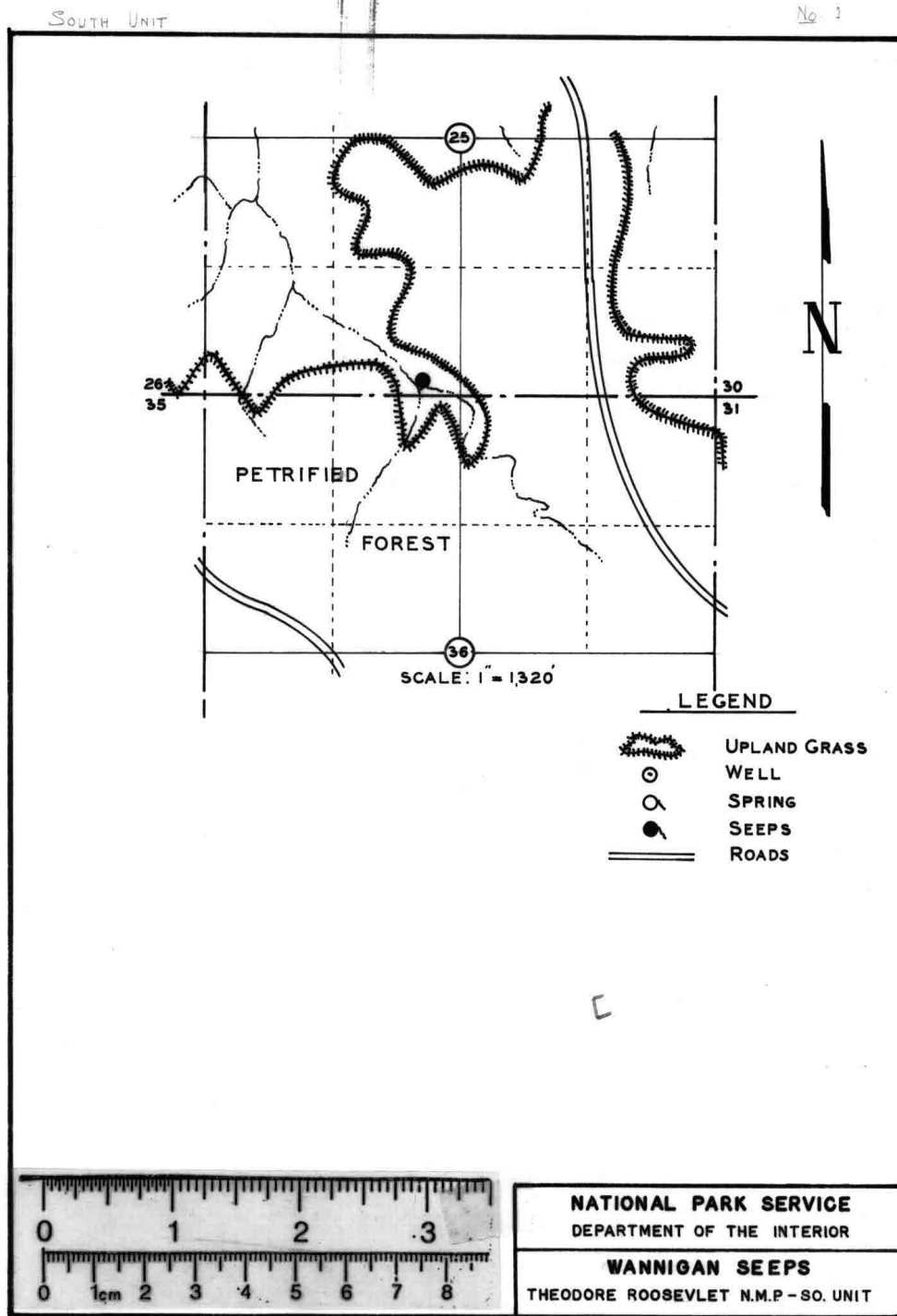
A study of the springs of the North Unit of Theodore Roosevelt National Memorial Park is in progress.

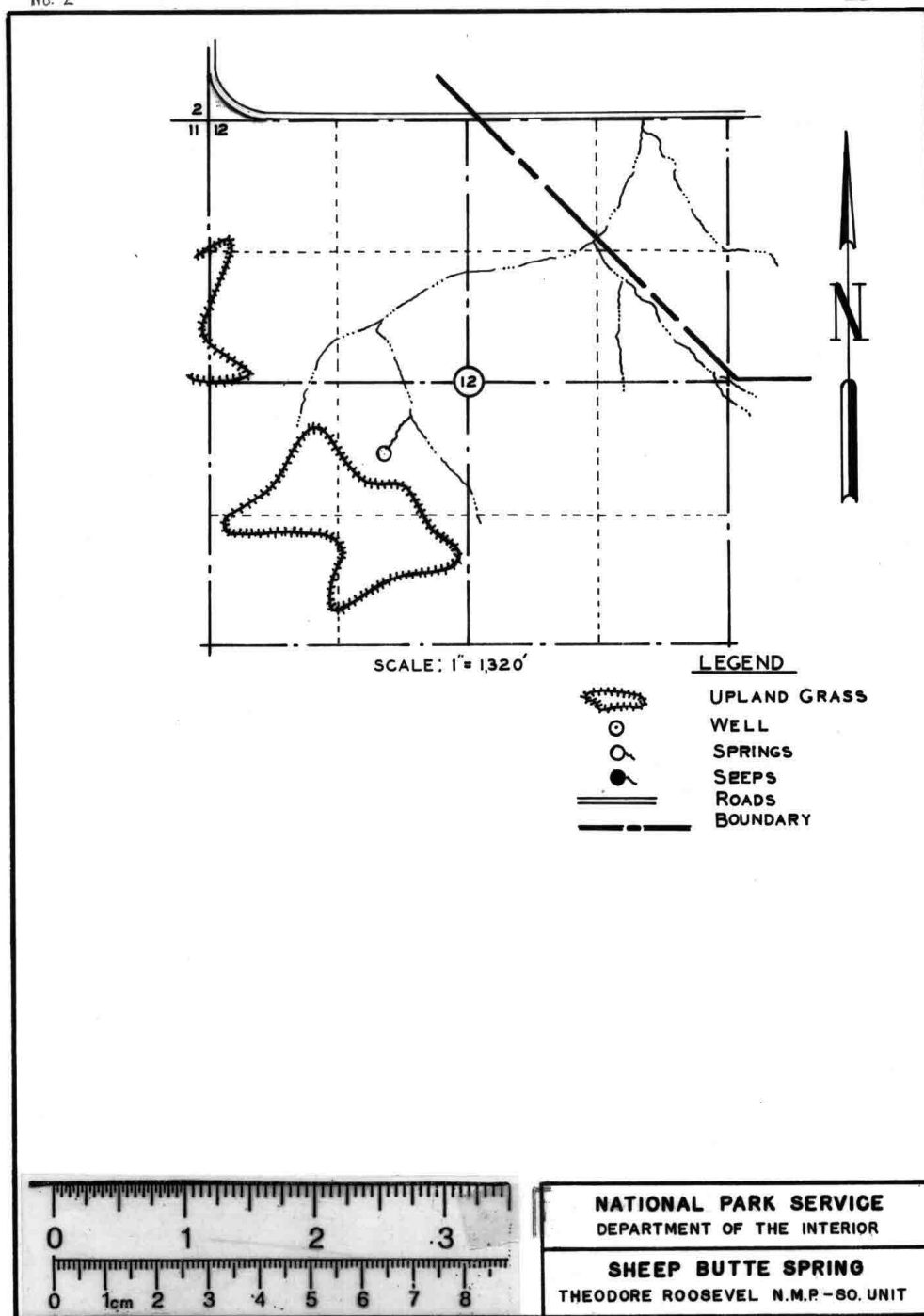
/s/ Neil J. Reid

Neil J. Reid
Park Warden

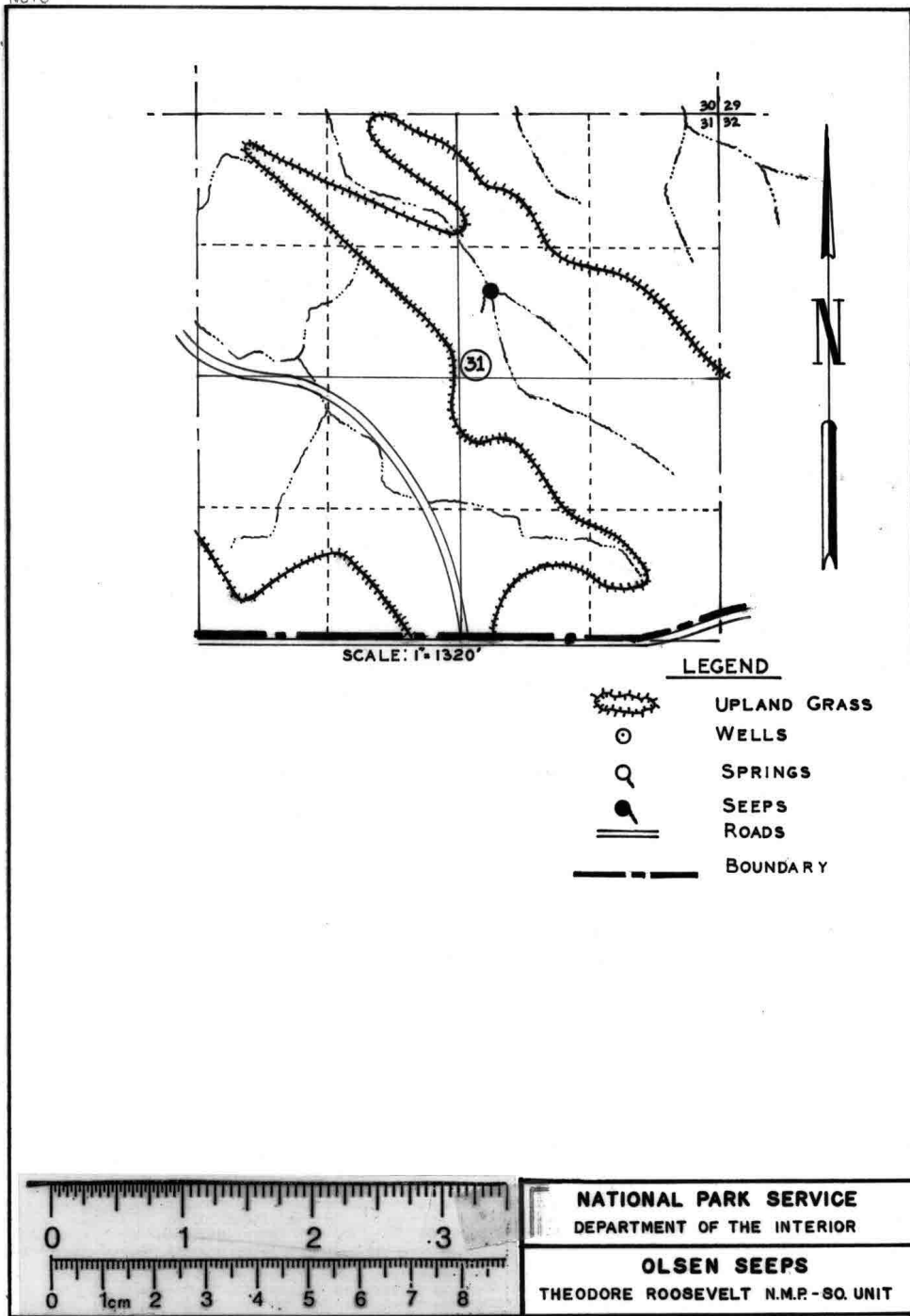
Maps and Miscellaneous Information



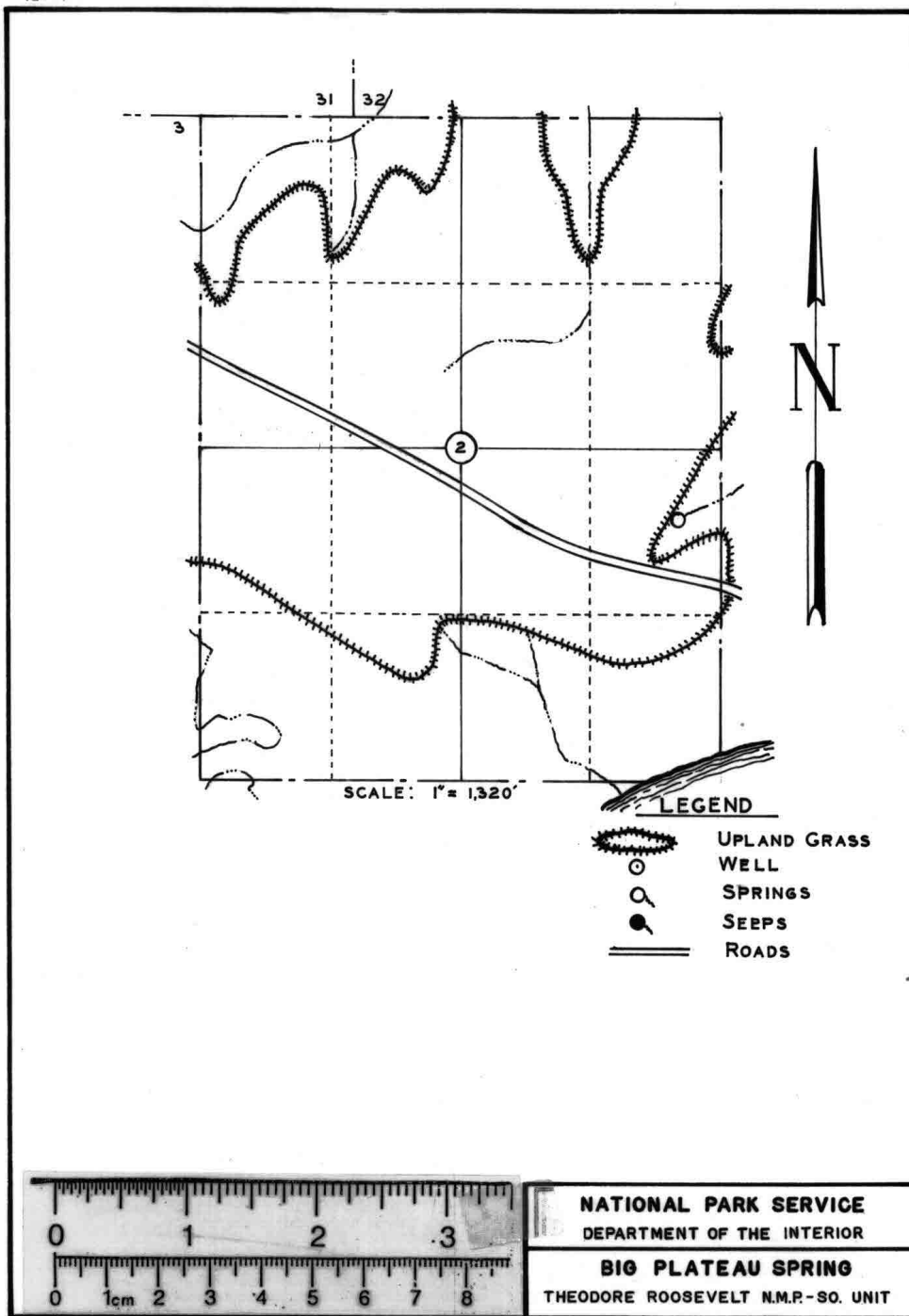




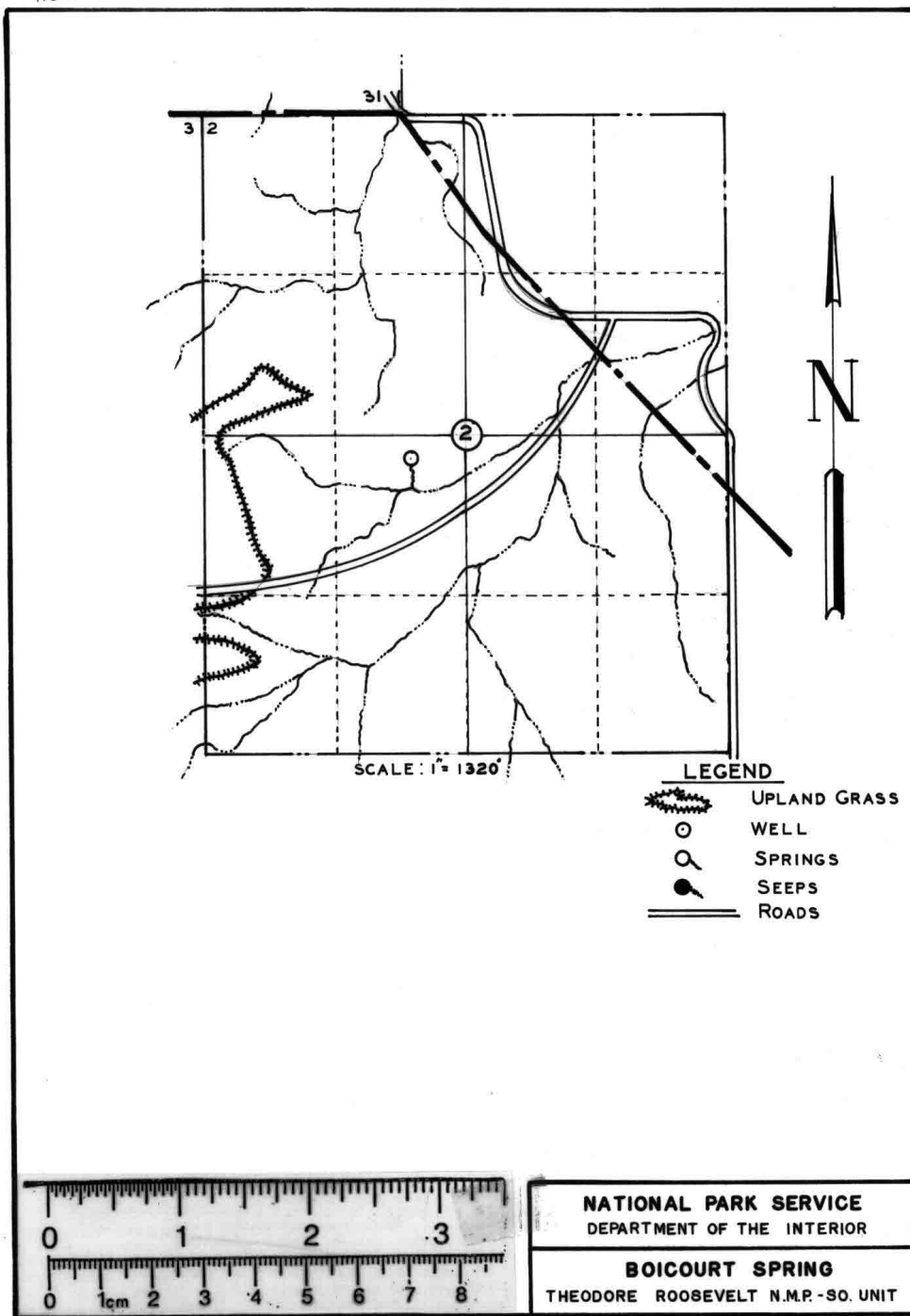
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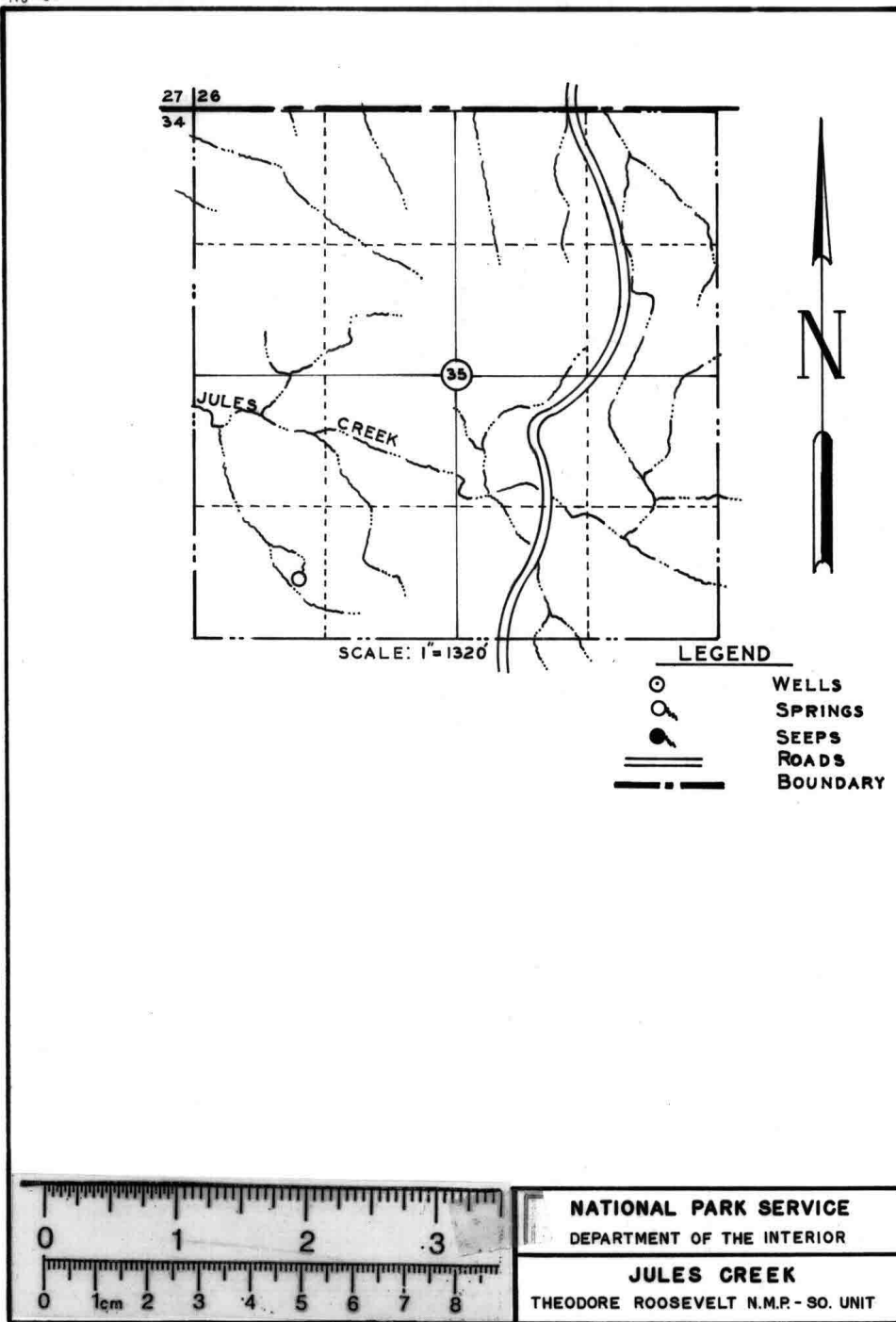
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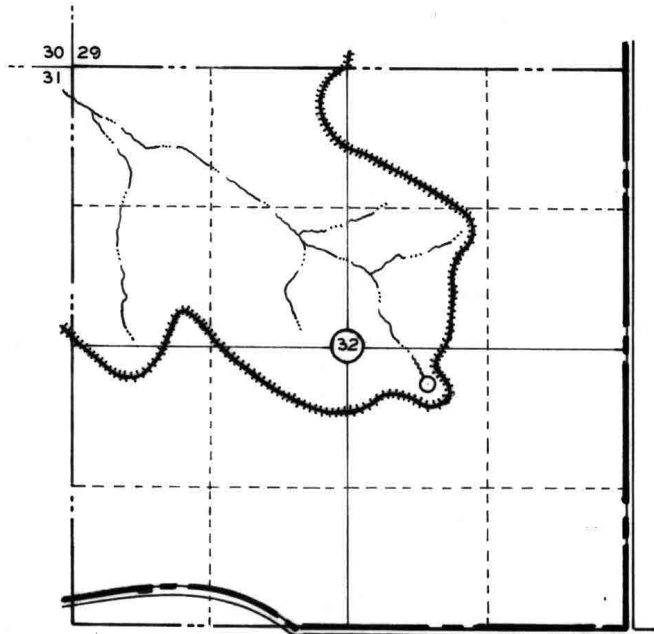
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No. 6



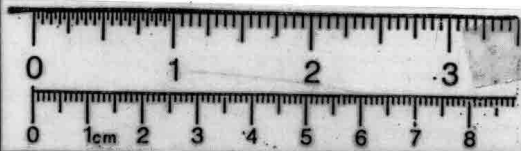
No. 7



SCALE: 1" = 1320'

LEGEND

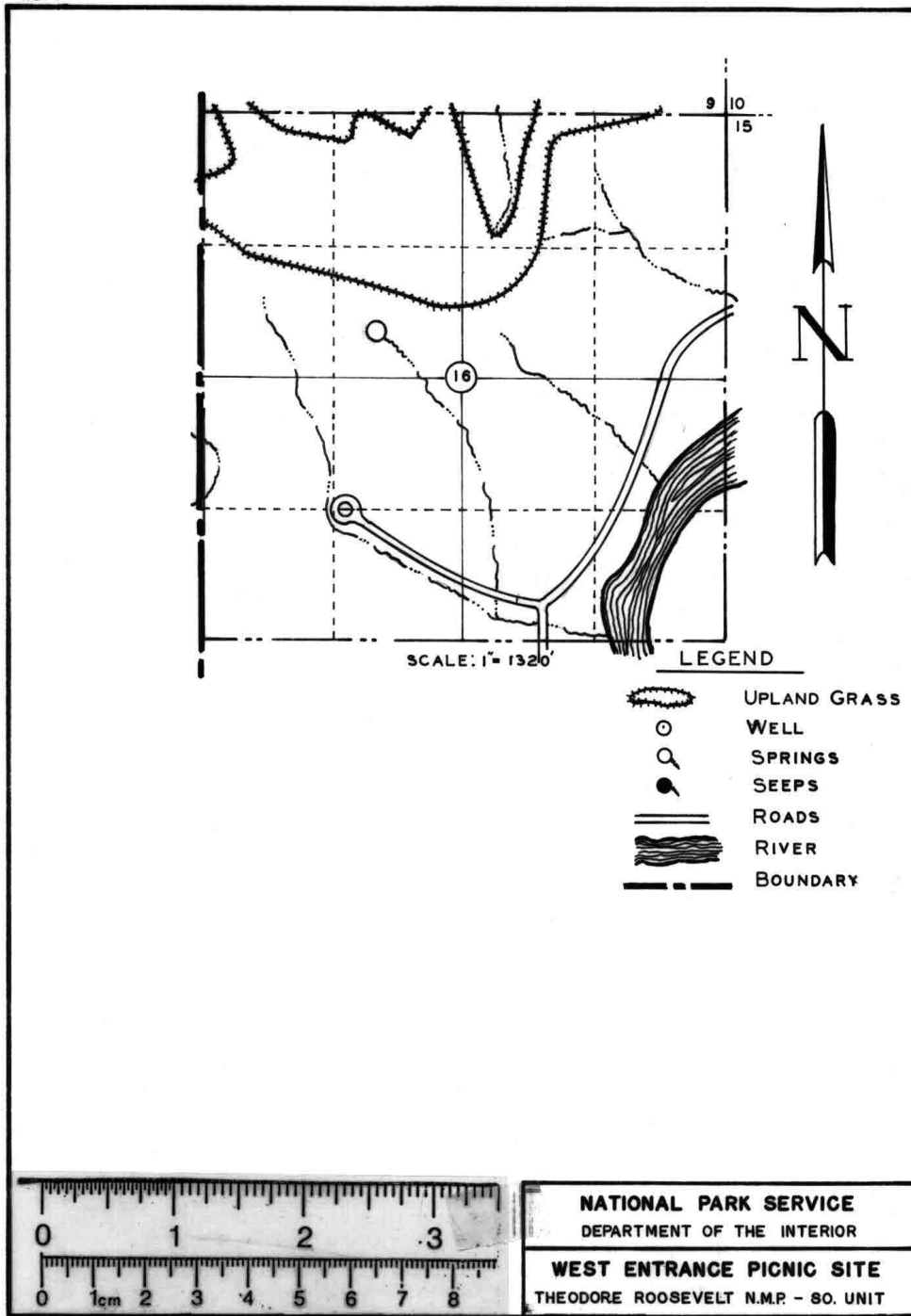
-  UPLAND GRASS
-  WELLS
-  SPRINGS
-  SEEPS
-  ROADS
-  BOUNDARY

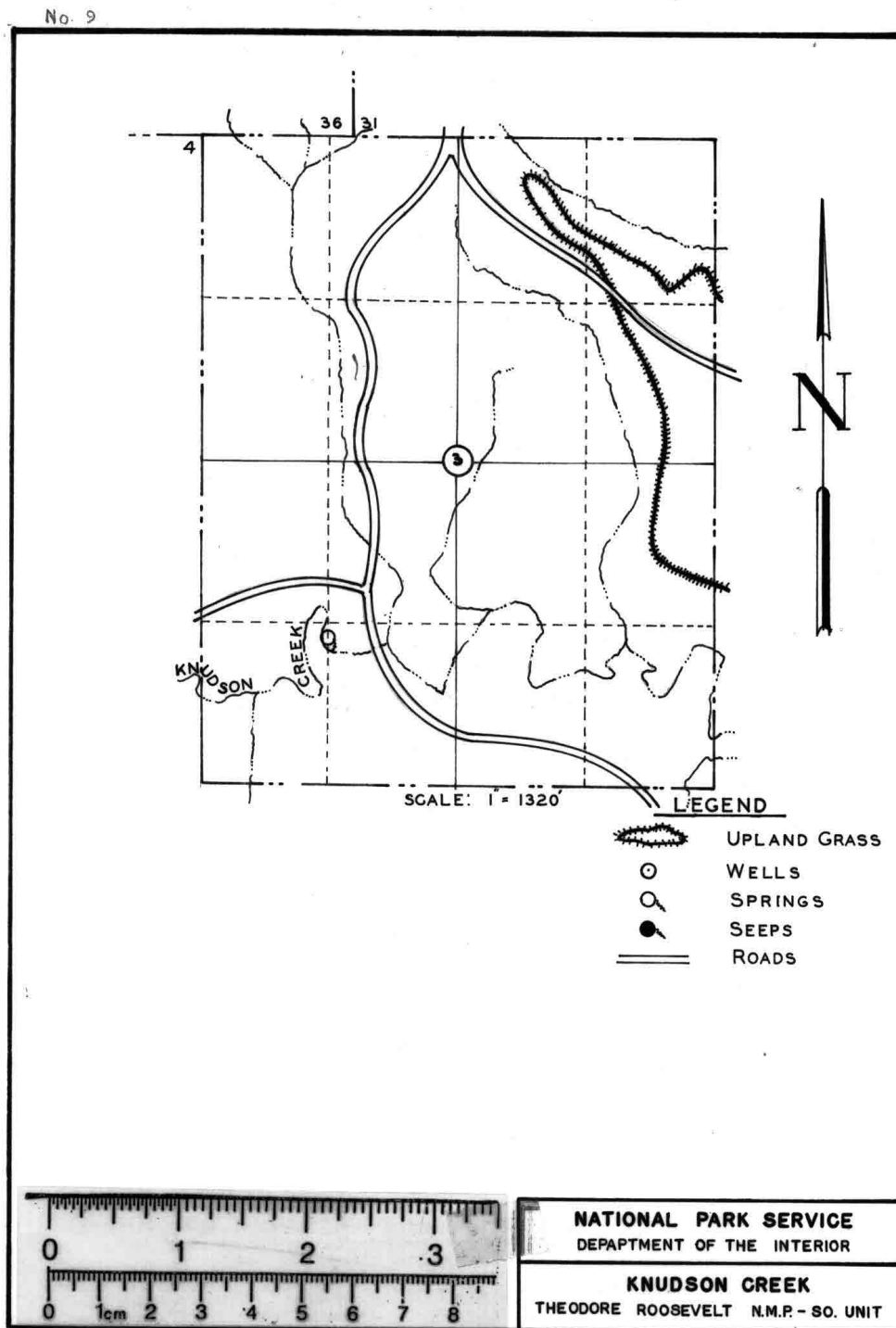


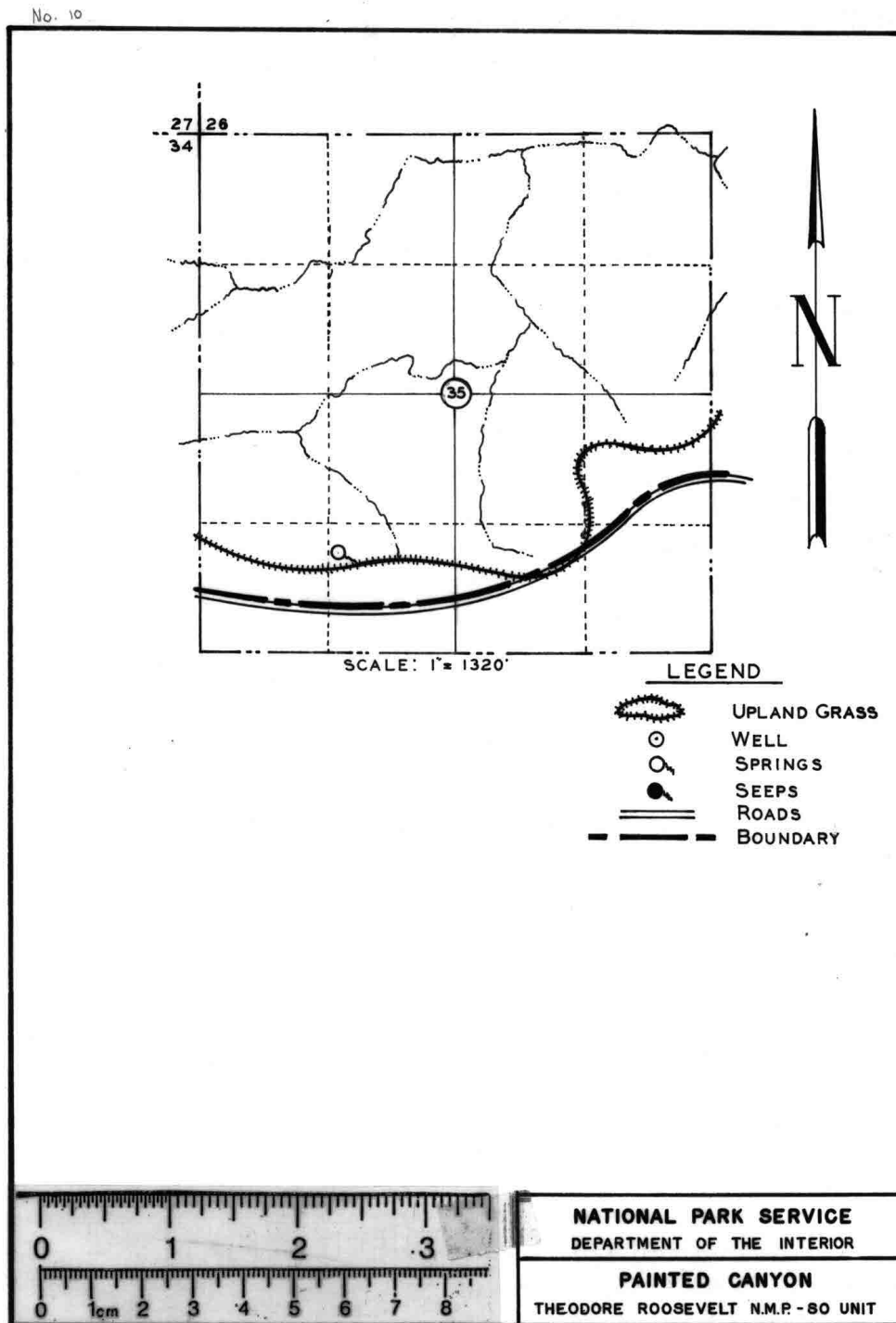
NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR

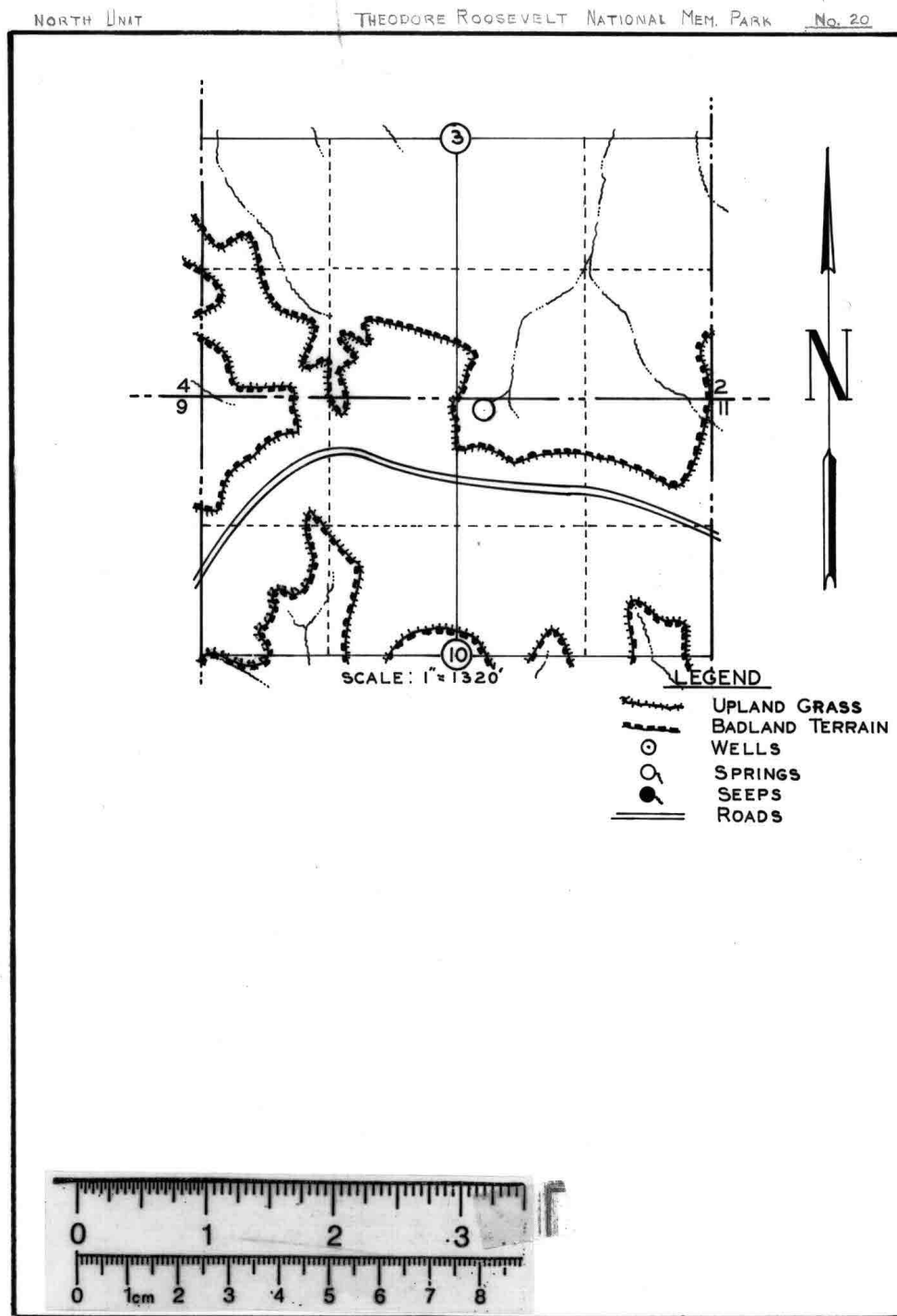
SOUTH EAST CORNER SPRING
THEODORE ROOSEVELT N.M.P. - SO. UNIT

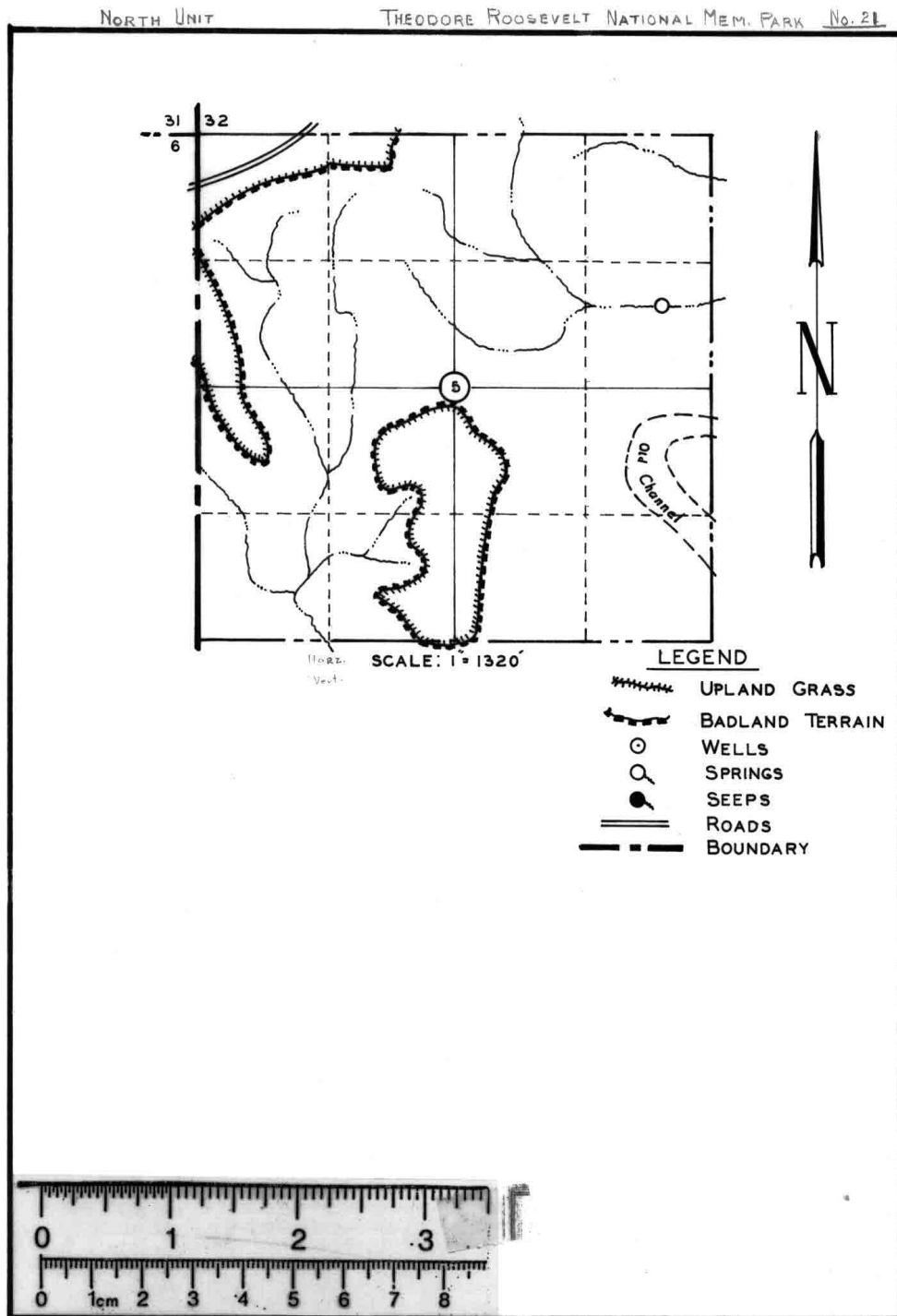
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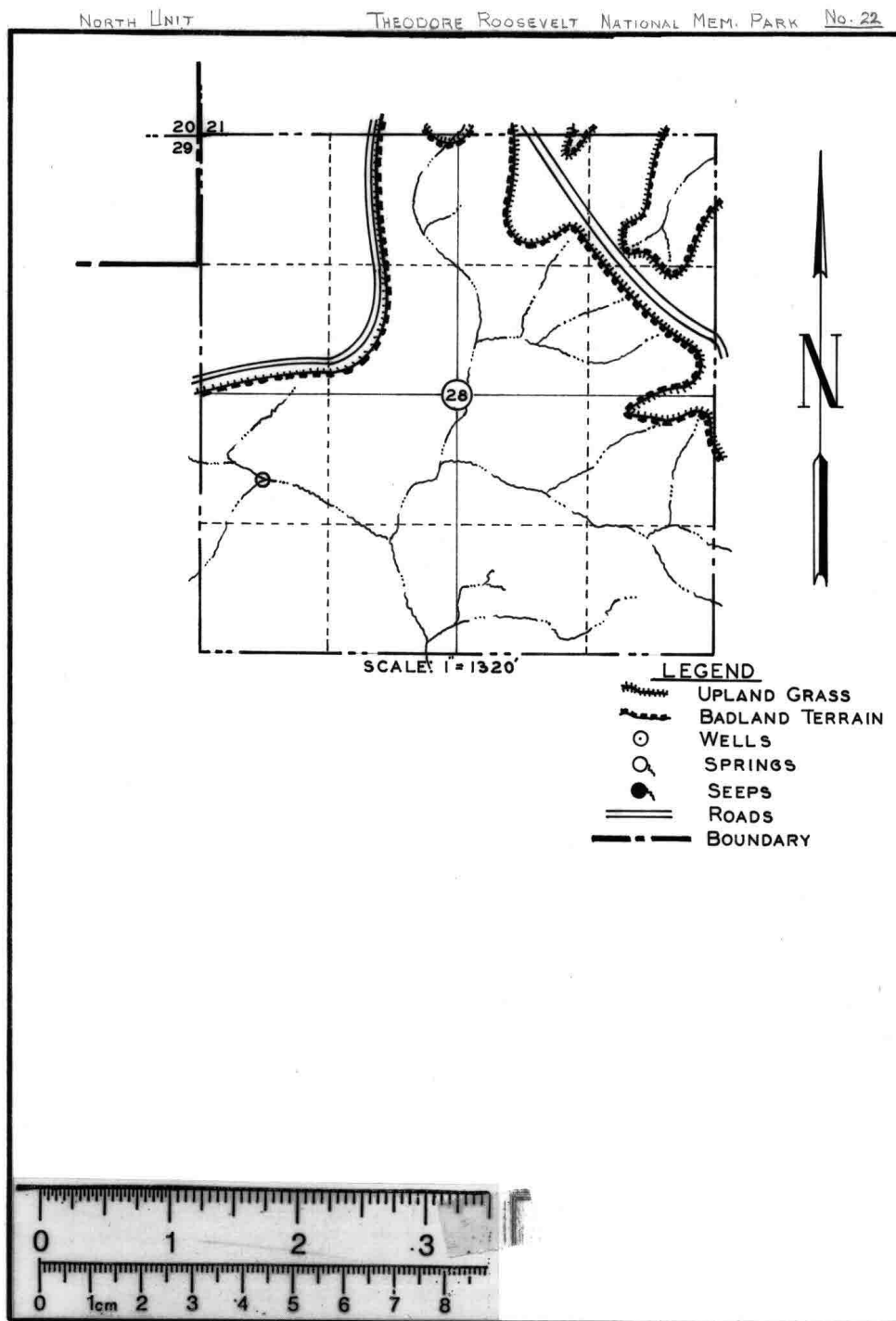


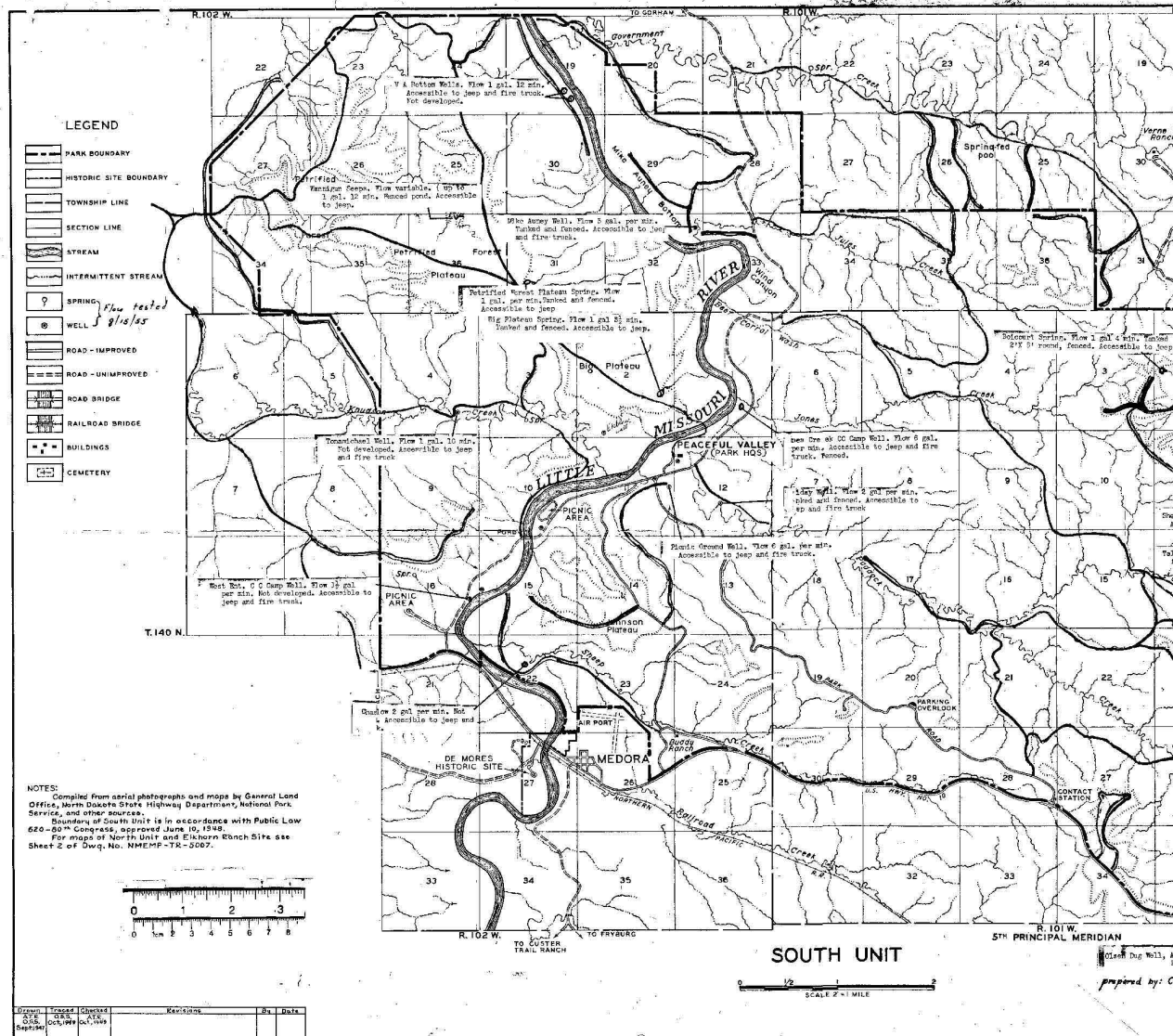












Docket Information

Number of Documents in Docket 34

Documents Dated from 10/15/1949 to 1/4/1960

Docket Compiled: 6/21/2011