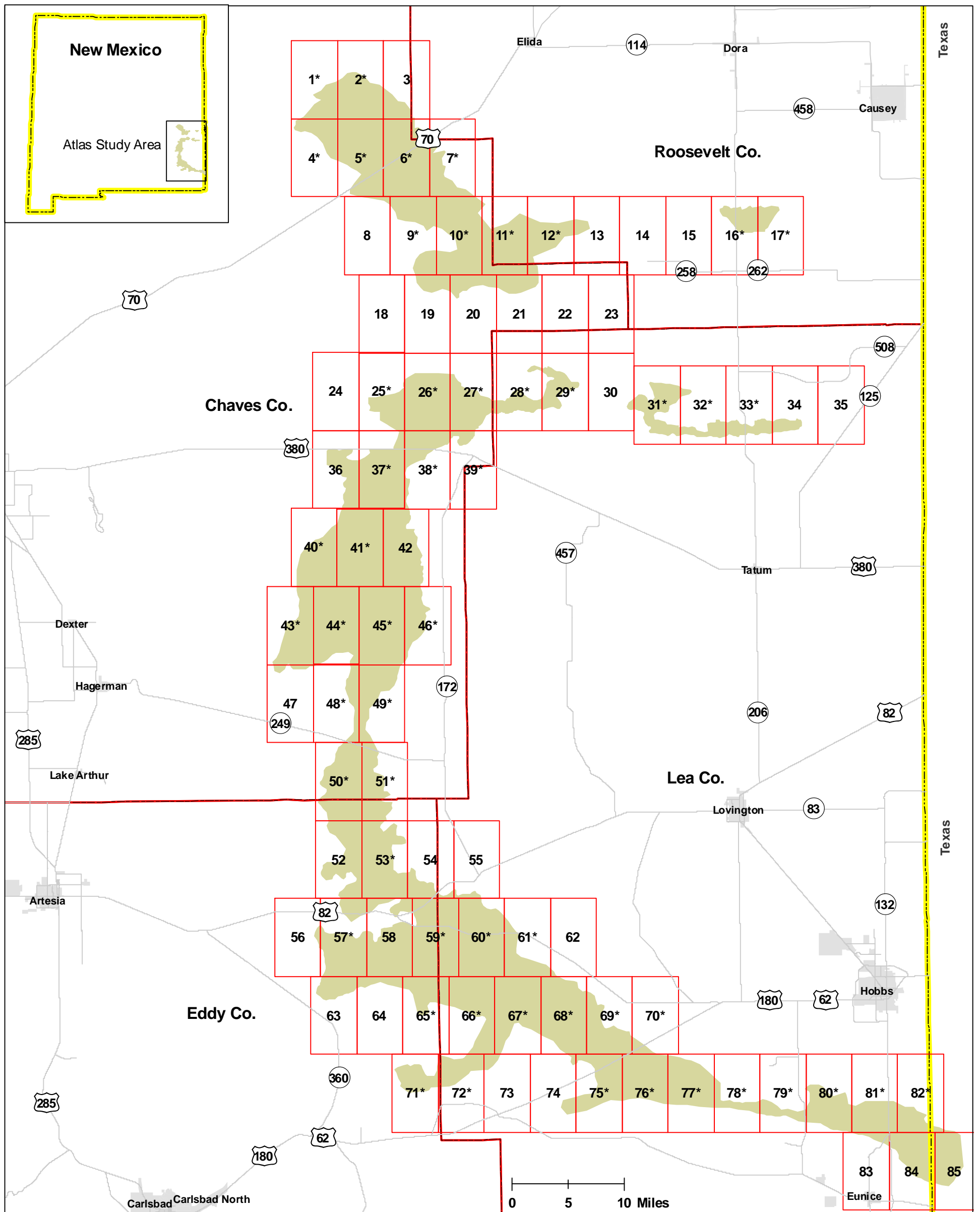












# Atlas of distribution and habitat of the dunes sagebrush lizard (*Sceloporus arenicolus*) in New Mexico

Grid numbers refer to detailed map pages.  
Asterisk indicates map with a specimen locality.



## Key to Features

-  **Sceloporus arenicolus** historical species occurrences
  -  **Sceloporus arenicolus** presence verified since 2005
  -  **U.S. route**
  -  **State route**
  -  **County road**
  -  **Road**
  -  **Populated area**
  -  **Township boundary**
  -  **Distribution boundary**
  -  **Shinnery Oak dominated shrubland and duneland, classified by Natural Heritage New Mexico**
- 
- 

### Atlas of distribution and habitat of the dunes sagebrush lizard (*Sceloporus arenicolus*) in New Mexico

Laura R. Laurencio  
Lee A. Fitzgerald

Texas Cooperative Wildlife Collection, Department of Wildlife and Fisheries Sciences,  
Texas A&M University, College Station, TX 77843-2258

#### CITATION

This publication should be cited as follows:

Laurencio, Laura R. and Lee A. Fitzgerald. 2010. *Atlas of distribution and habitat of the dunes sagebrush lizard (Sceloporus arenicolus) in New Mexico*. Texas Cooperative Wildlife Collection, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, TX 77843-2258. ISBN# 978-0-615-40937-5.

#### ACKNOWLEDGEMENTS

We thank the following people and institutions for providing assistance in creating this atlas: Charles W. Painter, Howard L. Snell and Tom Giermakowski at the Museum of Southwestern Biology, University of New Mexico, and Toby Hibbitts and James R. Dixon at the Texas Cooperative Wildlife Collection. Mike Hill, Toby Hibbitts, David Laurencio and the Herpetology lab at Texas A&M University participated in field work over many years. We thank Ralph W. Axtell and Charles W. Painter for their careful reviews. This work was supported with funds from Bureau of Land Management (Agreement L09AC15475) and National Science Foundation (DGE 0654377). This is publication number 1262 of the Texas Cooperative Wildlife Collection, Texas A&M University.

#### PRINTING INSTRUCTIONS

The electronic (pdf) file of this atlas is designed to be printed on 11x17 pages. At this size, the map scale is 1:30,000, and 1.0 inch corresponds to 0.47 mile. If printed at a different size, the graphic scale on each page allows accurate determination of distance.

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ISBN 978-0-615-40937-5

## Purpose

This atlas is a visual tool for understanding the geographic distribution of the dunes sagebrush lizard (*Sceloporus arenicolus*) in the context of its unique and easily identifiable habitat, shinnery oak dune complexes. *Sceloporus arenicolus* is endemic to the Mescalero Sands and Monahans Sandhills ecosystem and occurs exclusively in shinnery oak dune complexes characterized by open sand dune blowouts. Because these features can be accurately perceived with remotely sensed imagery, the atlas serves to identify potential and suitable habitat of *Sceloporus arenicolus*. The atlas illustrates the currently known extent, connectivity, and fragmentation of the species' habitat within New Mexico.

## Scale

The atlas is designed to be printed on 11"x17" pages. When printed at this size, the scale of the map is 1:30,000. Therefore, 1" (2.54 cm) on the map is equivalent to 0.47 mi or 0.76 km. The graphic scale on each page allows accurate determination of distance if the atlas is printed at a different size.

## Atlas Data Layers and Details

The atlas was created in ArcInfo 9.3 by overlaying the following layers:

- One-meter resolution Digital Orthophoto Quarter Quads (DOQQs) from 2004 serve as the basemap of the atlas;
- *Sceloporus arenicolus* locality data, derived from specimen voucher data obtained from natural history collections and from surveys conducted in 2008 – 2010;
- Vegetation classification from Natural Heritage New Mexico<sup>1,2</sup> illustrating shinnery oak (*Quercus havardii*) dominated shrubland and duneland;
- *Sceloporus arenicolus* geographic range polygon, described below;
- Township-and-Range based on the Public Land Survey System available from the Bureau of Land Management, New Mexico State Office.

A total of 85 detailed maps covering the range of *Sceloporus arenicolus* in New Mexico are provided in this atlas. A separate atlas covers the species' range in Texas<sup>3</sup> These maps cover the known geographic distribution of the lizard, and also potential habitat that has not been surveyed but appears suitable based on DOQQs and vegetation classification (e.g., maps 18 and 24). In addition to the map layers described above, UTM coordinates on the corners of each page assist the user in finding localities and potential sites. Road names are included for many of the roads that are visible on the maps. GIS road layers, Google map, and Yahoo map were used to determine and provide as many road names as possible.

*Sceloporus arenicolus* presence is depicted using different colors for historical localities and for localities where *Sceloporus arenicolus* has been found since 2005. This distinction is made only to provide the user with more information; **the atlas is not intended to analyze patterns of colonization or extirpation.** An appendix gives coordinates for the *Sceloporus arenicolus* localities. It is important to note that the locality numbers in the atlas were generated for the purposes of this publication, and do not correspond to site numbers associated with any projects or research on *Sceloporus arenicolus*.

## Geographic Range Polygon

The range of *Sceloporus arenicolus* was determined by visual assessment of the following data layers in ArcInfo 9.3:

- *Sceloporus arenicolus* presence and absence localities, derived from surveys conducted in 1994 – 1996<sup>4</sup> and 2008 – 2010, and from specimen voucher data.
- A series of 1-meter resolution Digital Orthophoto Quarter Quads (DOQQs) from 2004. These ortho-rectified aerial photos allow visual assessment of the shinnery oak sand dune blowout landforms throughout the range of *S. arenicolus* as of 2004.
- Vegetation classification from Natural Heritage New Mexico<sup>1,2</sup> illustrating shinnery oak (*Quercus havardii*) vegetation.
- A soil model provided by BLM, Carlsbad Office, produced by Ty Allen that illustrates areas that have sandy soils with sand sub-surface, which is correlated to *Sceloporus arenicolus* localities.

Using the above information, the known geographic range of *Sceloporus arenicolus* was delineated to include continuous blowout landforms and shinnery oak vegetation where soils were categorized as suitable and where *Sceloporus arenicolus* presence has been verified. Where vegetation or soils were unavailable (due to extent of the GIS layer), delineation relied on DOQQs and survey data.

## References:

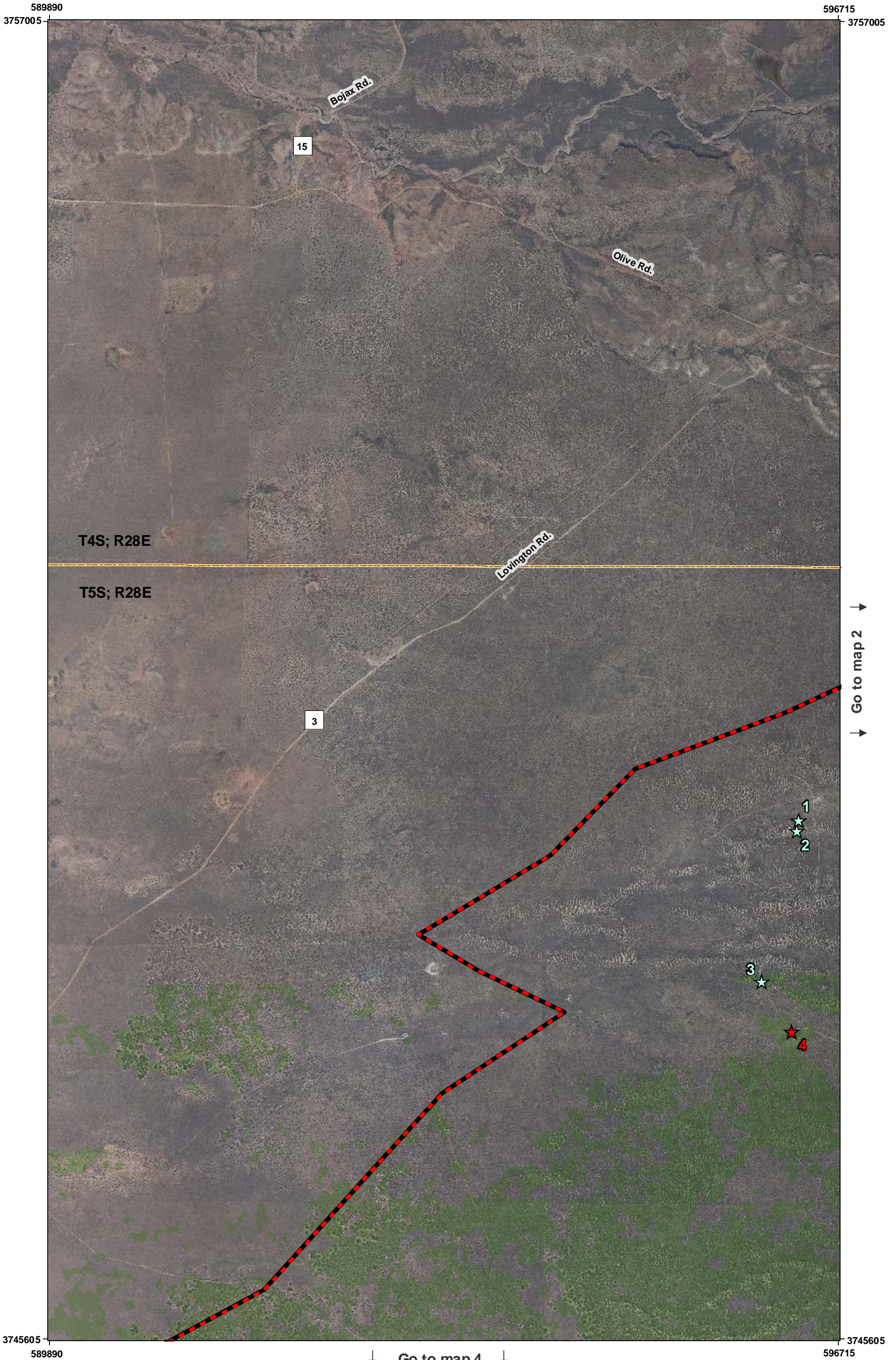
<sup>1</sup>Neville, P., T. Neville, and K. Johnson. 2005. Lesser prairie-chicken habitat map for portions of Eastern New Mexico, Natural Heritage New Mexico Publication No. 05-GTR-285, University of New Mexico, Albuquerque. 77 pp.

<sup>2</sup>Neville, P., T. Neville, and K. Johnson. 2007. Map of a portion of potential sand dune lizard habitat in Southeastern New Mexico. Natural Heritage New Mexico Publ. No. 07-GTR-318. Natural Heritage New Mexico, University of New Mexico, Albuquerque, NM. 71 p.

<sup>3</sup>Laurencio, D., L.R. Laurencio, and L.A. Fitzgerald. 2007. Geographic Distribution and Habitat Suitability of the Sand Dune Lizard (*Sceloporus arenicolus*) in Texas. Final report to Texas Parks and Wildlife Department, Austin, TX. 17 pp + appendix.

<sup>4</sup>Fitzgerald, L.A., C.W. Painter, D.A. Sias, H.L. Snell. 1997. The range, distribution and habitat of *Sceloporus arenicolus* in New Mexico. Final report to New Mexico Department of Game and Fish, Santa Fe, NM. 30 pp + appendices.

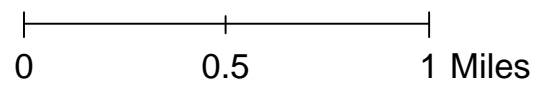




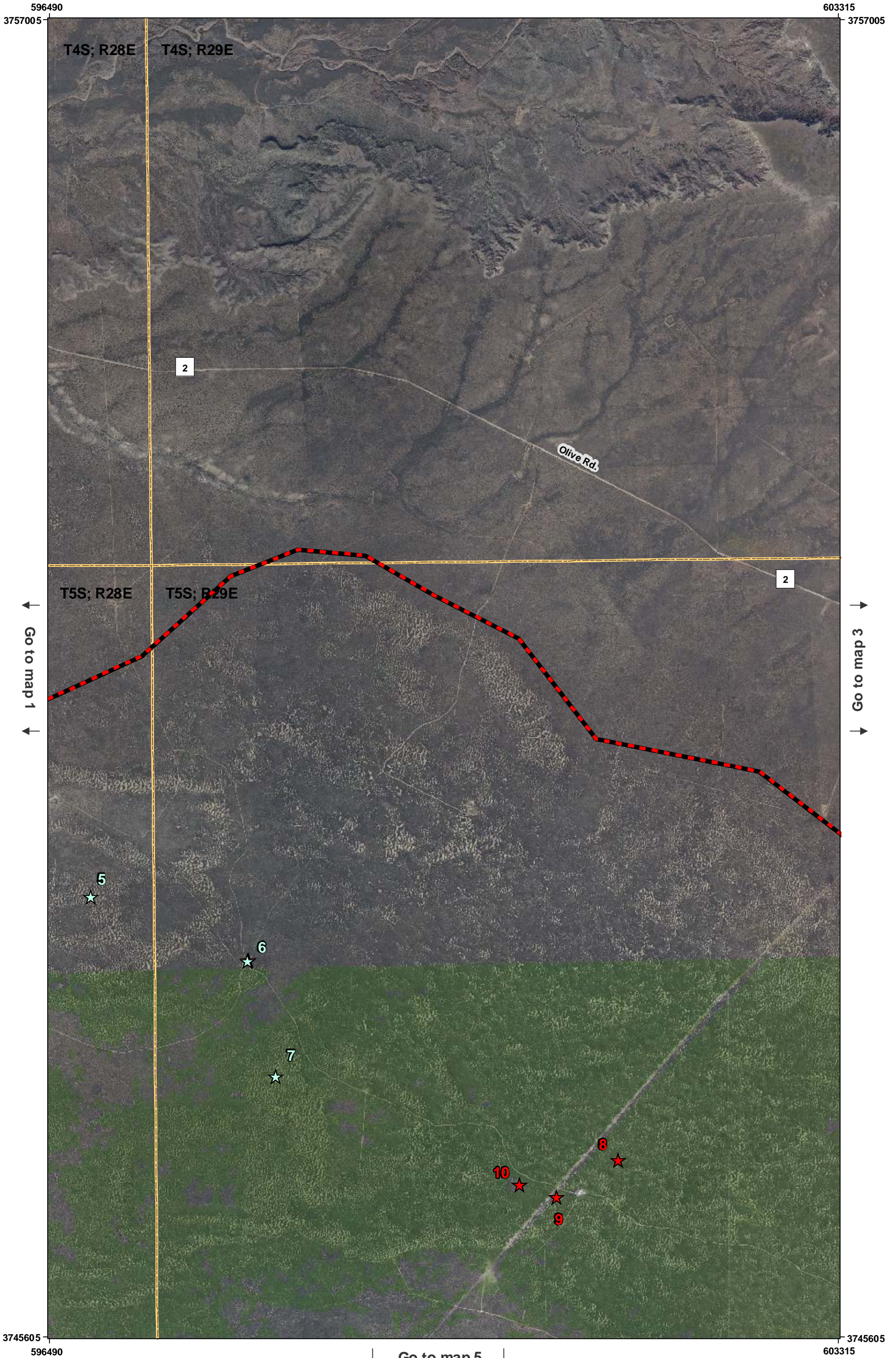
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Go to map 4

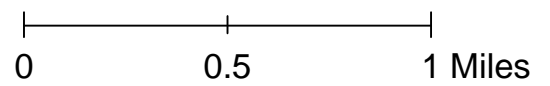
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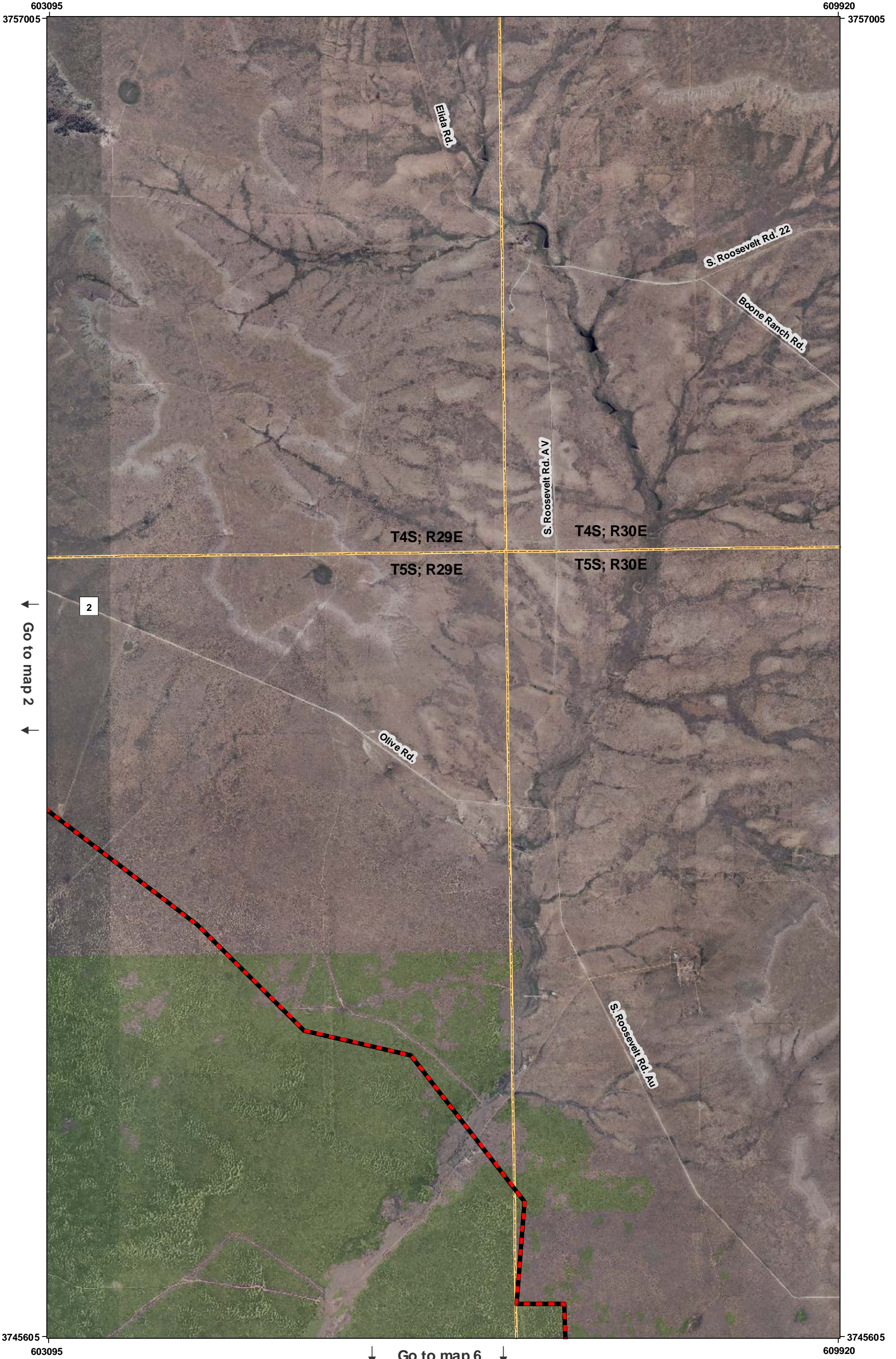




Note: Vegetation classification unavailable for northern portion of map.







Note: Vegetation classification unavailable for northern portion of map.



↑ Go to map 1 ↑

589890  
3745800

596715  
3745800

T5S; R28E

T6S; R29E

11 ★

↓ Go to map 5 ↓

77

Isleta Rd.

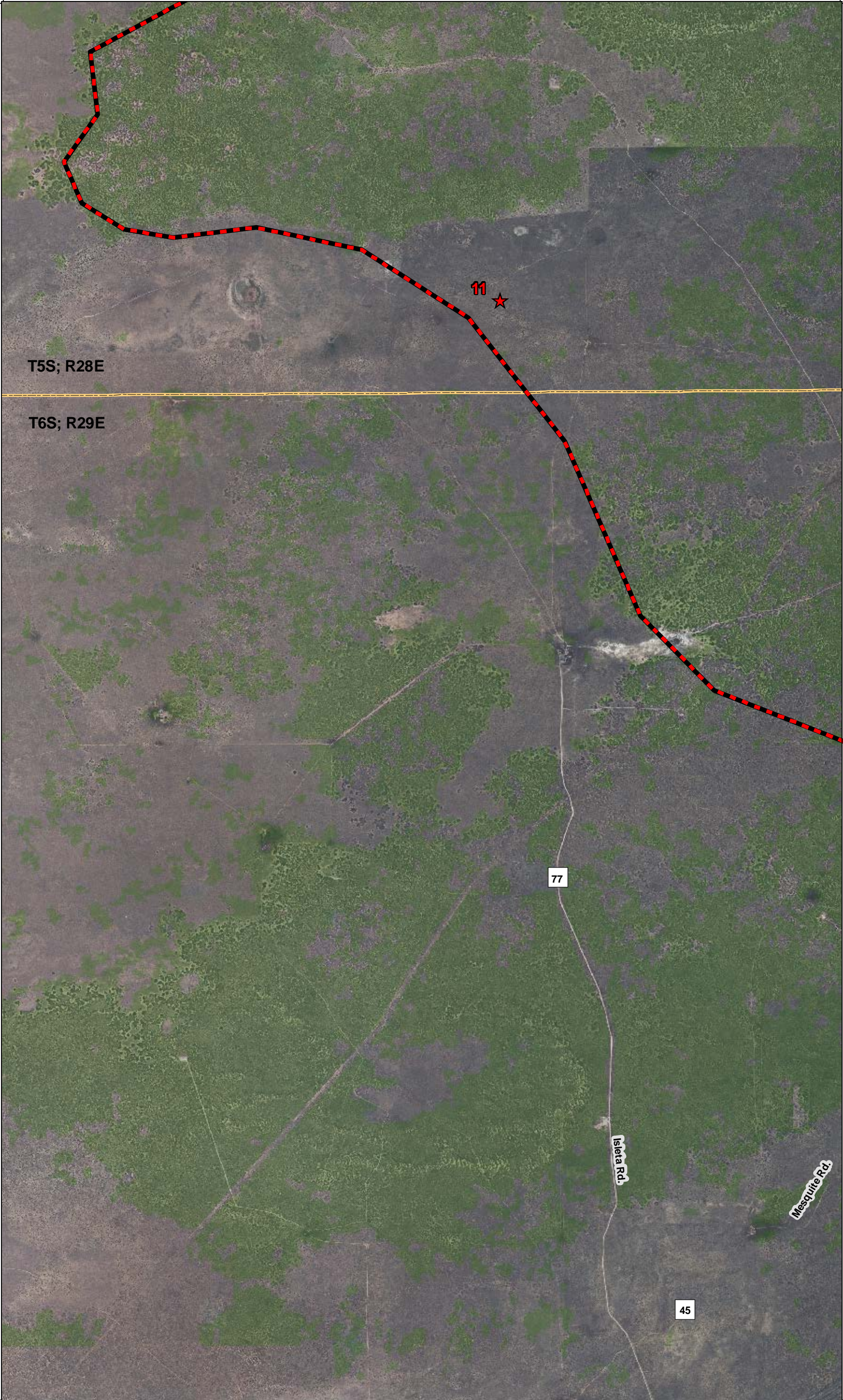
Mesquite Rd.

45

3734400  
589890

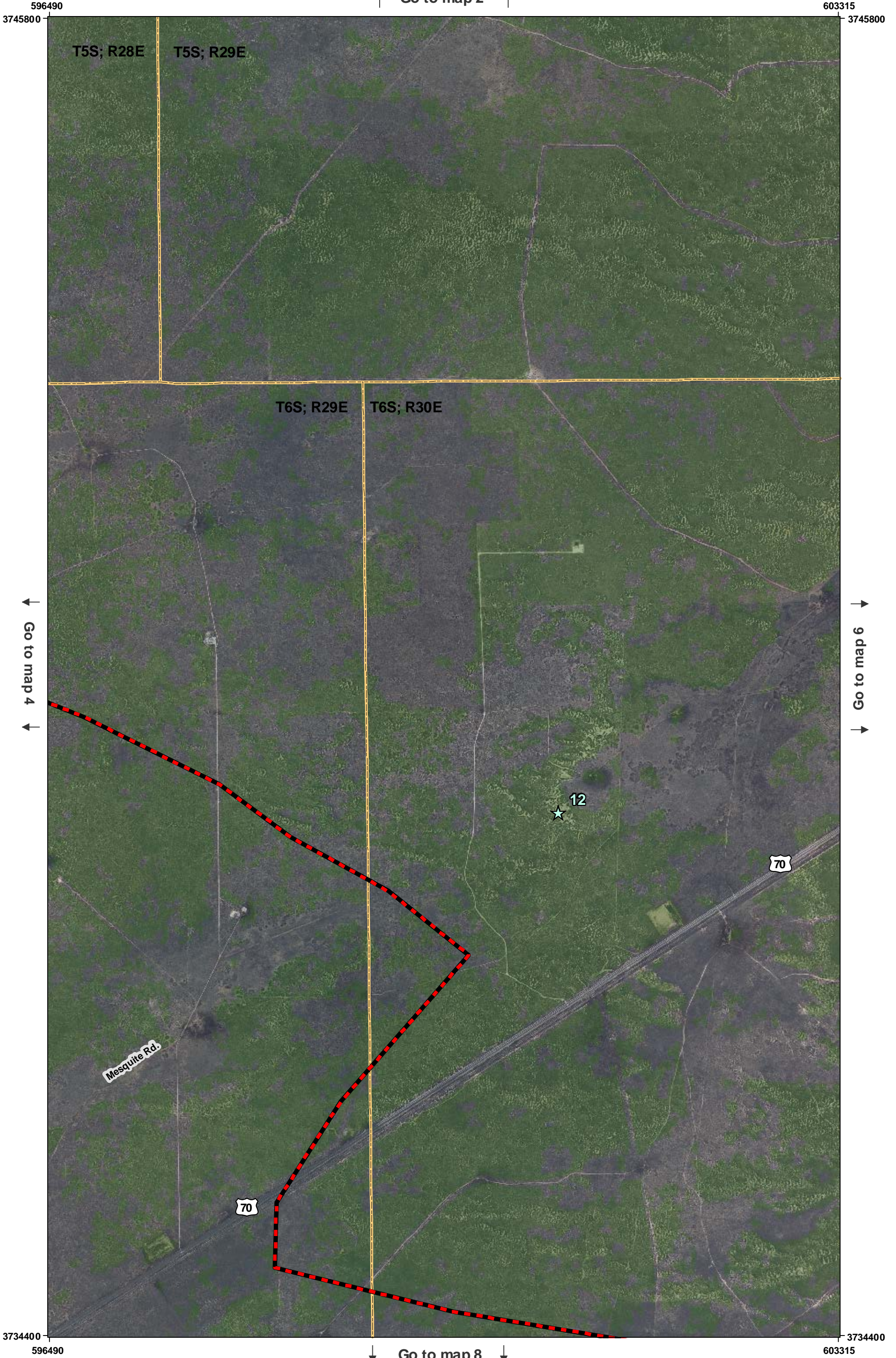
3734400  
596715

0 0.5 1 Miles





↑ Go to map 2 ↑



0 0.5 1 Miles



↑ Go to map 3 ↑

603095  
3745800

609920  
3745800

T5S; R29E

T5S; R30E

13 14  
15

T6S; R30E

T6S; R31E

70

70

32

↑ Go to map 5 ↑

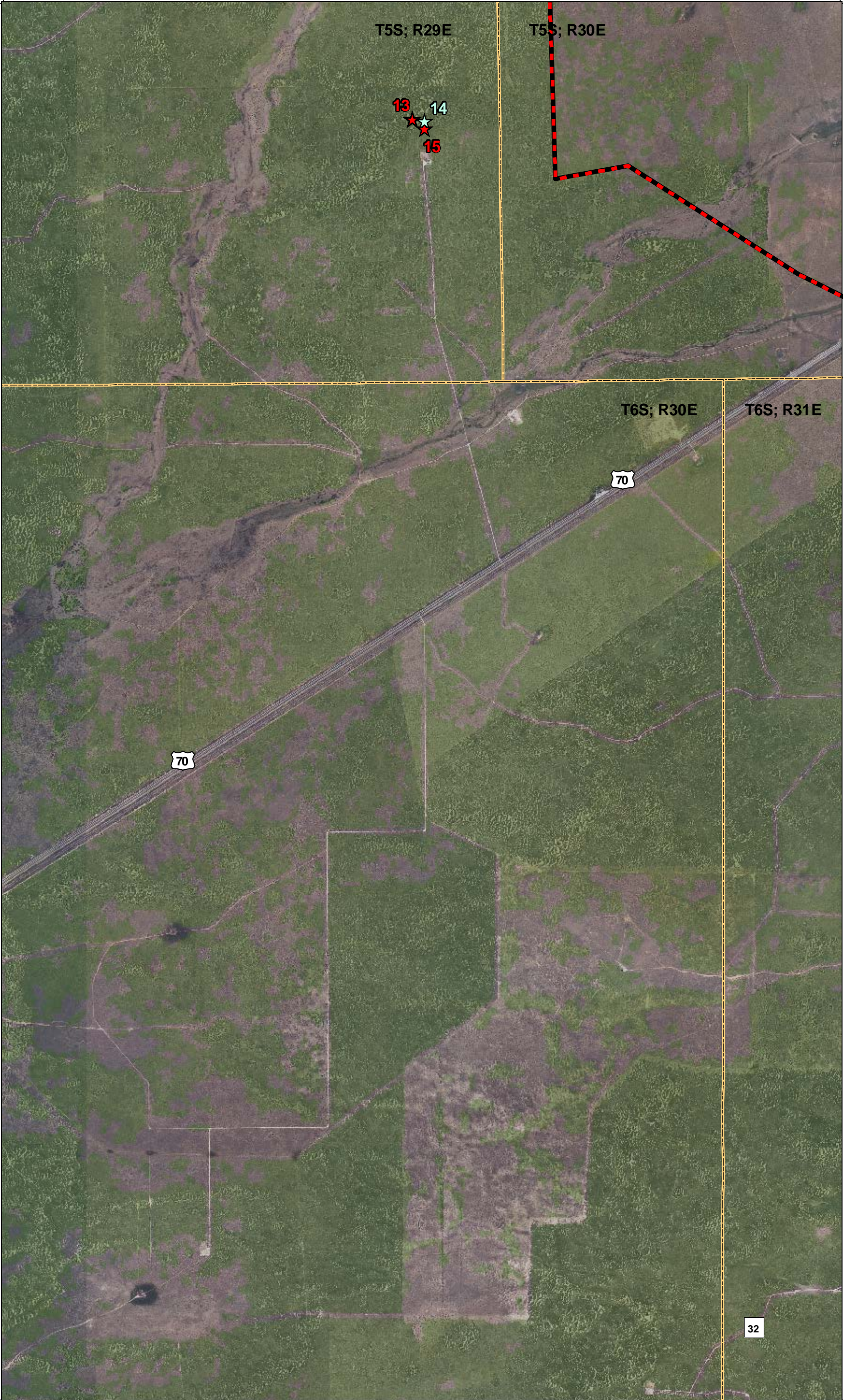
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↓ Go to map 9 ↓

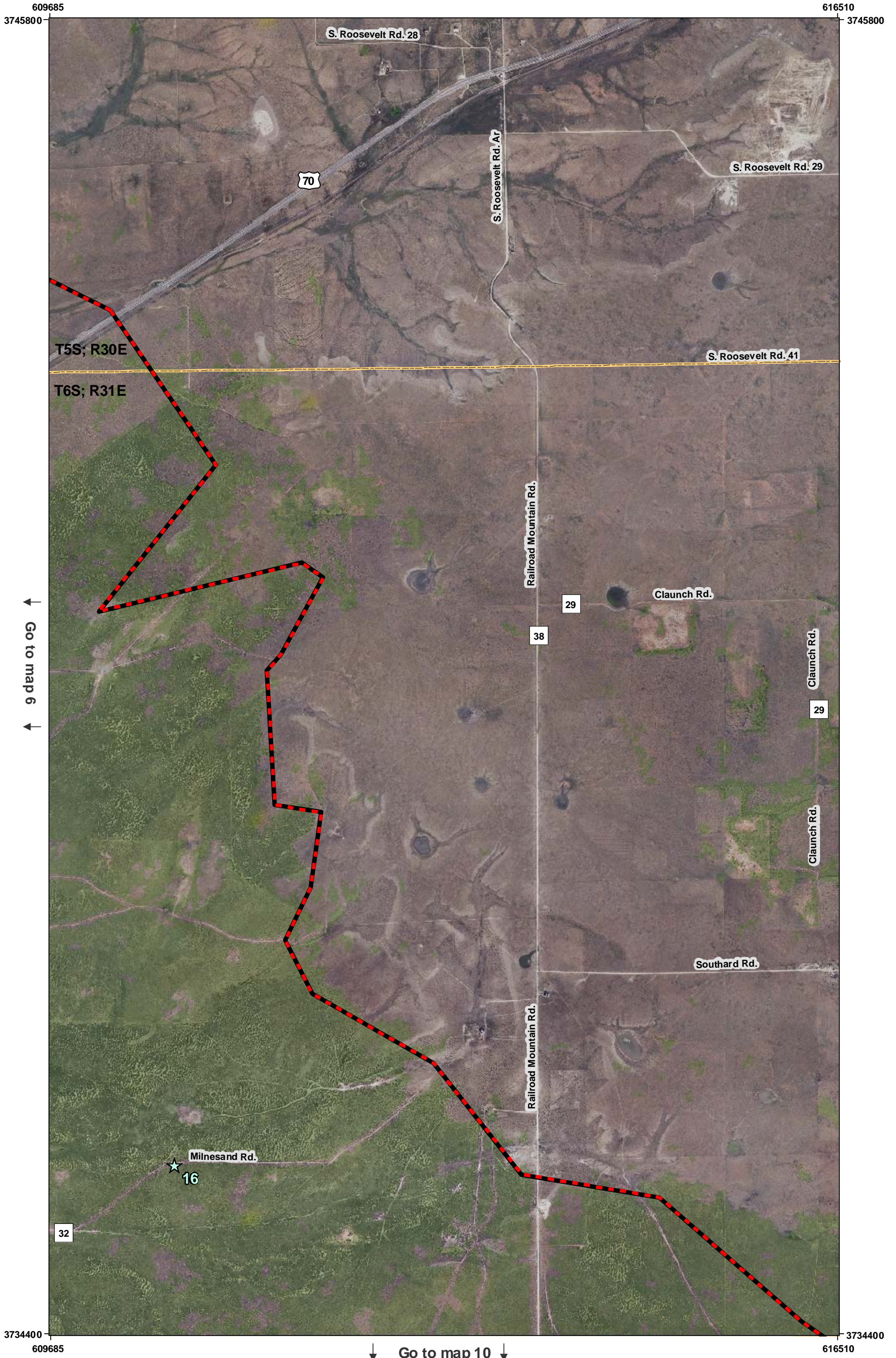
3734400  
603095

3734400  
609920

0 0.5 1 Miles







T5S; R30E

T6S; R31E

S. Roosevelt Rd. 28

S. Roosevelt Rd. 29

S. Roosevelt Rd. 41

S. Roosevelt Rd. Ar

Railroad Mountain Rd.

Claunch Rd.

Claunch Rd.

Claunch Rd.

Southard Rd.

Milnesand Rd.

★ 16

32

29

38

29

Go to map 10

Go to map 6

0 0.5 1 Miles

609685

3745800

616510

3745800

3734400

609685

3734400

616510



↑ Go to map 5 ↑

597430  
3734600

604255  
3734600

T6S; R29E

T6S; R30E

Dora Rd.

T7S; R29E

T7S; R30E

Lingo Rd.

44

Lingo Rd.

Railroad Mountain Rd.

38

T8S; R29E

T8S; R30E

3723200  
597430

3723200  
604255

↓ Go to map 18 ↓

↓ Go to map 9 ↓

0 0.5 1 Miles



↑ Go to map 6 ↑

↑ Go to map 7 ↑

604025  
3734600

610850  
3734600

T7S; R30E

T7S; R31E

32

17

38

Railroad Mountain Rd.

39

Hanover Rd.

T8S; R30E

T8S; R31E

3723200  
604025

3723200  
610850

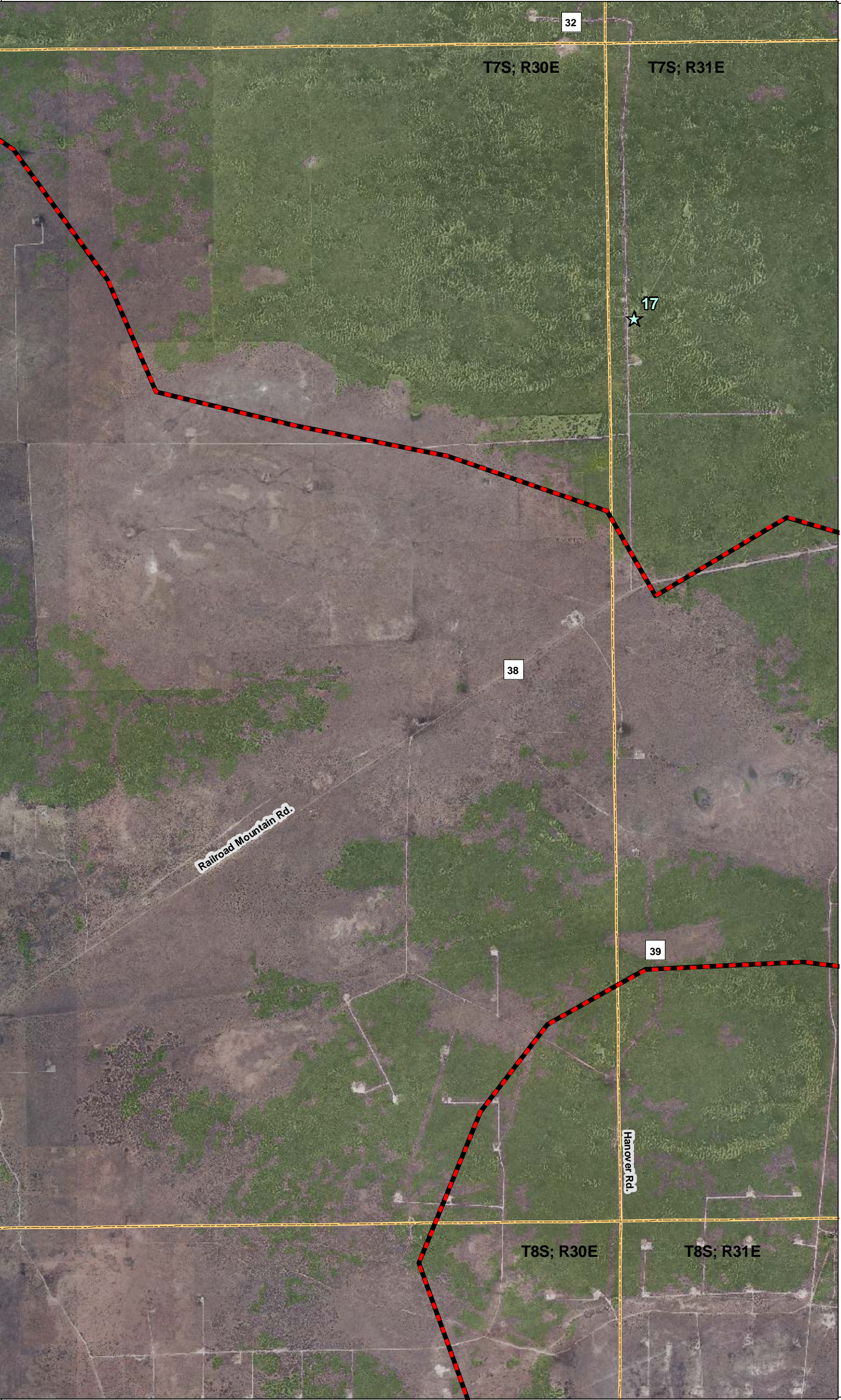
↓ Go to map 18 ↓

↓ Go to map 19 ↓

0 0.5 1 Miles

↑ Go to map 8 ↑

↓ Go to map 10 ↓





↑ Go to map 7 ↑

610625  
3734600

617450  
3734600

T7S; R31E

38

34

Railroad Mountain Rd.

Moon Ranch Rd.

18 ★

19 ★

20 ★

T8S; R31E

3723200  
610625

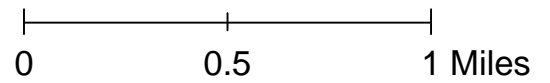
3723200  
617450

↑ Go to map 9 ↑

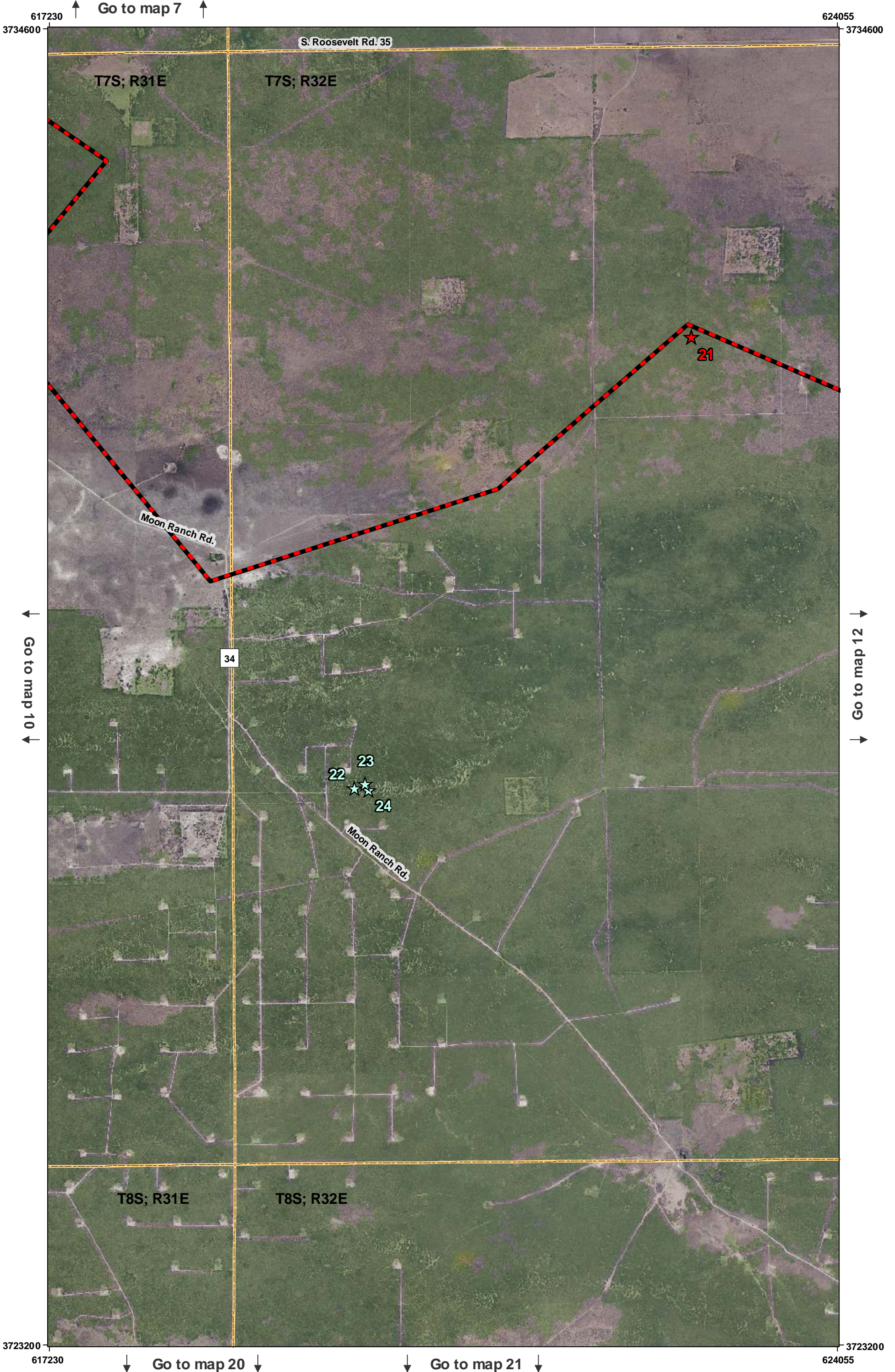
↓ Go to map 11 ↓

↓ Go to map 19 ↓

↓ Go to map 20 ↓







↑ Go to map 7 ↑

617230  
3734600

624055  
3734600

S. Roosevelt Rd. 35

T7S; R31E

T7S; R32E

Moon Ranch Rd.

34

21

22

23

24

Moon Ranch Rd.

T8S; R31E

T8S; R32E

617230  
3723200

624055  
3723200

↓ Go to map 20 ↓

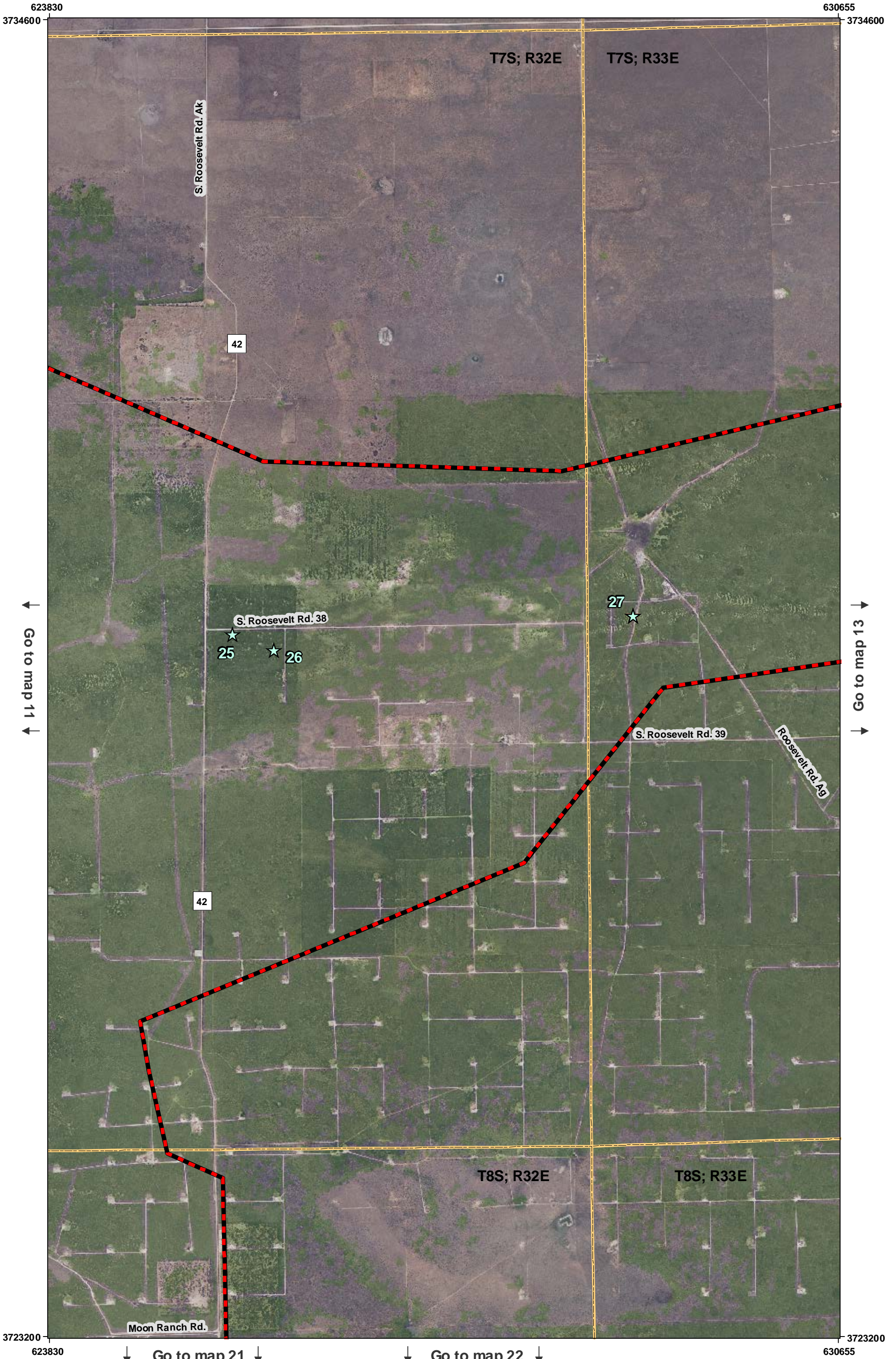
↓ Go to map 21 ↓

0 0.5 1 Miles

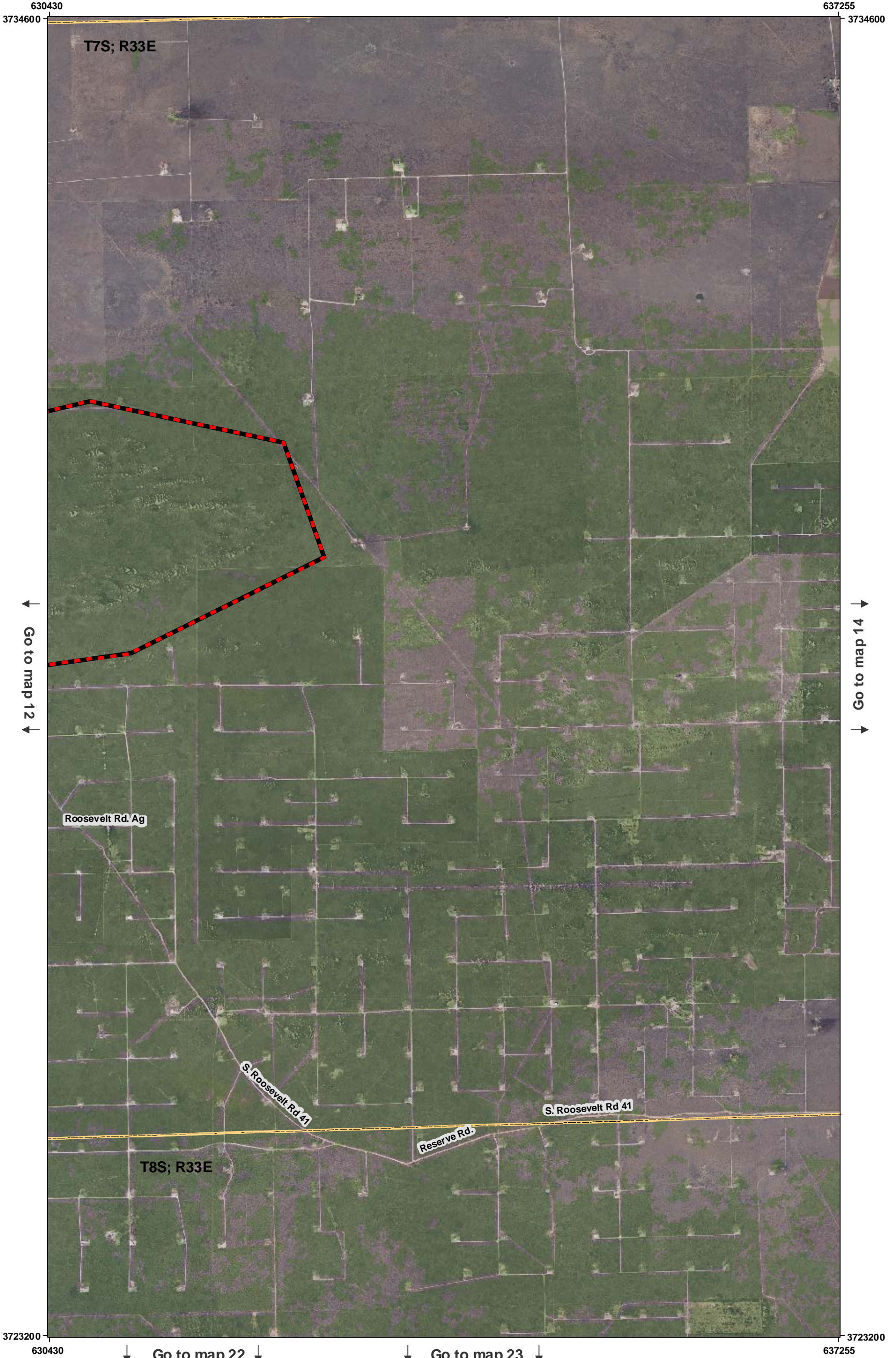
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↓ Go to map 12 ↓

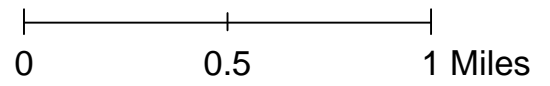














643630  
3734600

650455  
3734600

T7S; R34E

T7S; R35E

↑ Go to map 14 ↓

↑ Go to map 16 ↓

S. Roosevelt Rd. 39

T8S; R34E

T8S; R35E

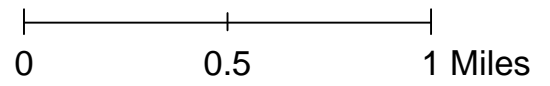
3723200  
643630

3723200  
650455

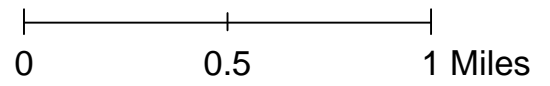
258

0 0.5 1 Miles











↑ Go to map 8 ↑

↑ Go to map 9 ↑

599500  
3723400

606325  
3723400

T8S; R30E

73

39

↓ Go to map 19 ↓

T8S; R30E

Cato R.d.

3712000  
599500

3712000  
606325

↓ Go to map 25 ↓

0 0.5 1 Miles



↑ Go to map 9 ↑

↑ Go to map 10 ↑

606105  
3723400

612930  
3723400

T8S; R30E

T8S; R31E

39

39

39

40

Hanover Rd.

Nogeezi Rd.

C2-040

40

↑ Go to map 18 ↑

↓ Go to map 20 ↓

T9S; R30E

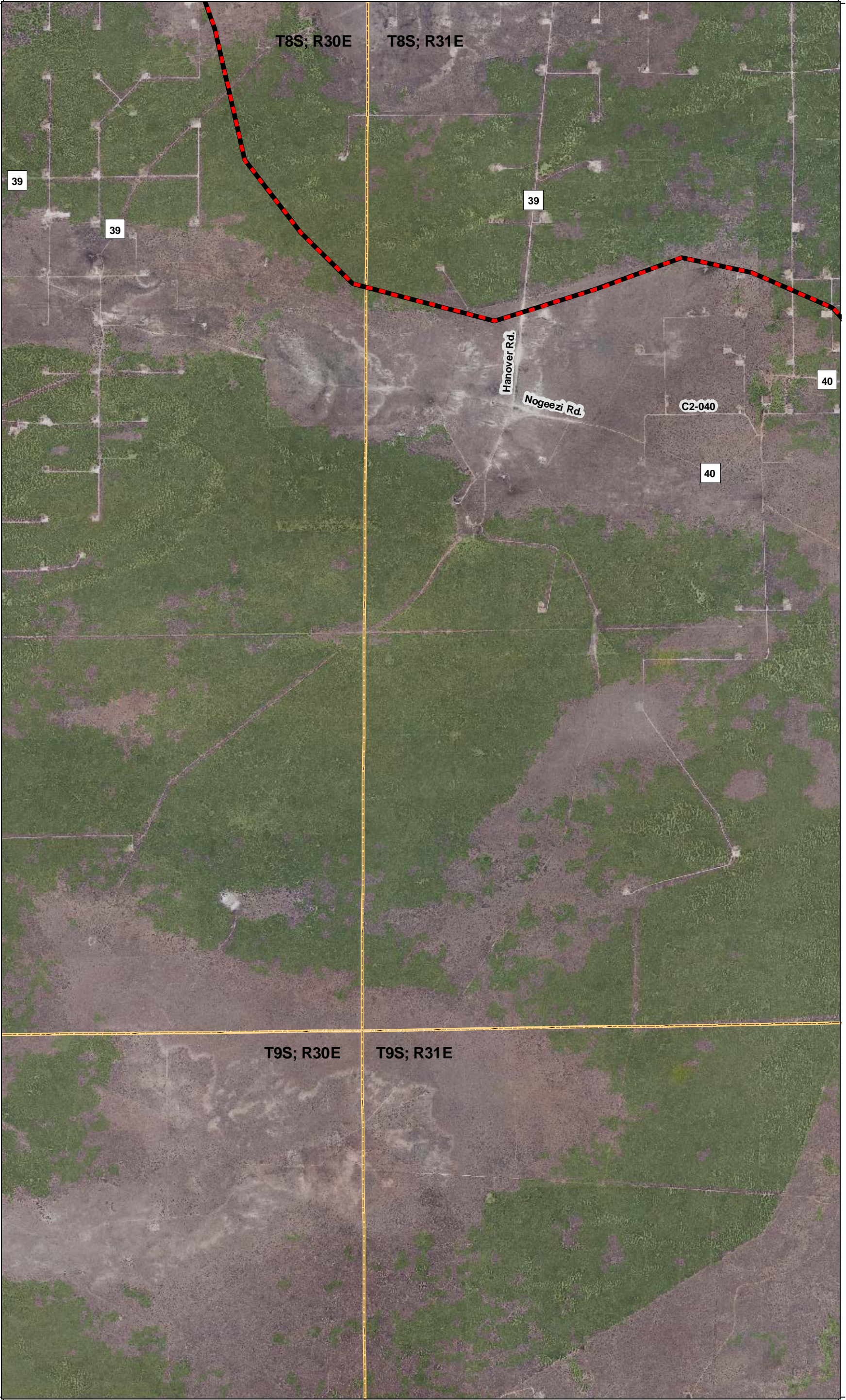
T9S; R31E

3712000  
606105

3712000  
612930

↓ Go to map 26 ↓

0 0.5 1 Miles





↑ Go to map 10 ↑

↑ Go to map 11 ↑

612700  
3723400

619525  
3723400

T8S; R31E

T8S; R32E

40

Nogeezi Rd.

40

Nogeezi Rd.

↑ Go to map 19 ↑

↓ Go to map 21 ↓

T9S; R31E

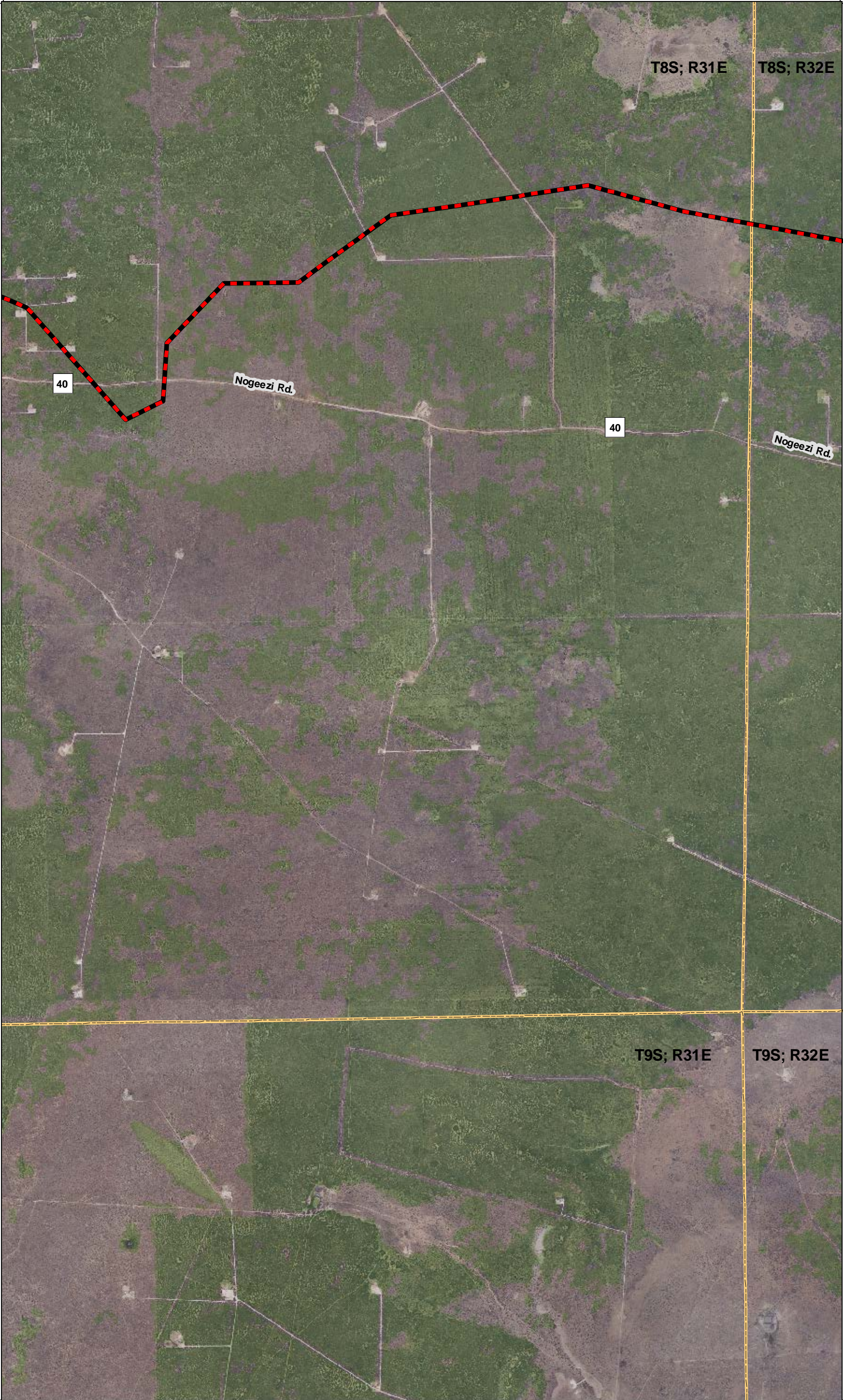
T9S; R32E

3712000  
612700

3712000  
619525

↓ Go to map 27 ↓

0 0.5 1 Miles





↑ Go to map 11 ↑

↑ Go to map 12 ↑

619300  
3723400

626125  
3723400

T8S; R32E

Moon Ranch Rd.

Reserve Rd.

Moon Ranch Rd.

Nogeezi Rd.

40

43

43

42

↑ Go to map 20 ↑

↓ Go to map 22 ↓

T9S; R32E

Carina Ln.

619300  
3712000

626125  
3712000

↓ Go to map 28 ↓

0 0.5 1 Miles



↑ Go to map 12 ↑

↑ Go to map 13 ↑

625905  
3723400

632730  
3723400

T8S; R32E

T8S; R33E

43

Ledoux Rd.

43

↑ Go to map 21 ↑

↓ Go to map 23 ↓

T9S; R32E

T9S; R33E

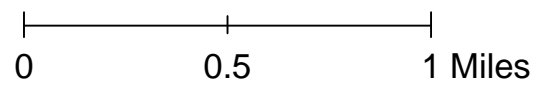
Ruidoso Rd.

Tobac Rd.

3712000  
625905

3712000  
632730

↓ Go to map 29 ↓





↑ Go to map 13 ↑

↑ Go to map 14 ↑

632500  
3723400

639325  
3723400

T8S; R33E

T8S; R34E

S. Roosevelt Rd. Y

Lamesa Rd.

Ledoux Rd.

43

↑ Go to map 22 ↓

T9S; R32E

T9S; R33E

T-170

Tobac Rd.

T-170

3712000  
632500

3712000  
639325

↓ Go to map 30 ↓

0 0.5 1 Miles



592915  
3712205

599740  
3712205

T9S; R29E

T10S; R29E

Queamado Rd.

248

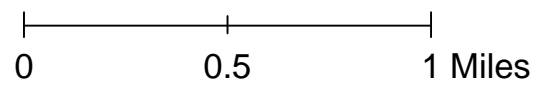
Queando Rd.

↓ Go to map 25 ↓

↓ Go to map 36 ↓

3700805  
592915

3700805  
599740





↑ Go to map 18 ↑

599500  
3712205

606325  
3712205

T9S; R30E

Cato Rd.

↑ Go to map 24 ↑

↓ Go to map 26 ↓

T10S; R30E

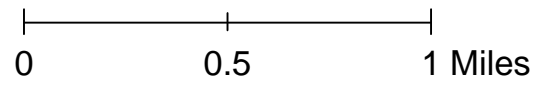
65

3700805  
599500

3700805  
606325

↓ Go to map 37 ↓

33





↑ Go to map 19 ↑

606105  
3712205

612930  
3712205

T9S; R30E

T9S; R31E

↑ Go to map 25 ↓

↓ Go to map 27 ↓

T10S; R30E

T10S; R31E

3700805  
606105

3700805  
612930

↓ Go to map 38 ↓

Mathers Rd.

34

38

43

42

44

39

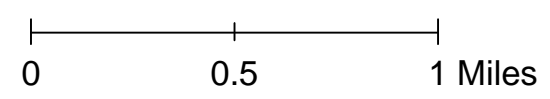
41

45

36

37

40



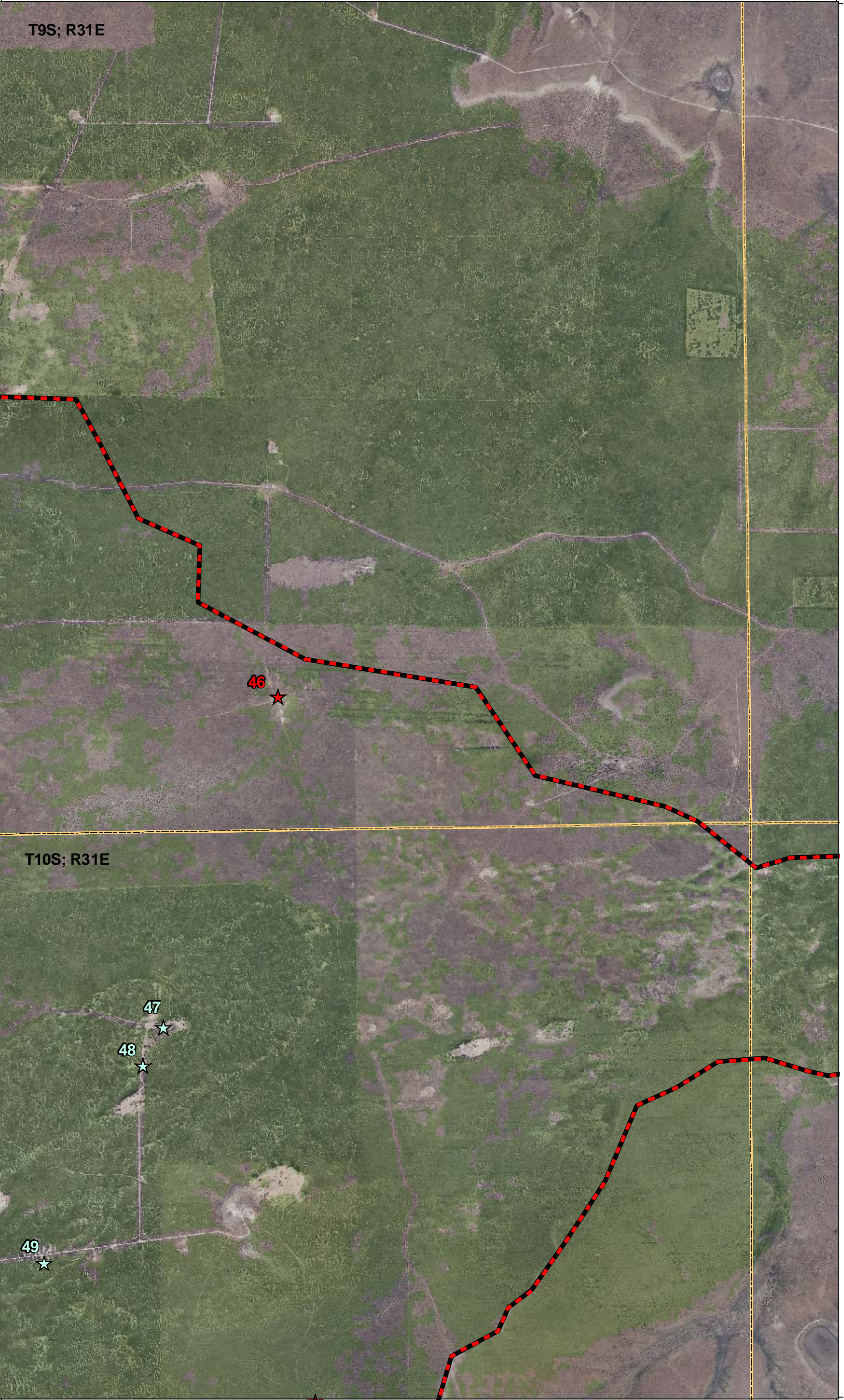


↑ Go to map 20 ↑

612700  
3712205

619525  
3712205

T9S; R31E



↑ Go to map 26 ↓

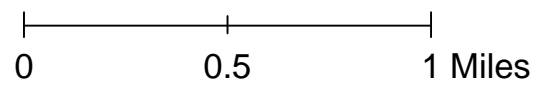
↓ Go to map 28 ↓

T10S; R31E

3700805  
612700

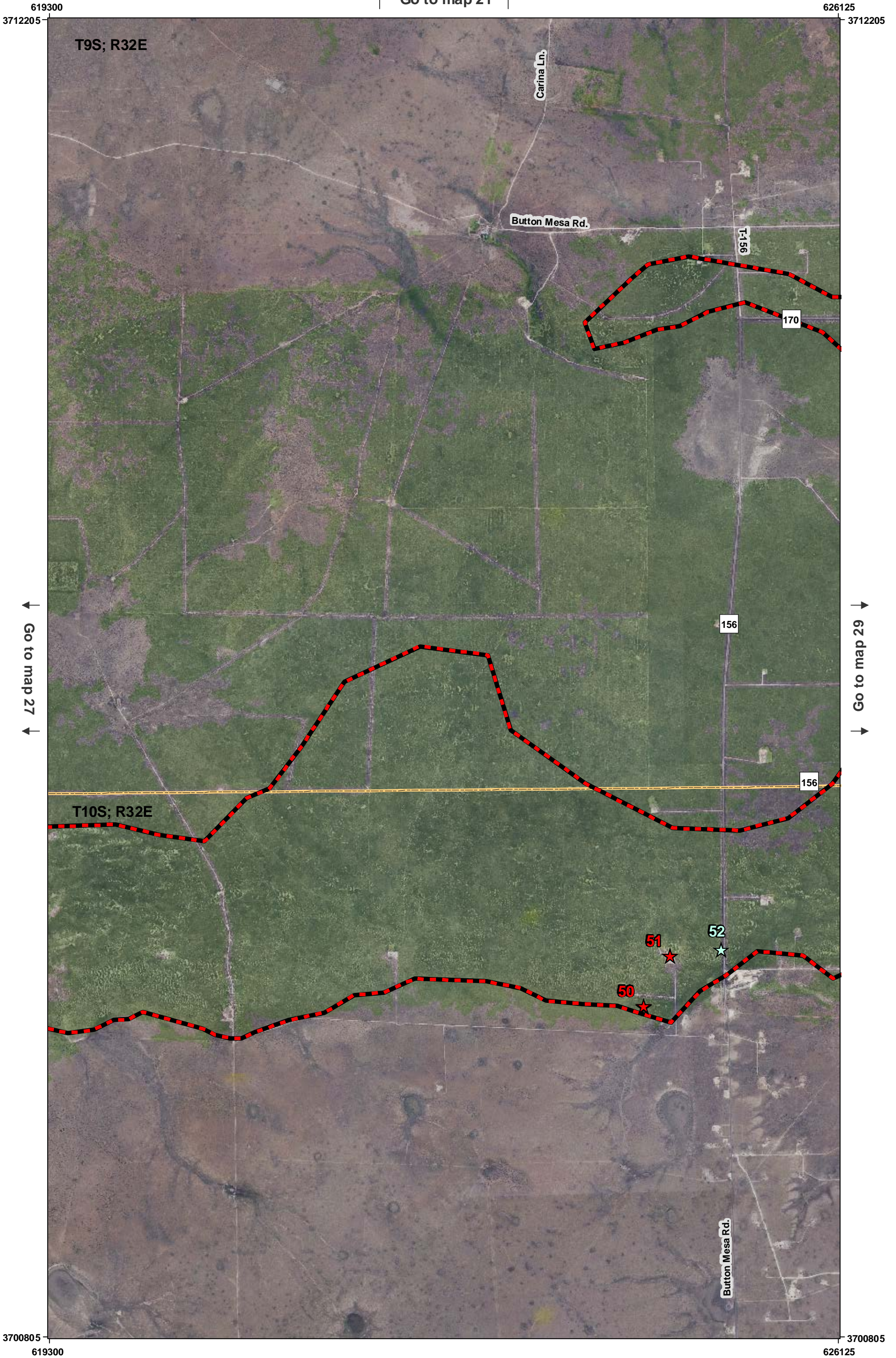
3700805  
619525

↓ Go to map 39 ↓





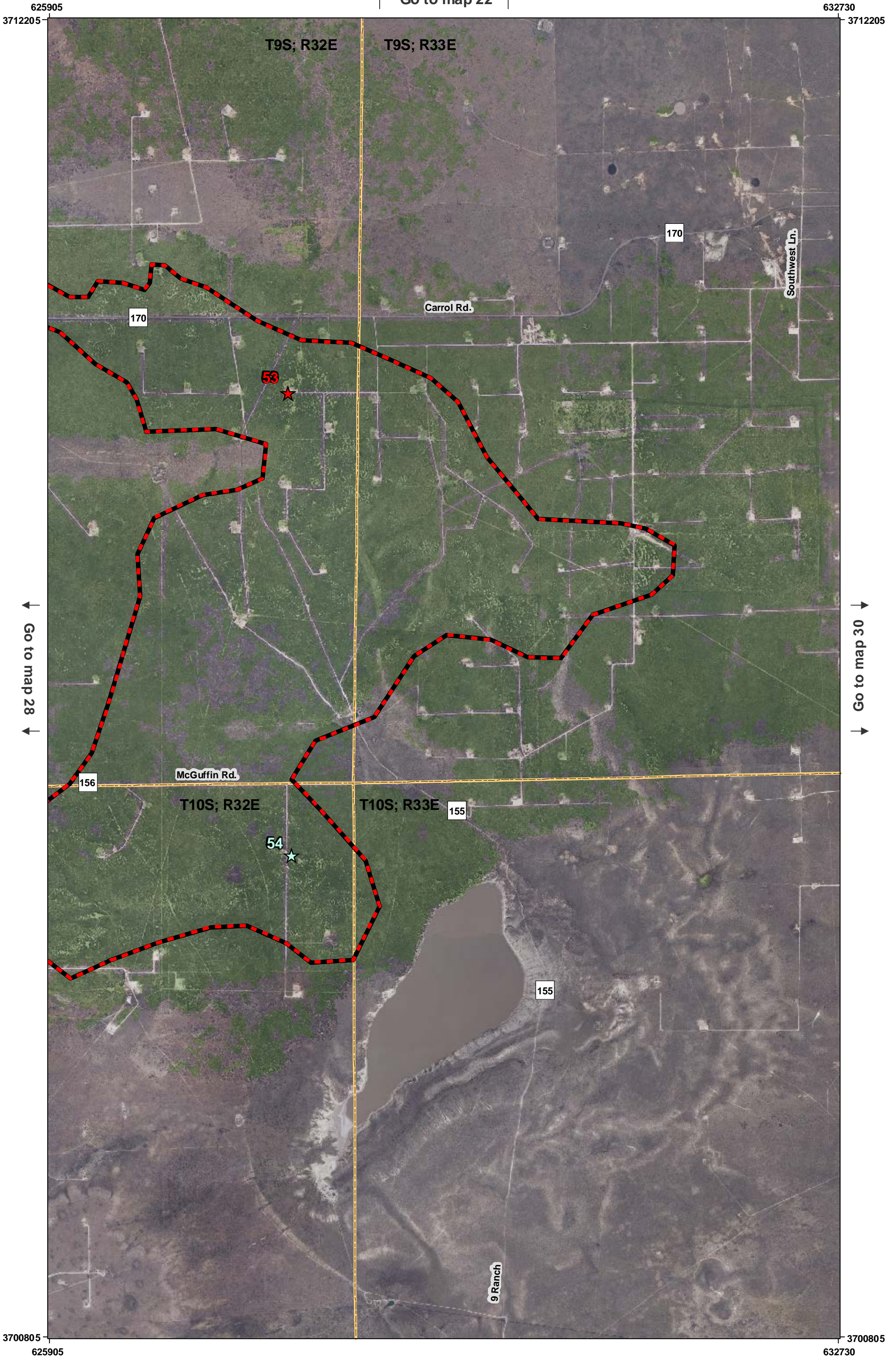
↑ Go to map 21 ↑



0 0.5 1 Miles

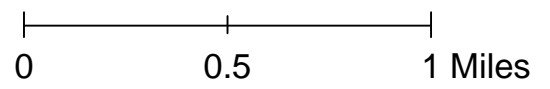


↑ Go to map 22 ↑



↑ Go to map 28 ↓

↓ Go to map 30 ↓

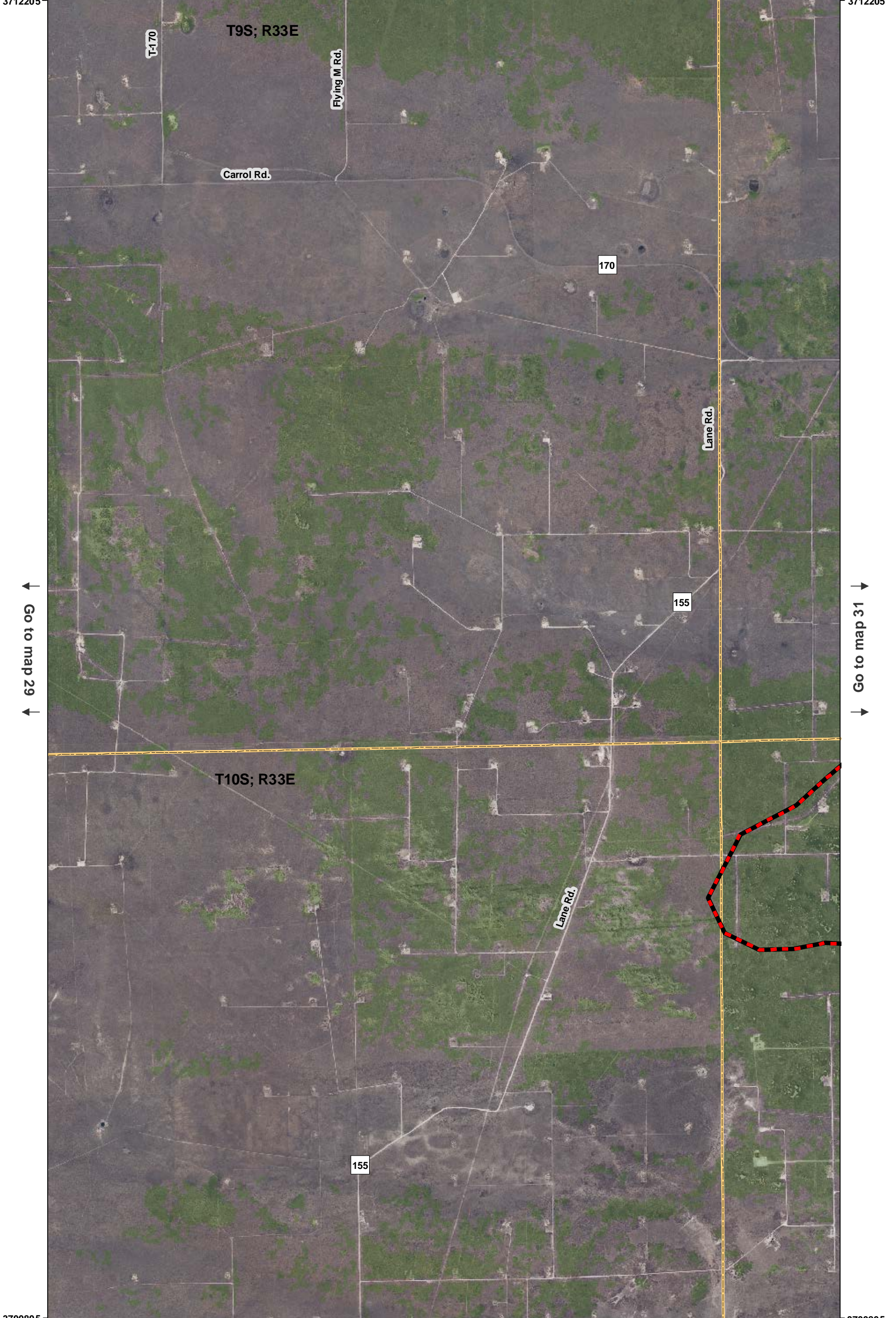




↑ Go to map 23 ↑

632500  
3712205

639325  
3712205

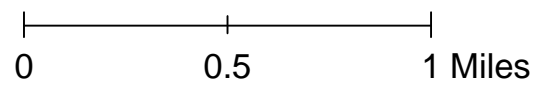


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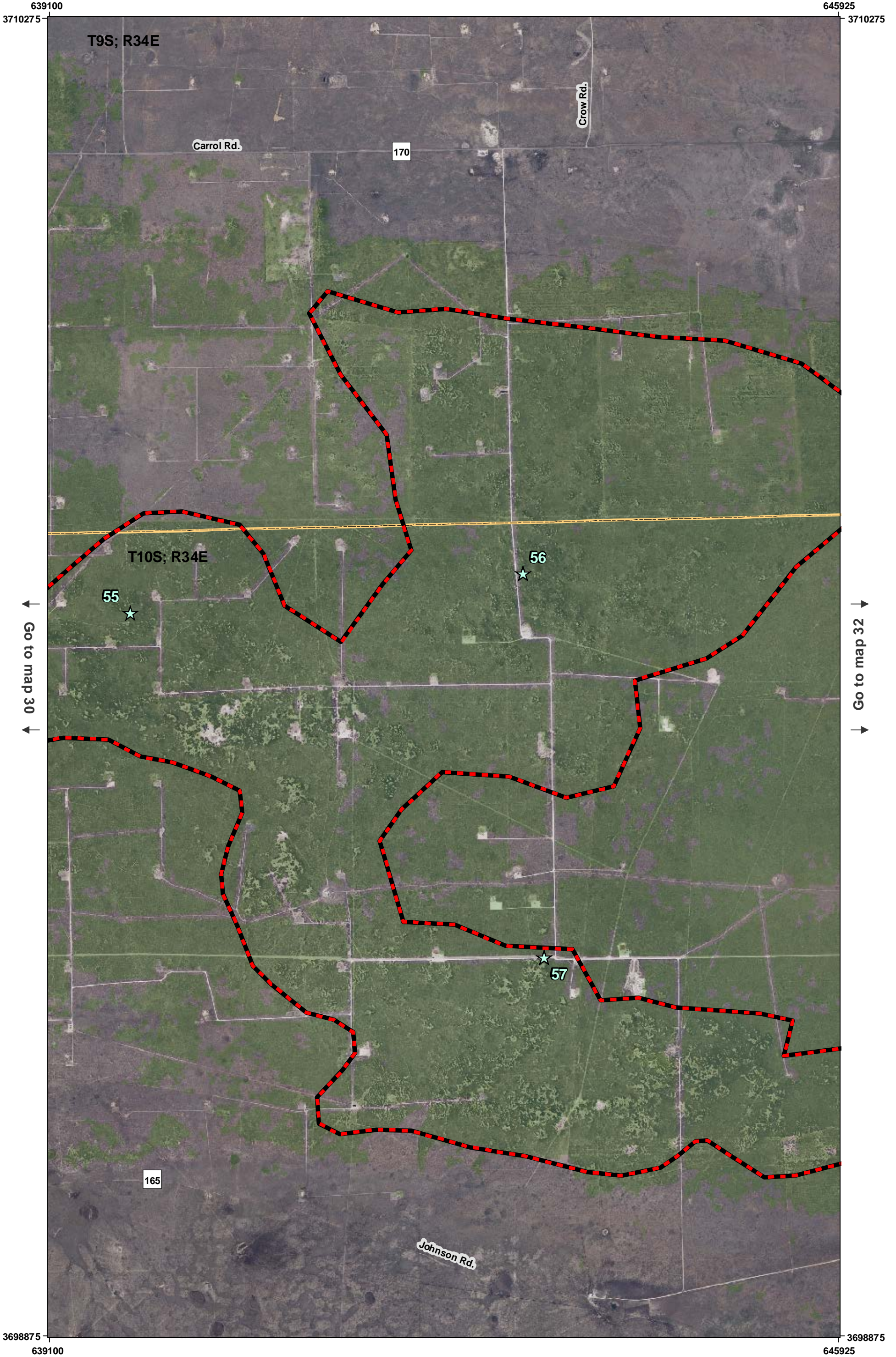
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3700805  
632500

3700805  
639325

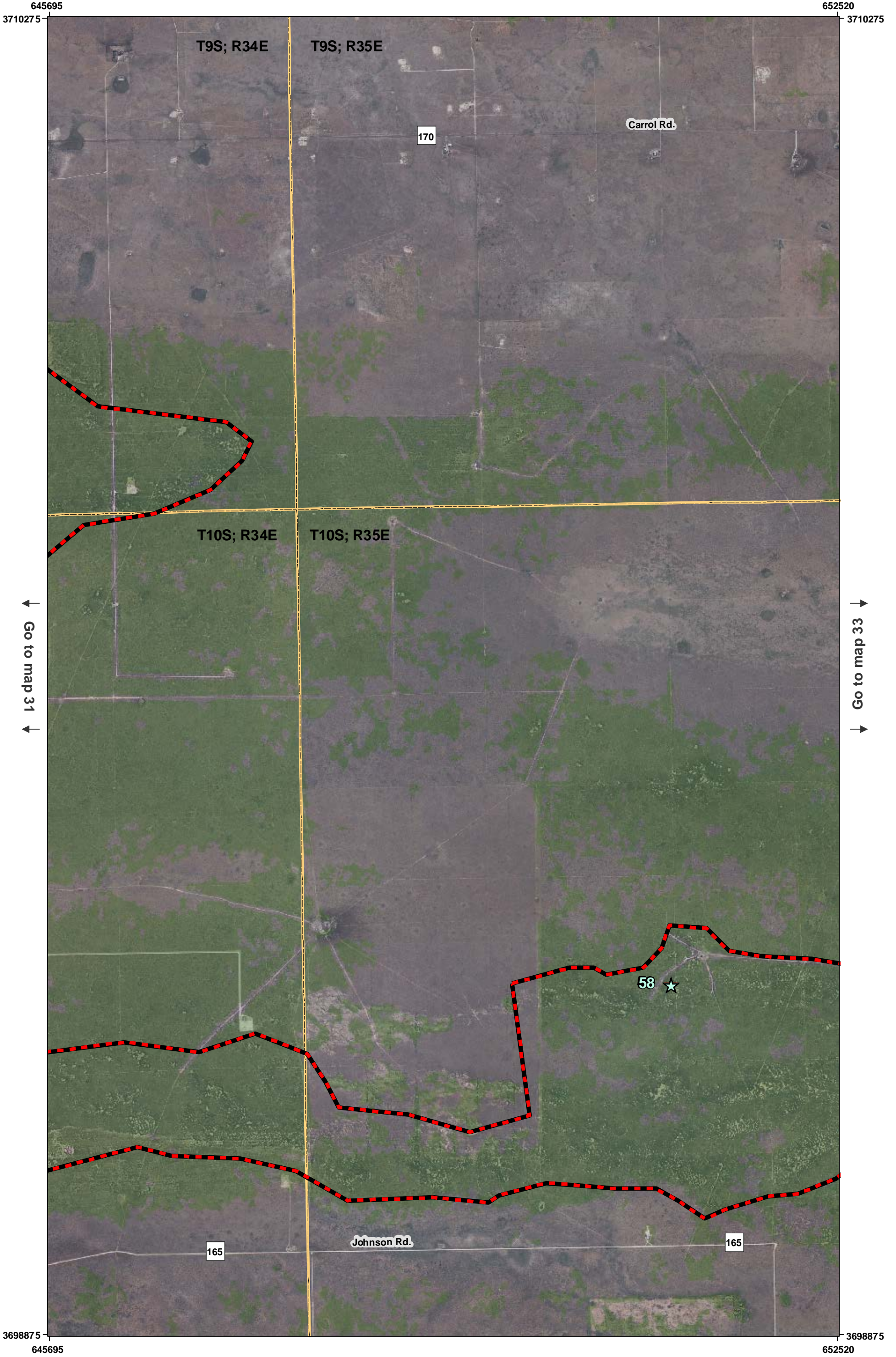




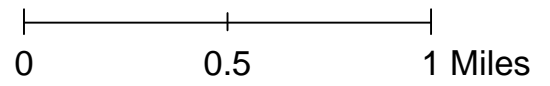
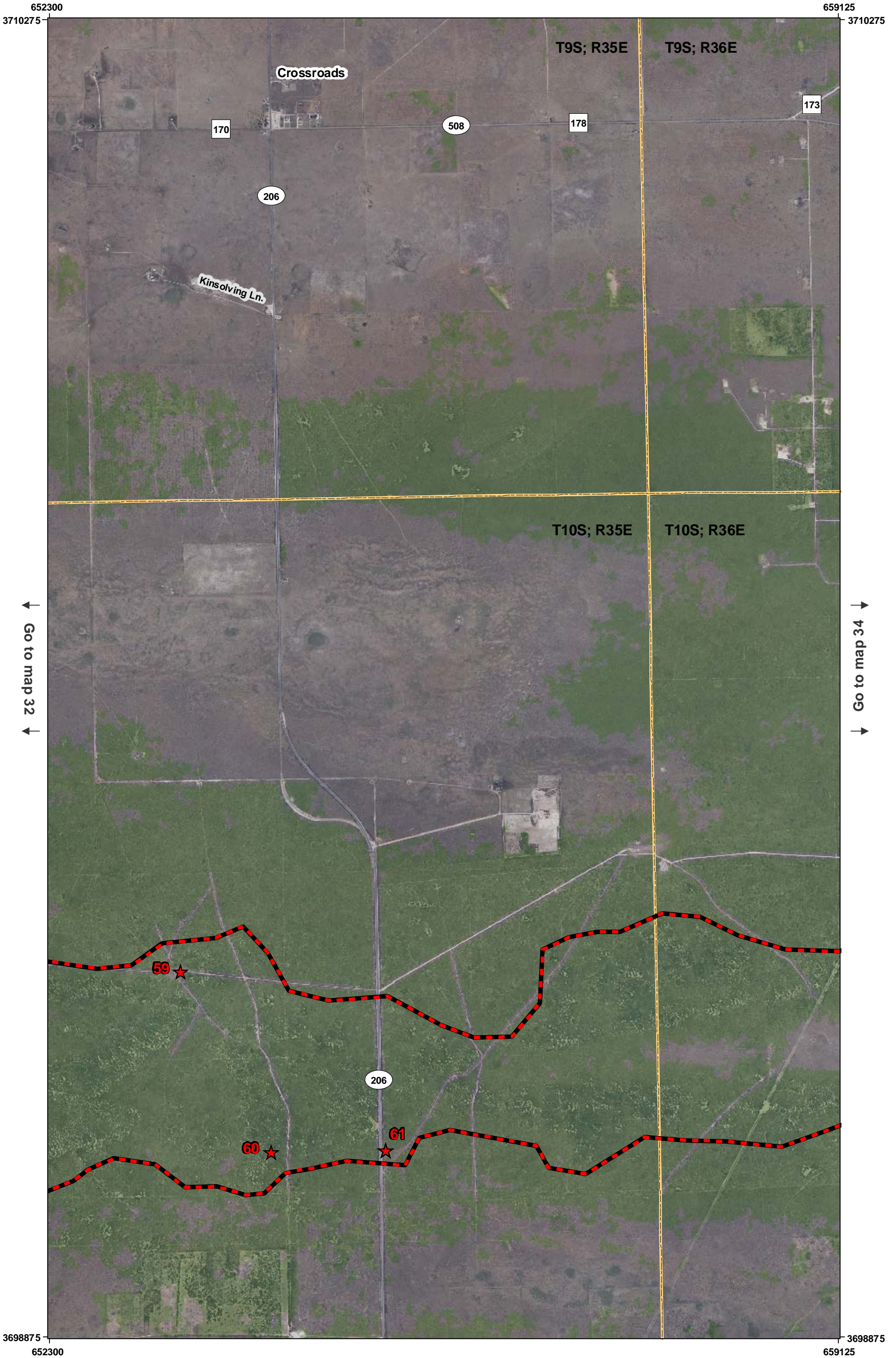


0 0.5 1 Miles

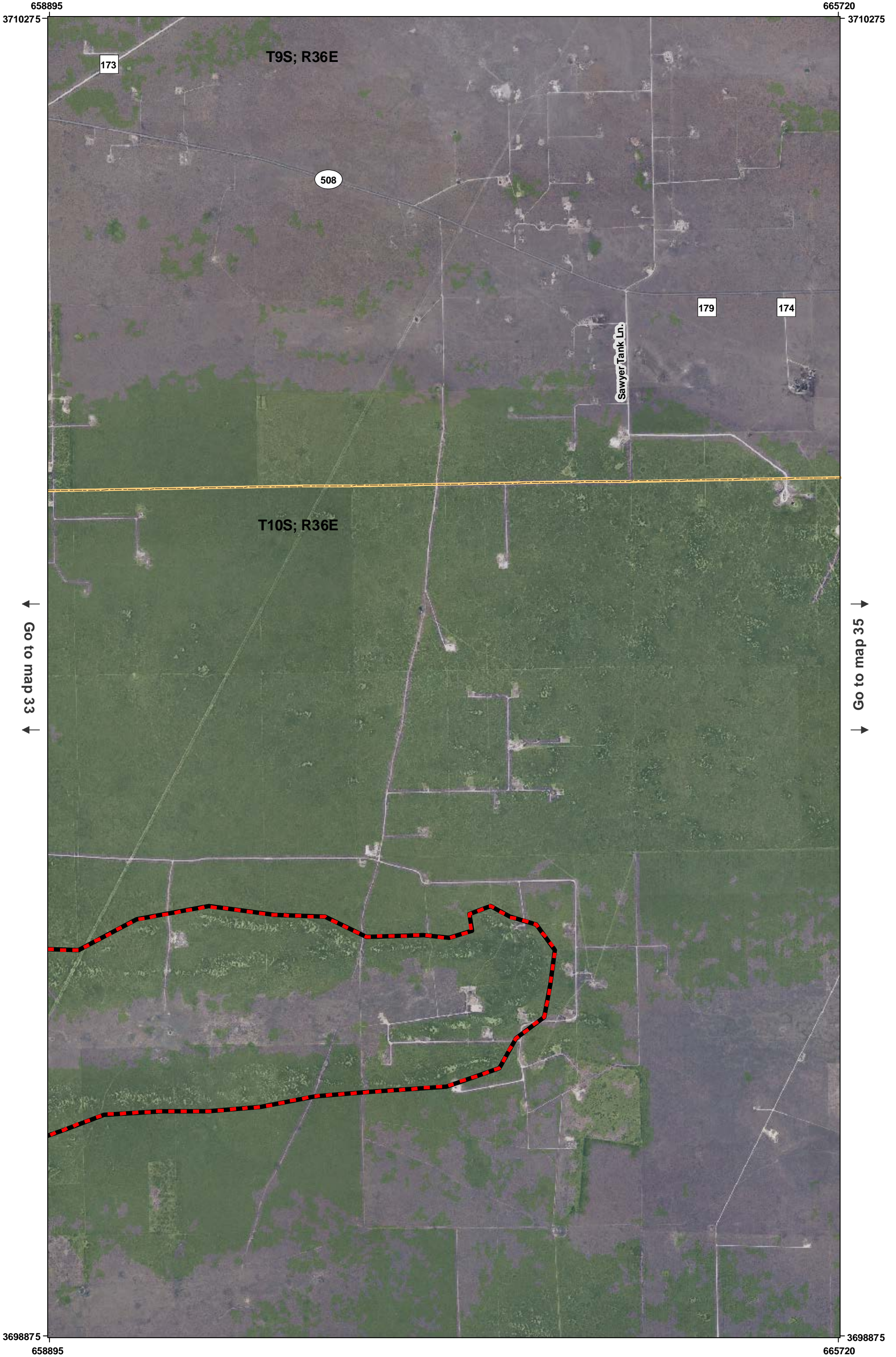




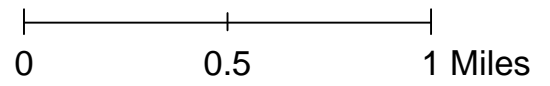






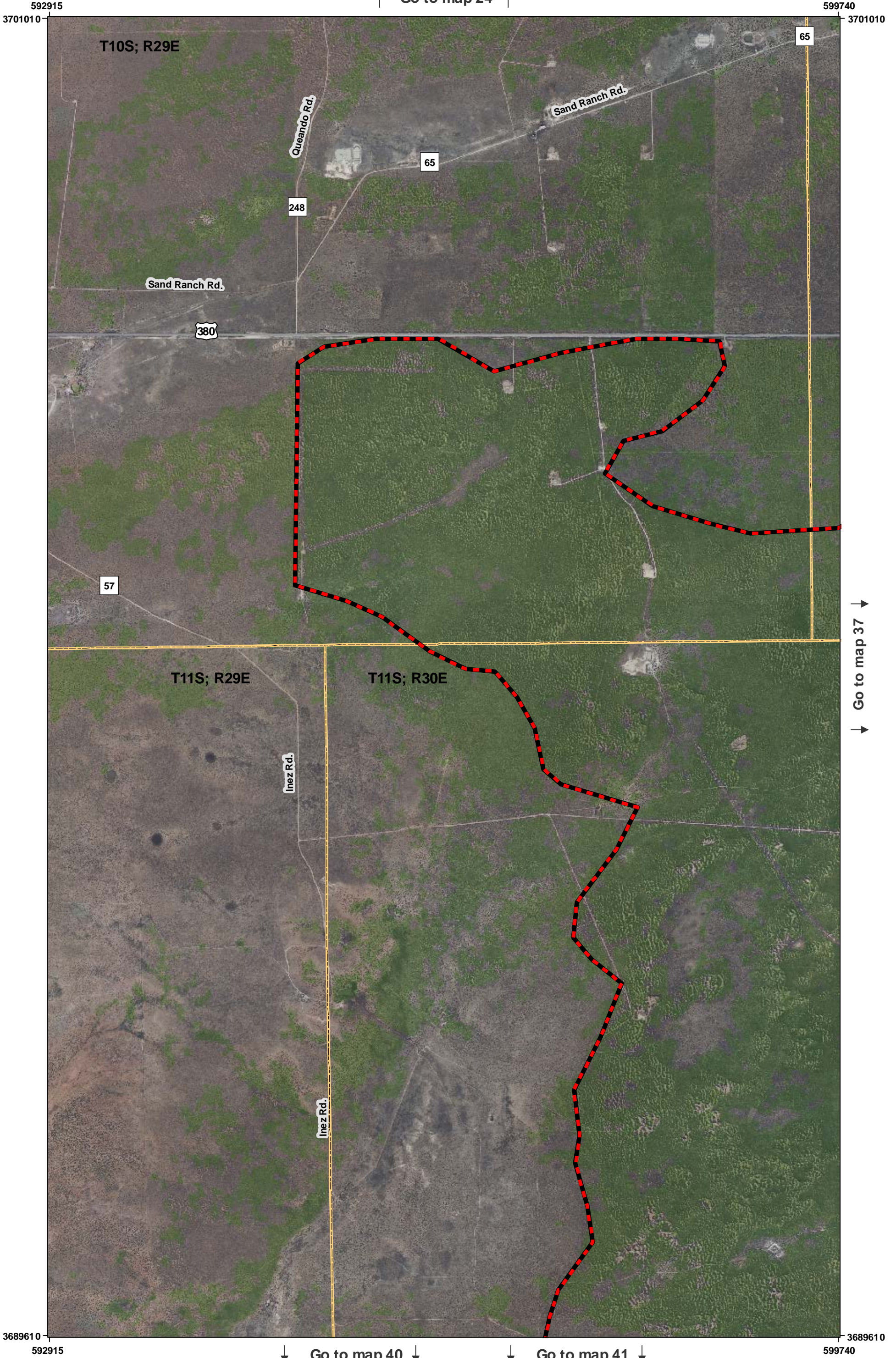








↑ Go to map 24 ↑



↓ Go to map 37 ↓

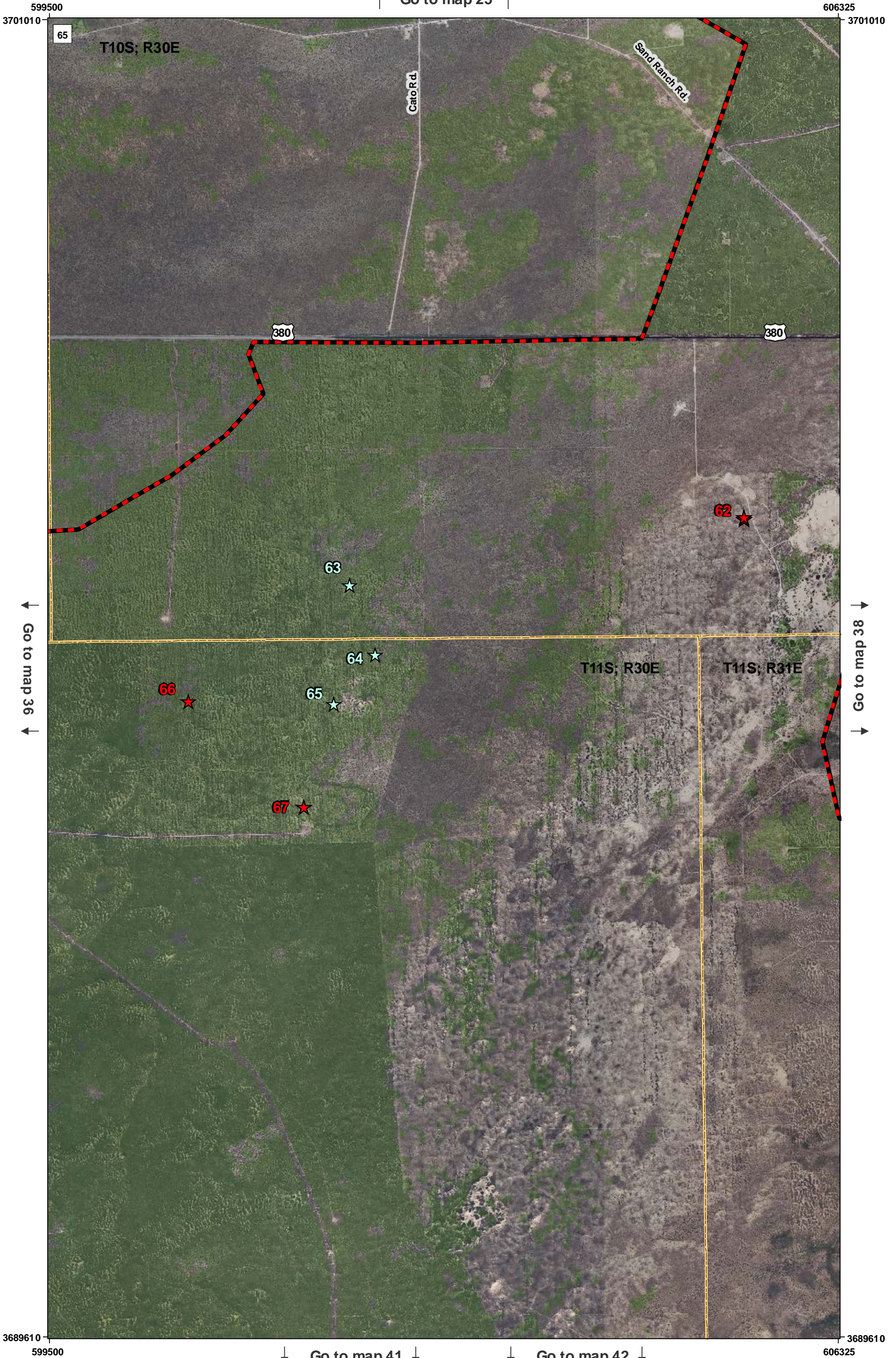
↓ Go to map 40 ↓

↓ Go to map 41 ↓

0 0.5 1 Miles



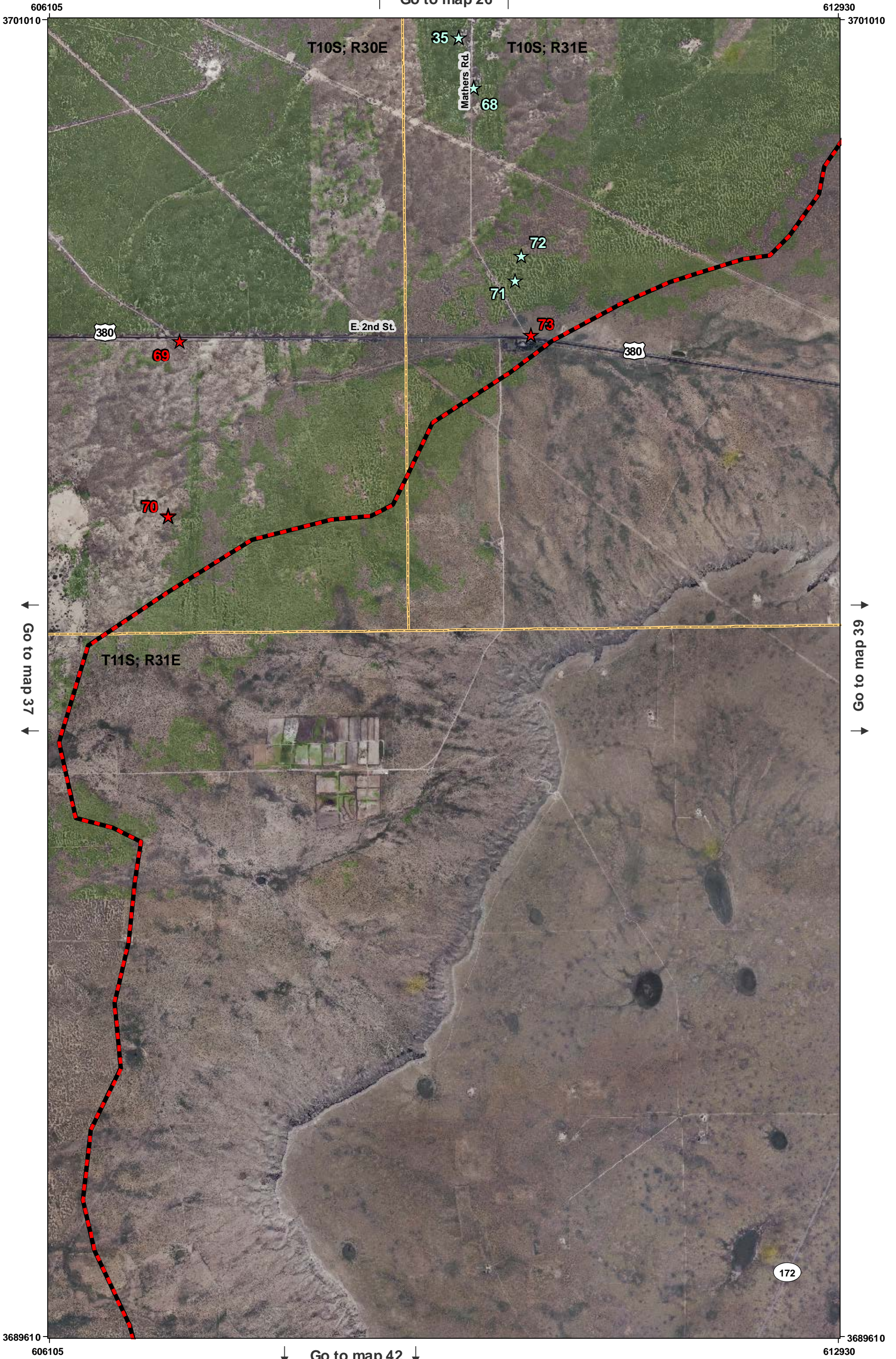
↑ Go to map 25 ↑



0 0.5 1 Miles



↑ Go to map 26 ↑





↑ Go to map 27 ↑

612700  
3701010

619525  
3701010

74 ★

T10S; R32E

75 ★

380

172

380

T11S; R31E

T11S; R32E

Tower Rd.

T-159

Eclipse Loop

172

3689610  
612700

3689610  
619525

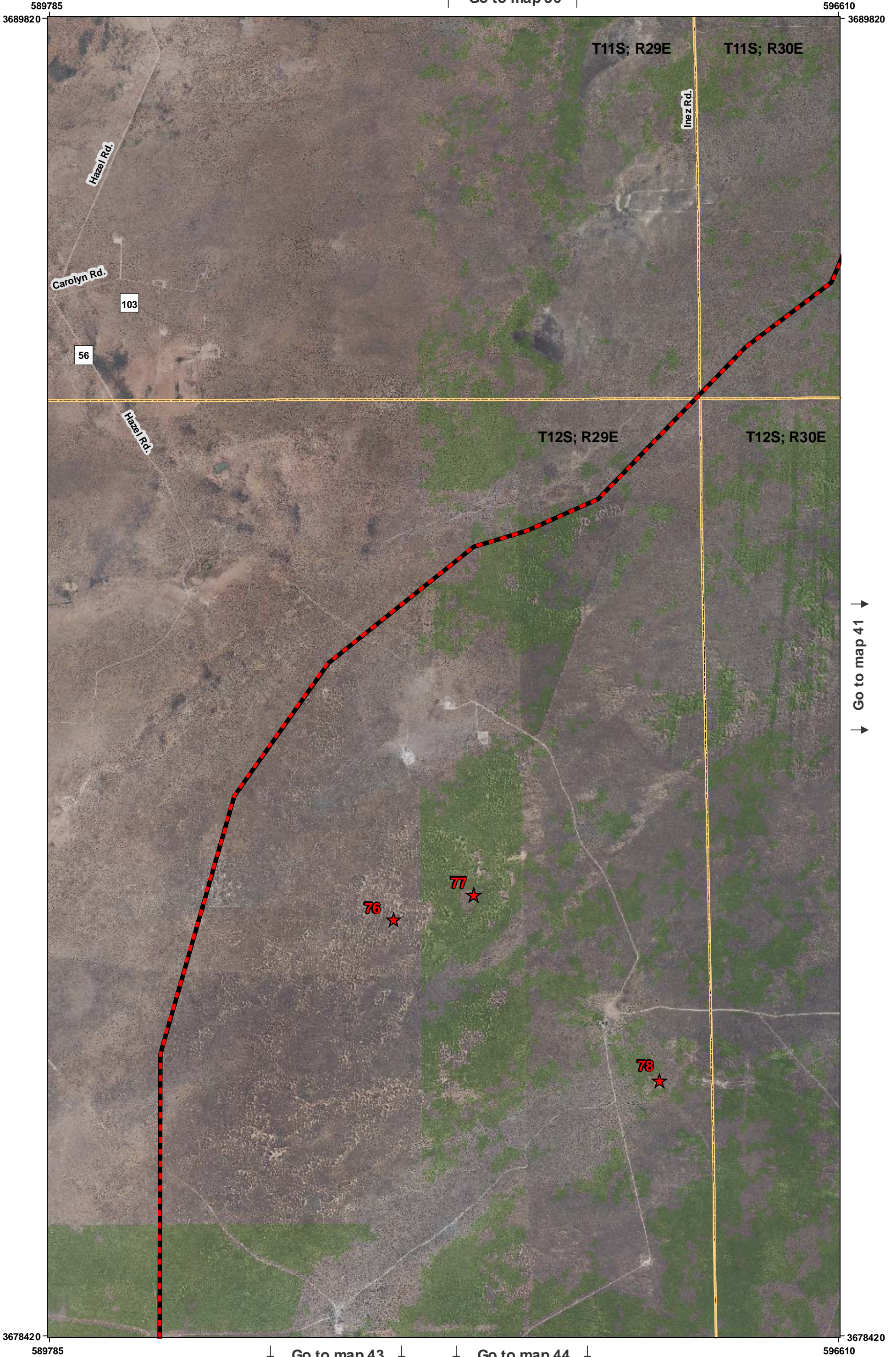
0 0.5 1 Miles

↑ Go to map 38 ↓





↑ Go to map 36 ↑



↓ Go to map 41 ↓

↓ Go to map 43 ↓

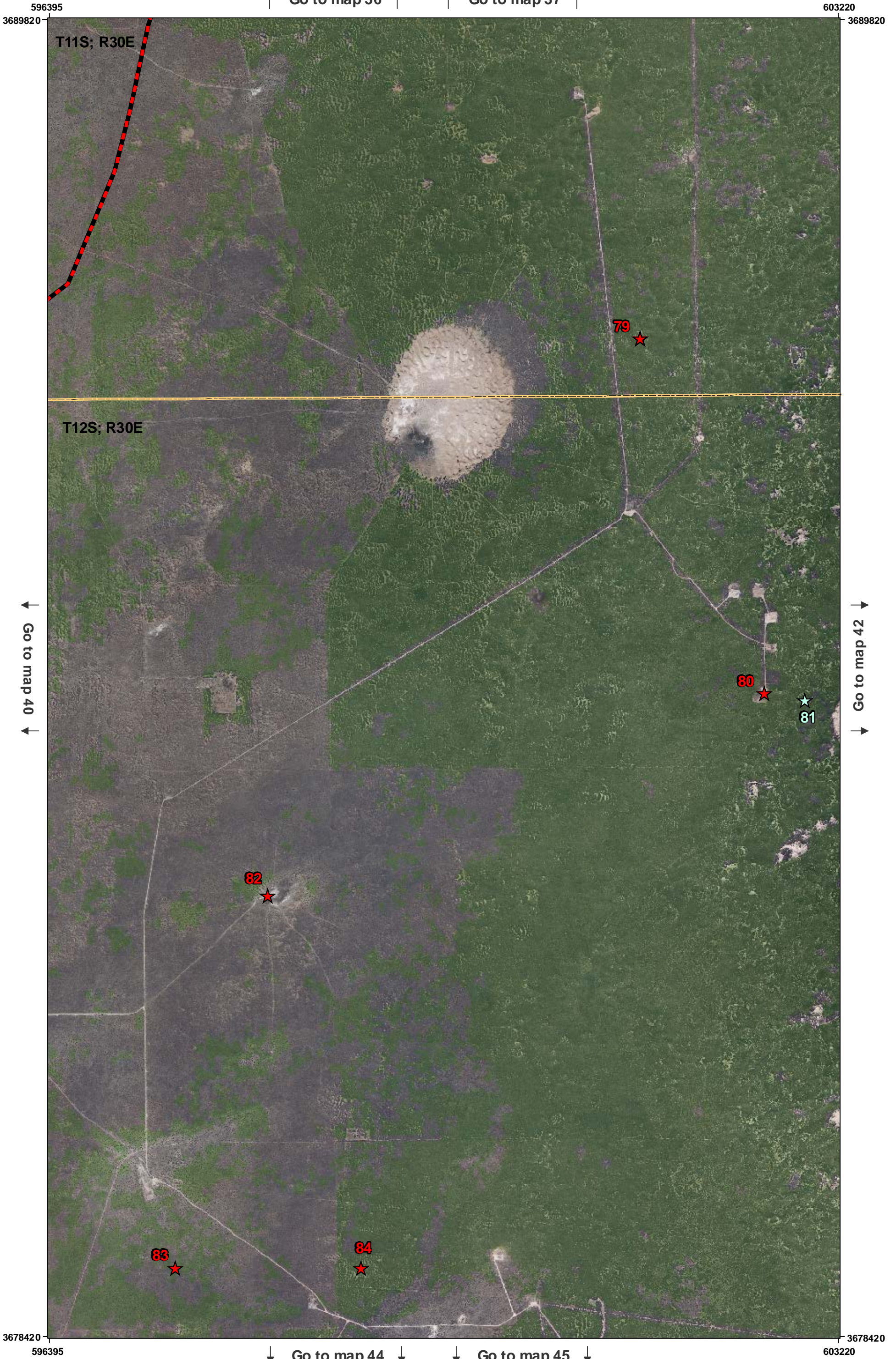
↓ Go to map 44 ↓



Note: Vegetation classification unavailable for western portion of map.

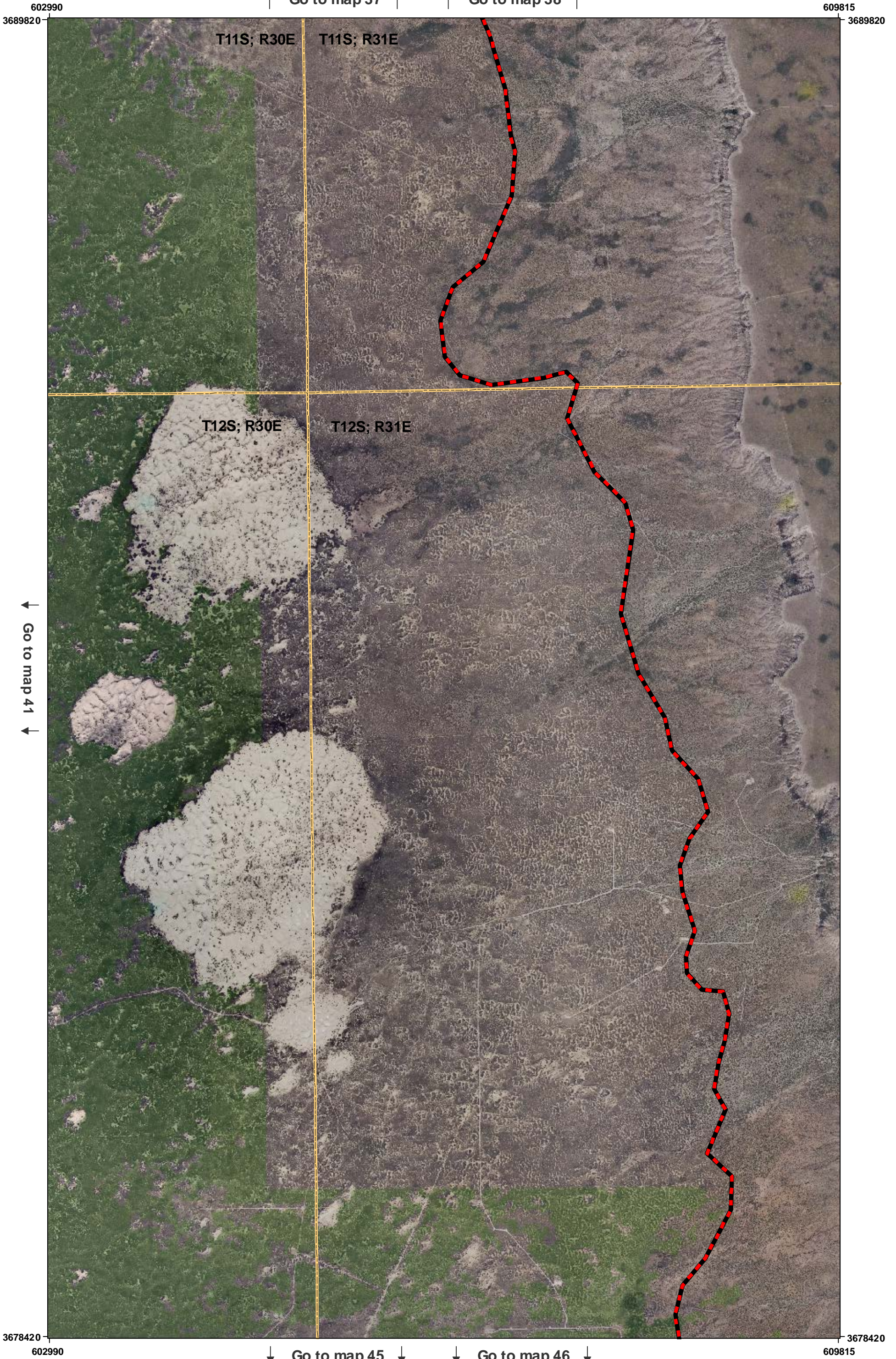


↑ Go to map 36 ↑    ↑ Go to map 37 ↑



0    0.5    1 Miles





Note: Vegetation classification unavailable for eastern portion of map.

0 0.5 1 Miles



↑ Go to map 40 ↑

586375  
3678615

593200  
3678615

T12S; R29E

T13S; R29E

85

86

87

88

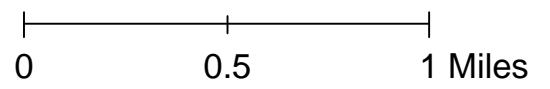
89

↓ Go to map 44 ↓

3667215  
586375

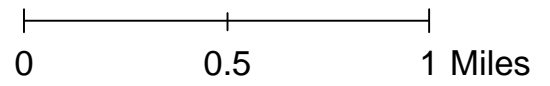
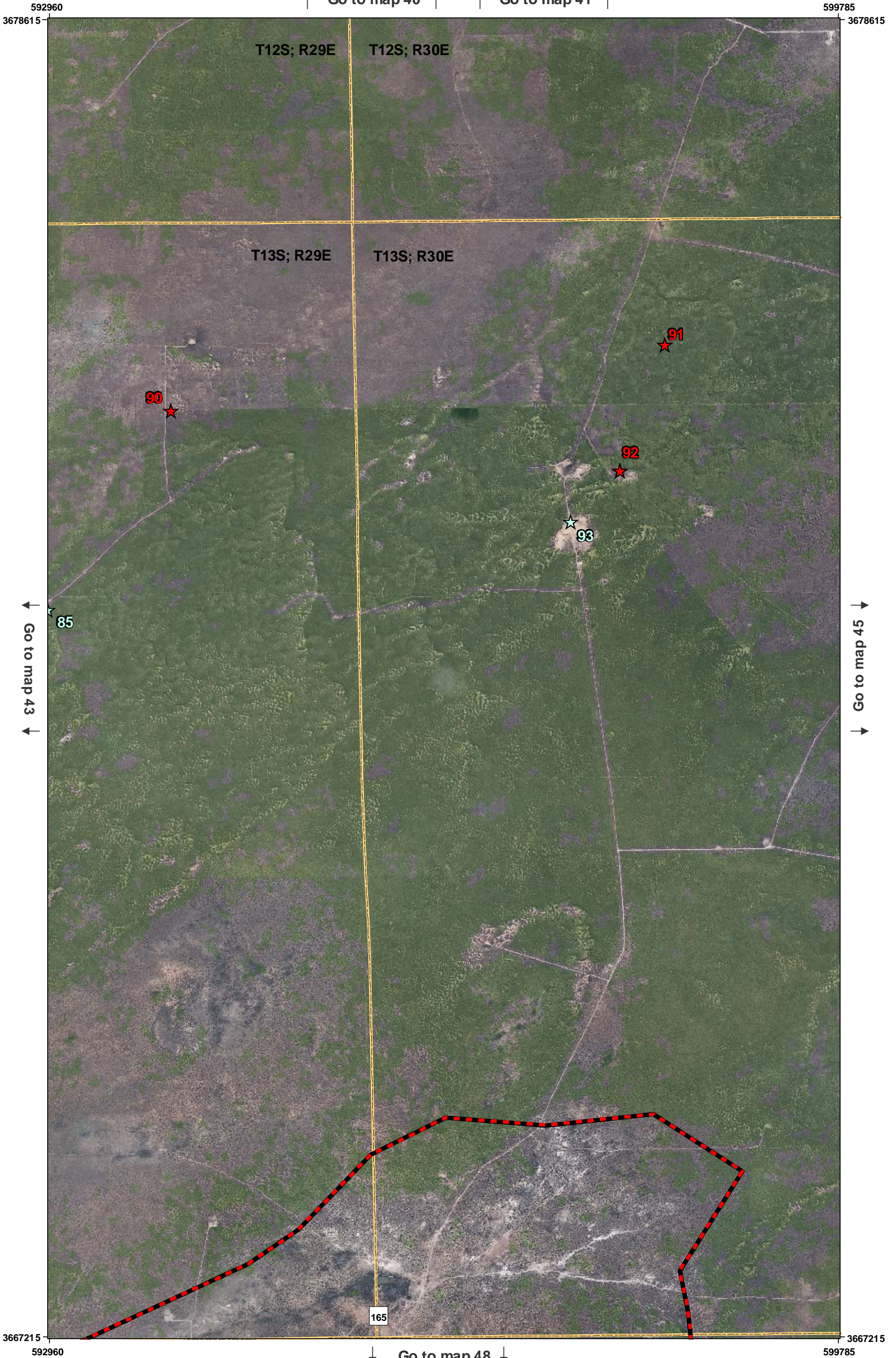
3667215  
593200

↓ Go to map 47 ↓



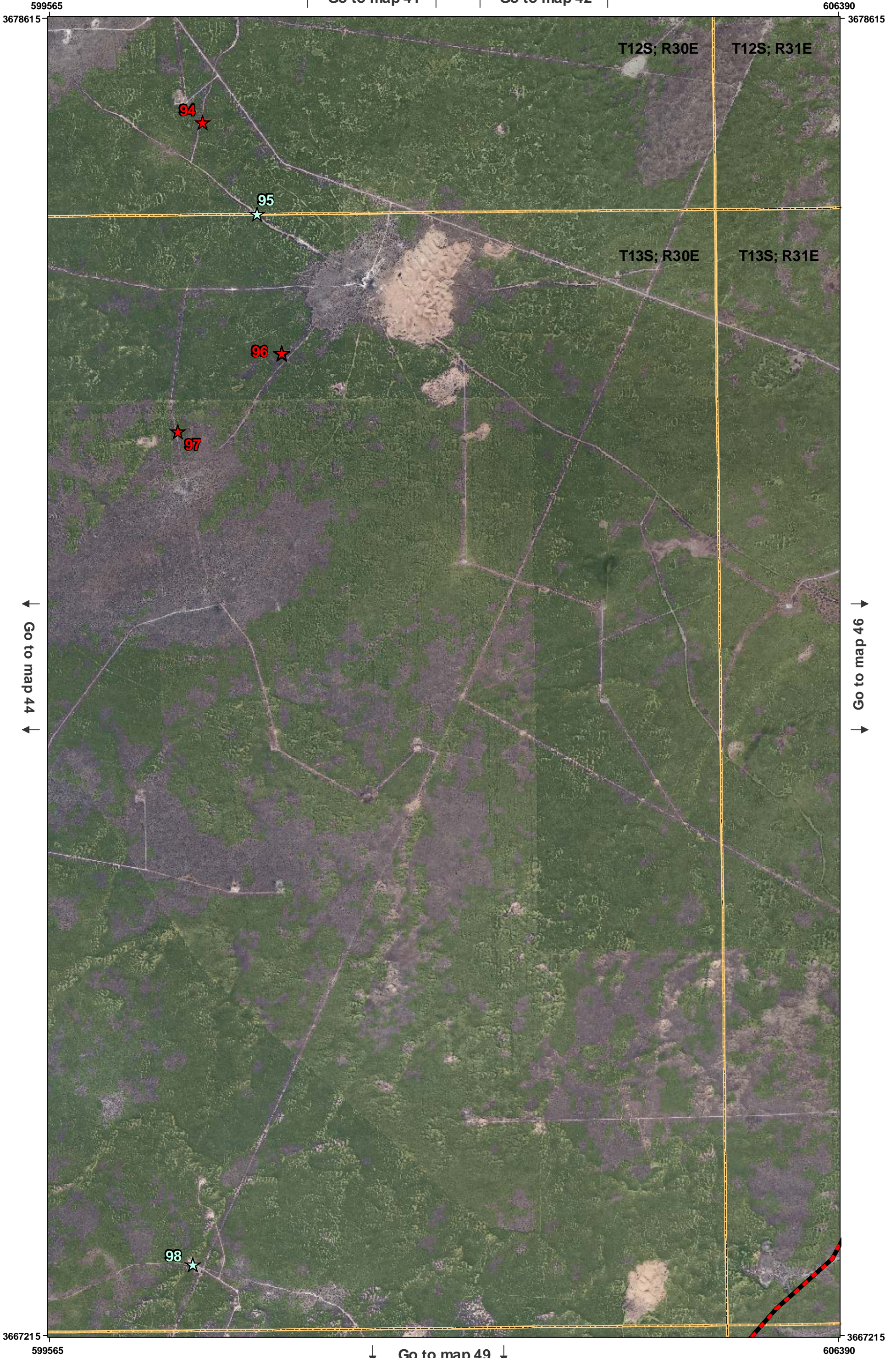


↑ Go to map 40 ↑    ↑ Go to map 41 ↑





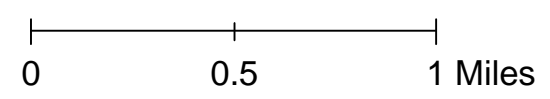
↑ Go to map 41 ↑    ↑ Go to map 42 ↑



↑ Go to map 44 ↓

↓ Go to map 46 ↓

↓ Go to map 49 ↓





↑ Go to map 42 ↑

606160  
3678615

612985  
3678615

T12S; R31E

T13S; R31E

172

Tabitha Rd.

Priscilla Rd.

99 ★

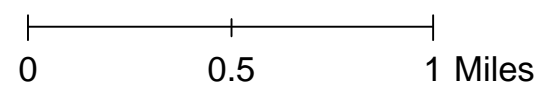
172

172

↑ Go to map 45 ↓

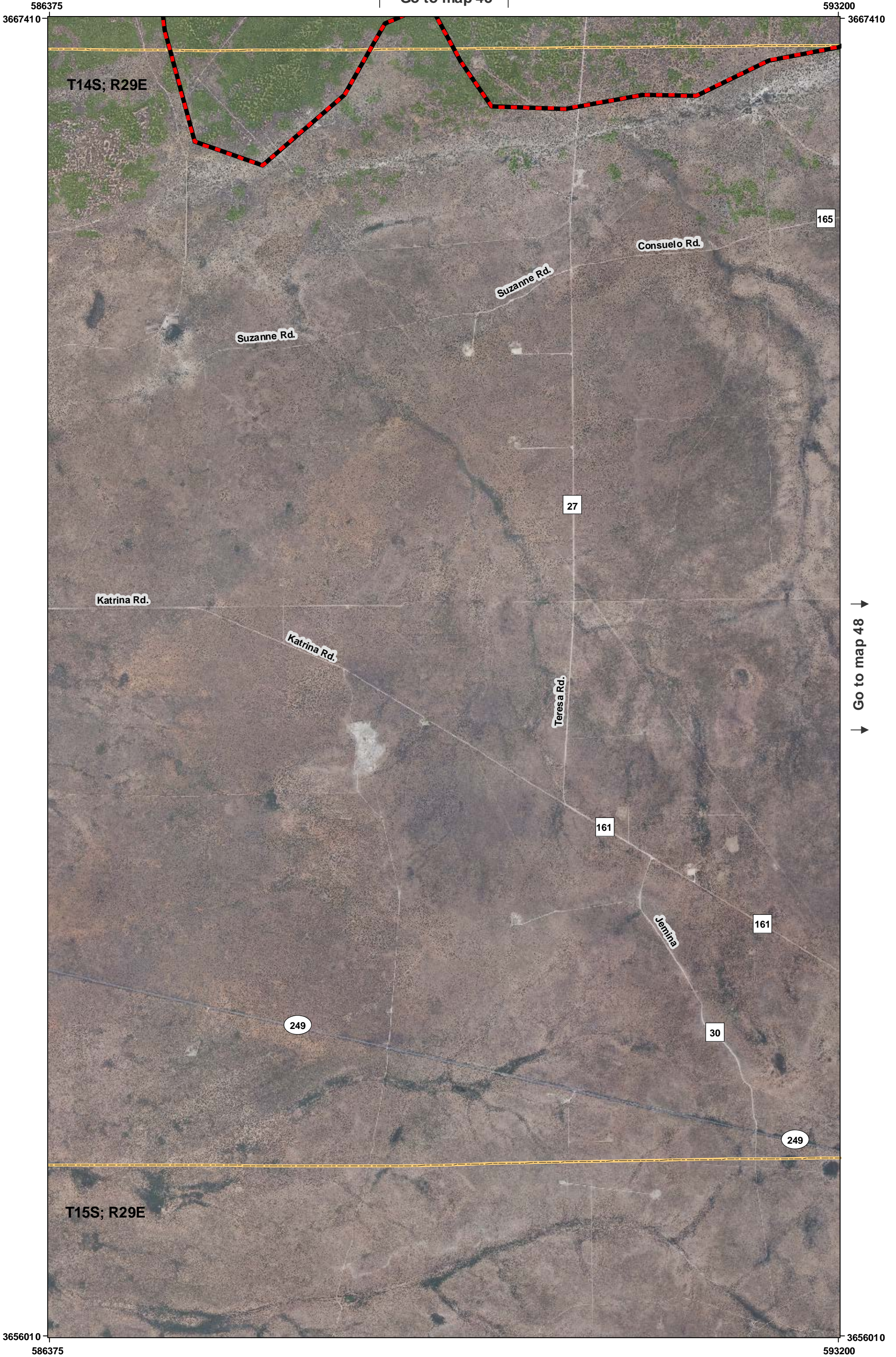
3667215  
606160

3667215  
612985



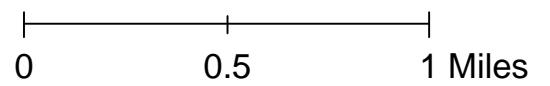


↑ Go to map 43 ↑



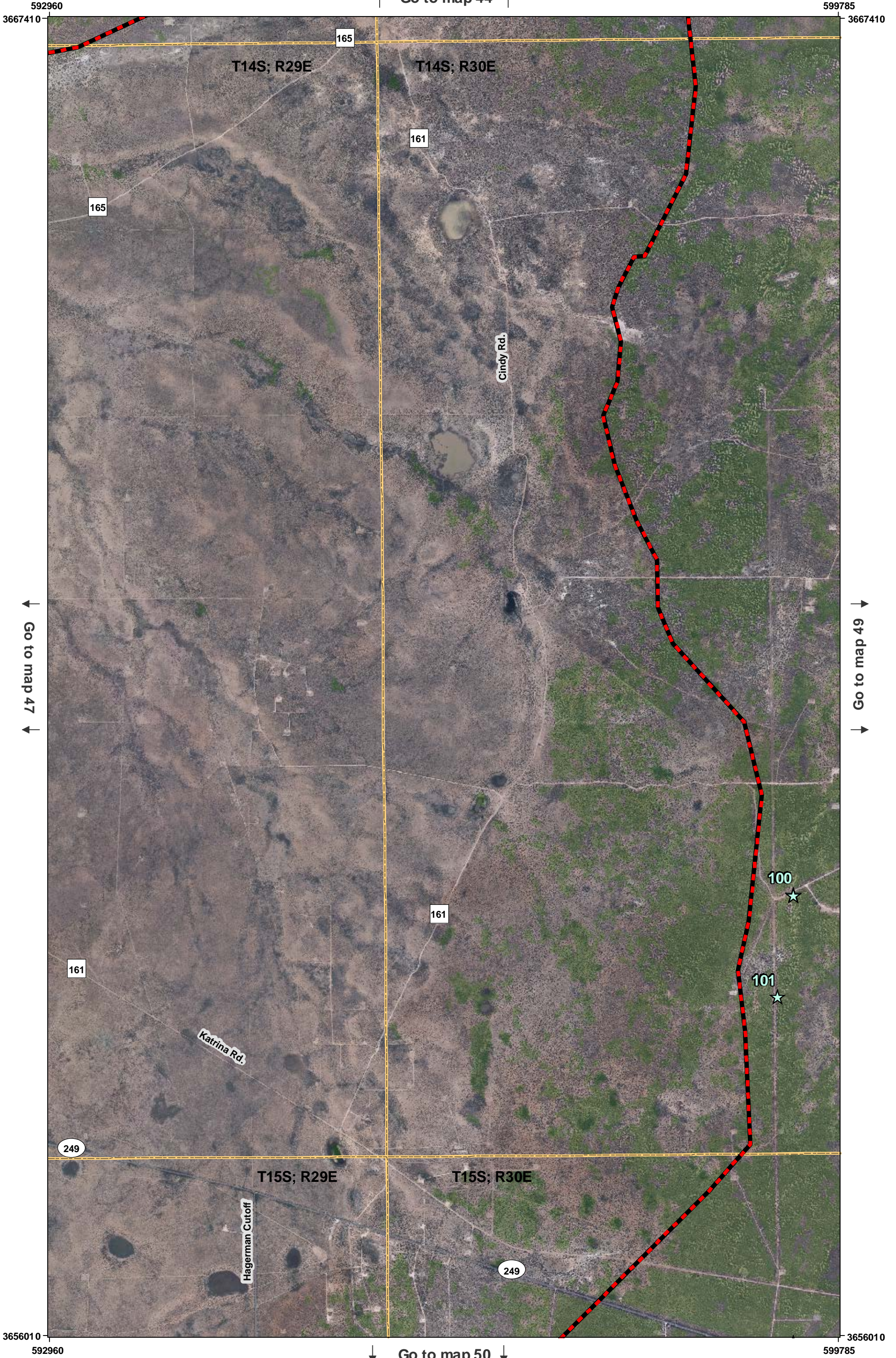
↓ Go to map 48 ↓

Note: Vegetation classification unavailable for southern portion of map.





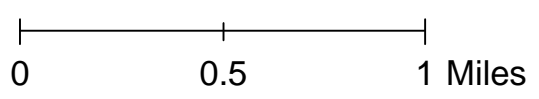
↑ Go to map 44 ↑



↑ Go to map 47 ↑

↓ Go to map 49 ↓

↓ Go to map 50 ↓





↑ Go to map 45 ↑

599565  
3667410

606390  
3667410

T14S; R30E

T14S; R31E

★ 103

★ 102

★ 104

★ 105

T15S; R30E

T15S; R31E

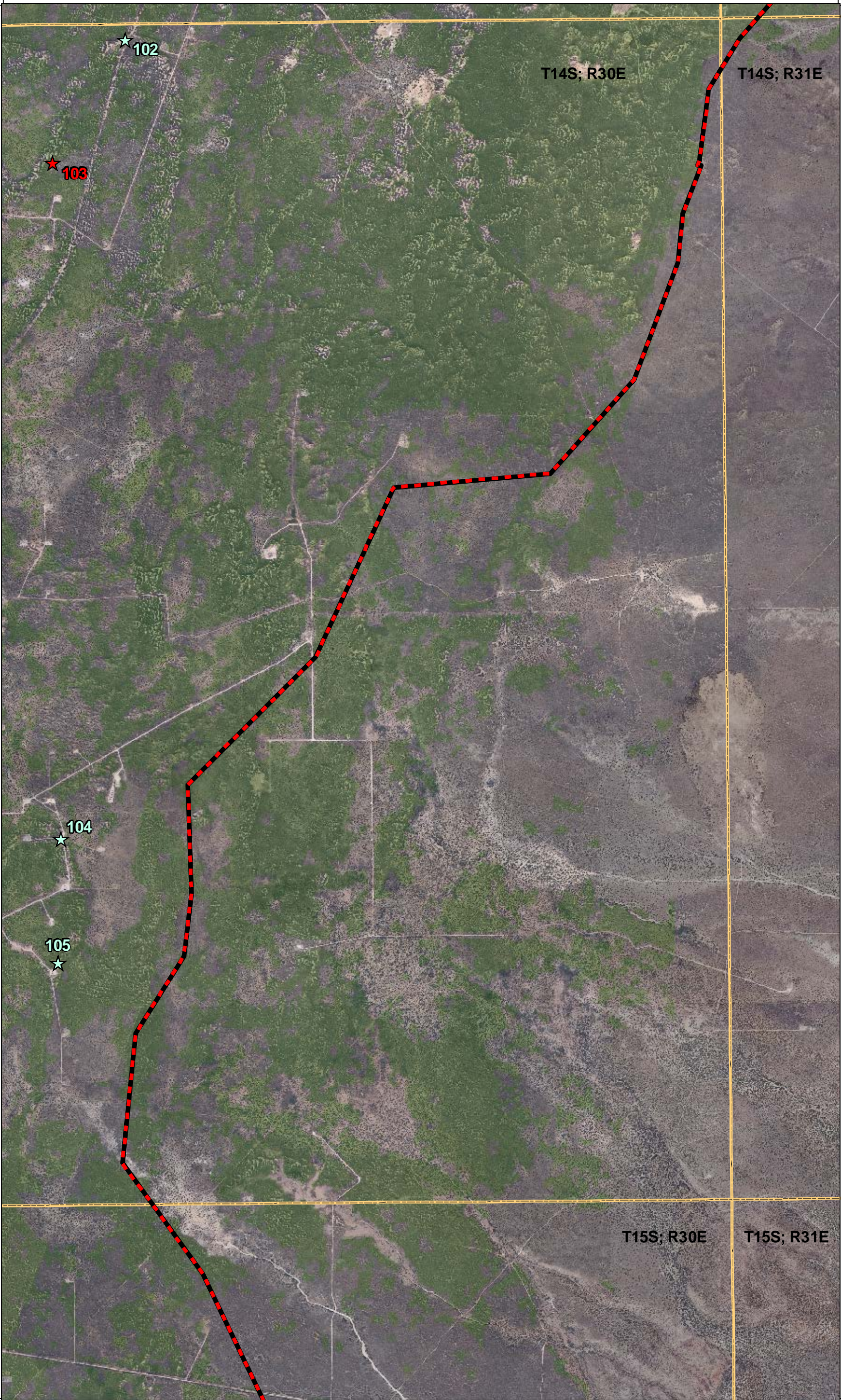
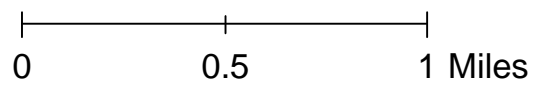
↑ Go to map 48 ↓

3656010  
599565

3656010  
606390

↓ Go to map 51 ↓

Note: Vegetation classification unavailable for eastern portion of map.





↑ Go to map 48 ↑

593350  
3656210

600175  
3656210

T15S; R29E

T15S; R30E

249

★ 106

Hagerman Cutoff

22

↓ Go to map 51 ↓

Hagerman Cutoff

★ 107

T16S; R30E

Booger Langston Rd.

Booger Langston Rd.

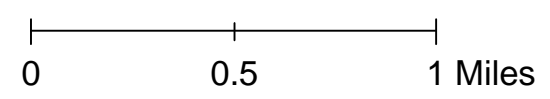
★ 108

Booger Langston Rd.

3644810  
593350

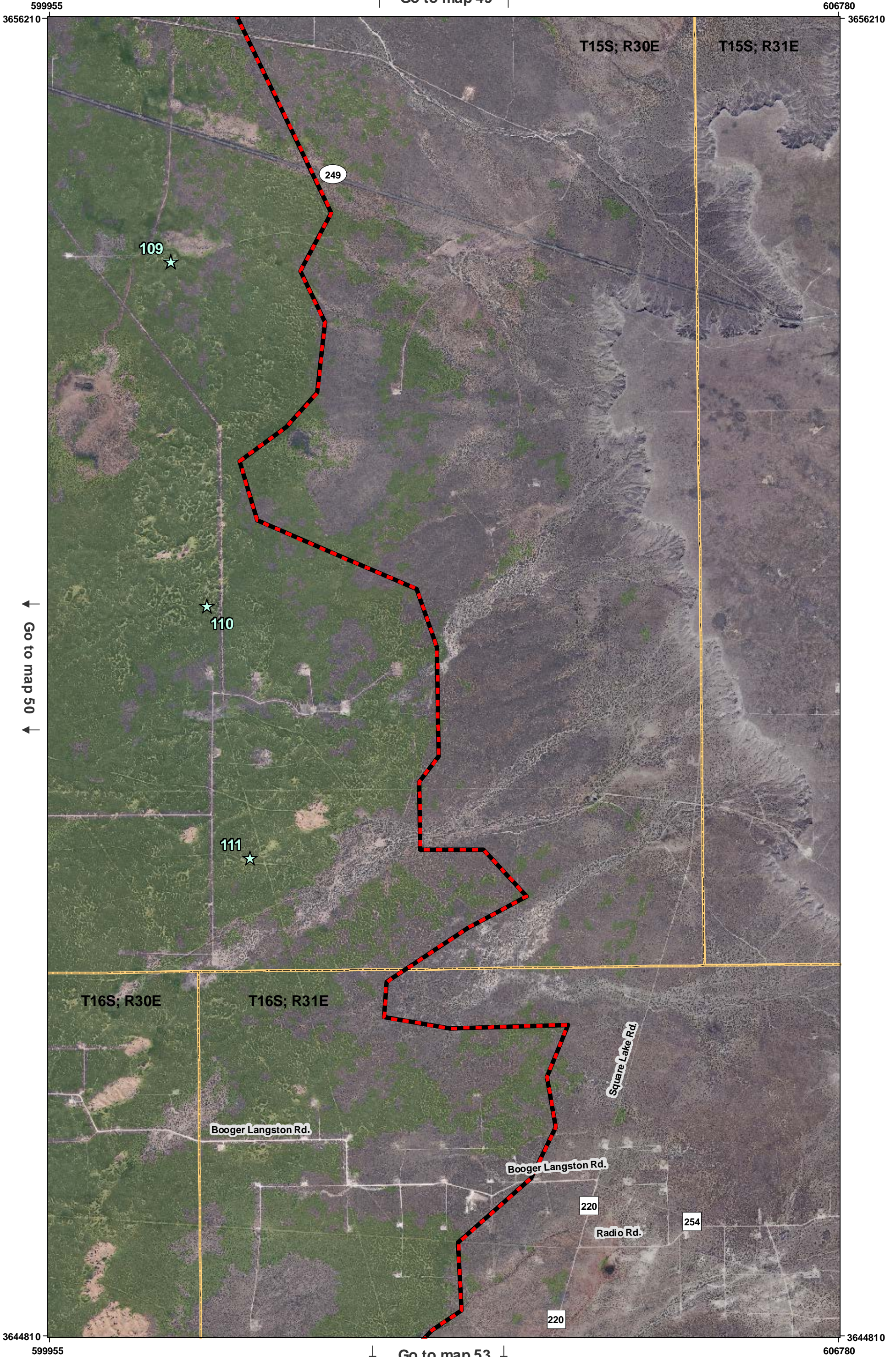
3644810  
600175

↓ Go to map 52 ↓

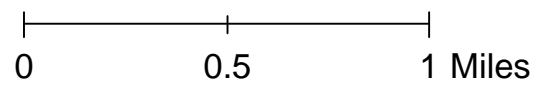




↑ Go to map 49 ↑



Note: Vegetation classification unavailable for eastern edge of map.





↑ Go to map 50 ↑

593350  
3645015

600175  
3645015

T16S; R30E

Hagerman Cutoff Rd.

Shell Rd.

253

253

Shell Rd.

↓ Go to map 53 ↓

Goat Ropers Rd.

Goat Ropers Rd.

Mallet Rd.

Mallett Rd.

Mallett Rd.

Mallett Rd.

T17S; R30E

Hagerman Cutoff Rd.

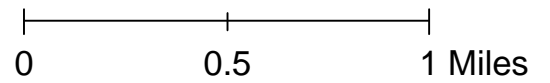
Goat Ropers Rd.

220

3633615  
593350

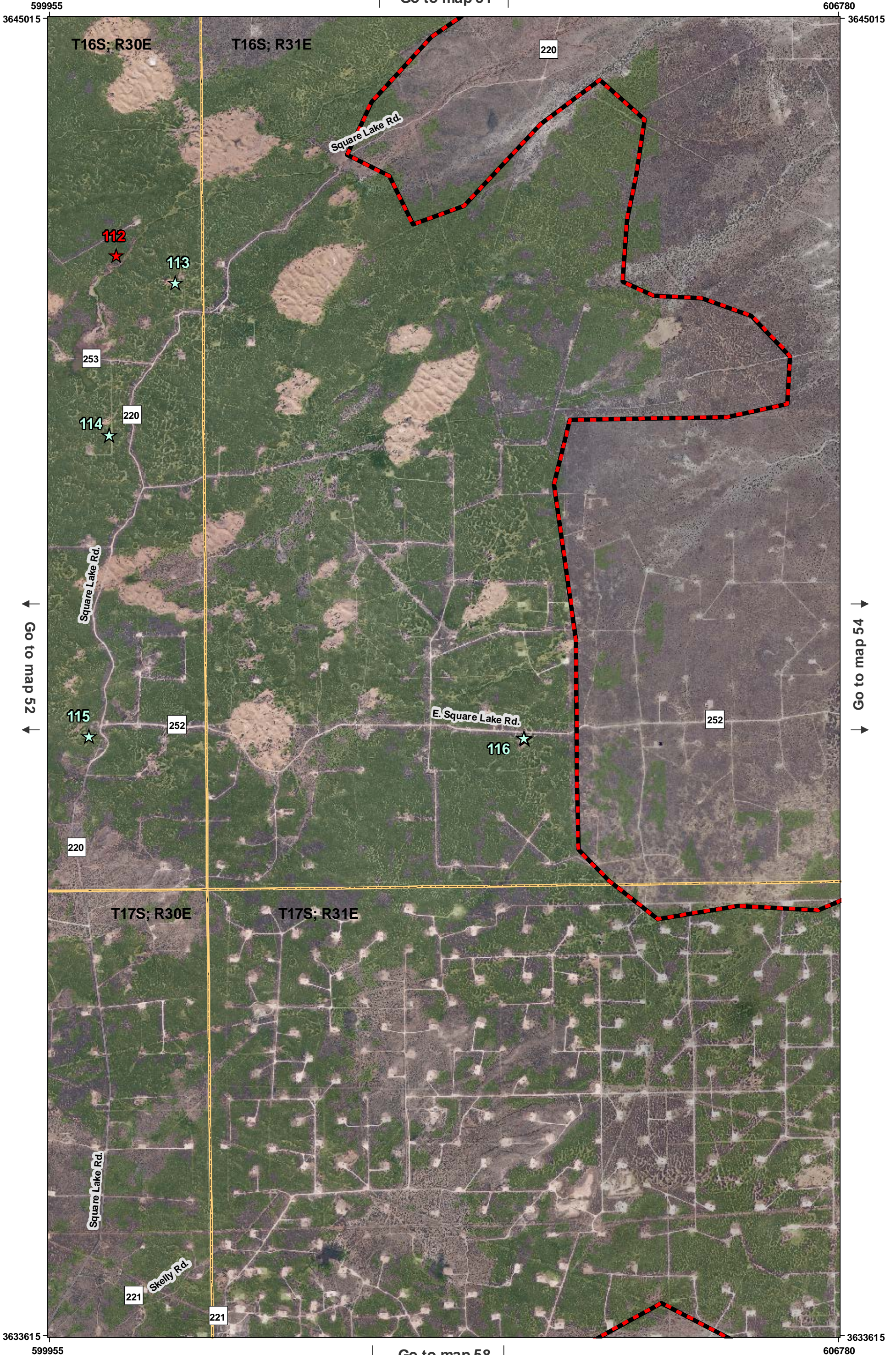
600175  
3633615

↓ Go to map 57 ↓





↑ Go to map 51 ↑

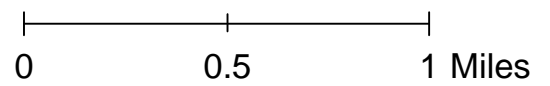


↑ Go to map 52 ↑

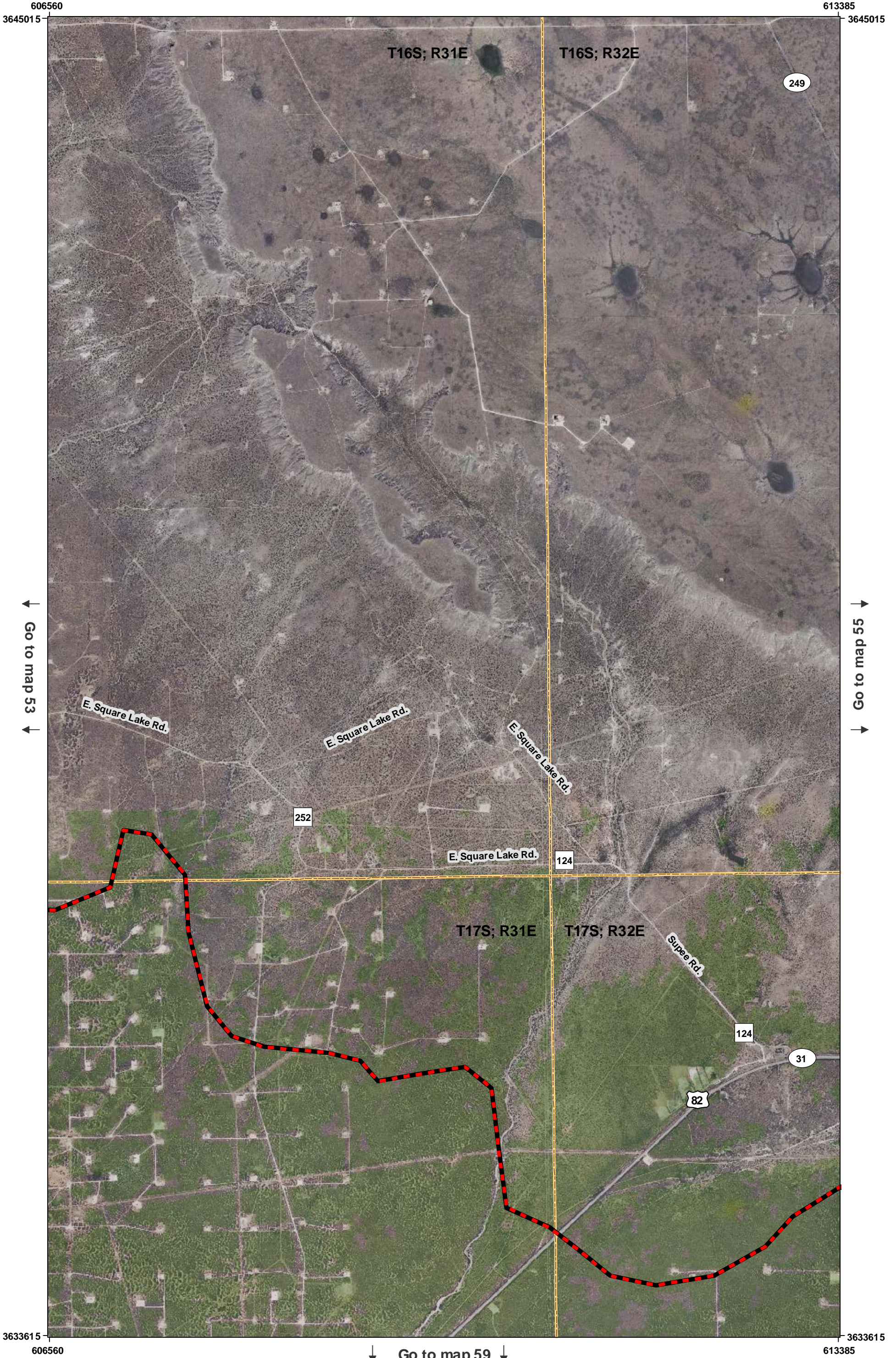
↓ Go to map 54 ↓

↓ Go to map 58 ↓

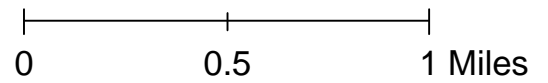
Note: Vegetation classification unavailable for northeastern portion of map.







Note: Vegetation classification unavailable for northern portion of map.



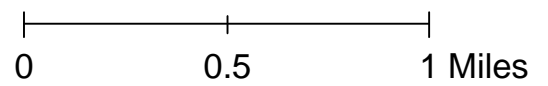




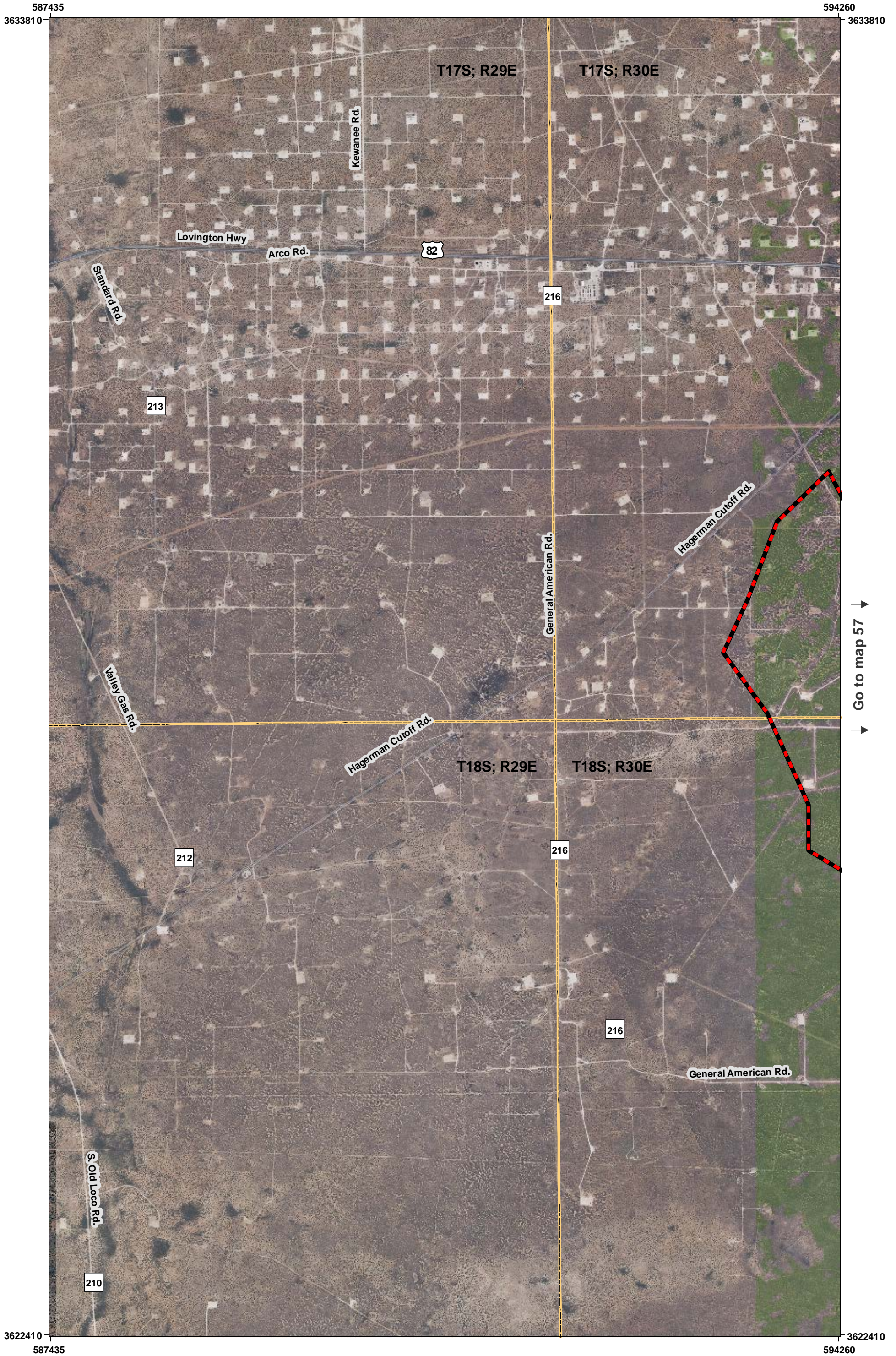
↑ Go to map 54 ↓

↓ Go to map 60 ↓

Note: Vegetation classification only available for southwestern portion of map.

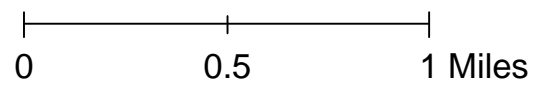






↓ Go to map 57 ↓

Note: Vegetation classification unavailable for western portion of map.





↑ Go to map 52 ↑

Go to map 53 ↑

594035  
3633810

600860  
3633810

T17S; R30E

220

Goat Ropers Rd.

Hagerman Cutoff Rd.

Steve Cater

82

Square Lake Rd.

82

↑ Go to map 56 ↑

↓ Go to map 58 ↓

T18S; R30E

216

117

118

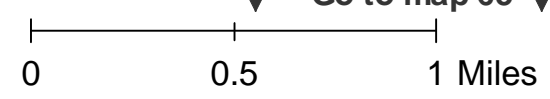
119

3622410  
594035

3622410  
600860

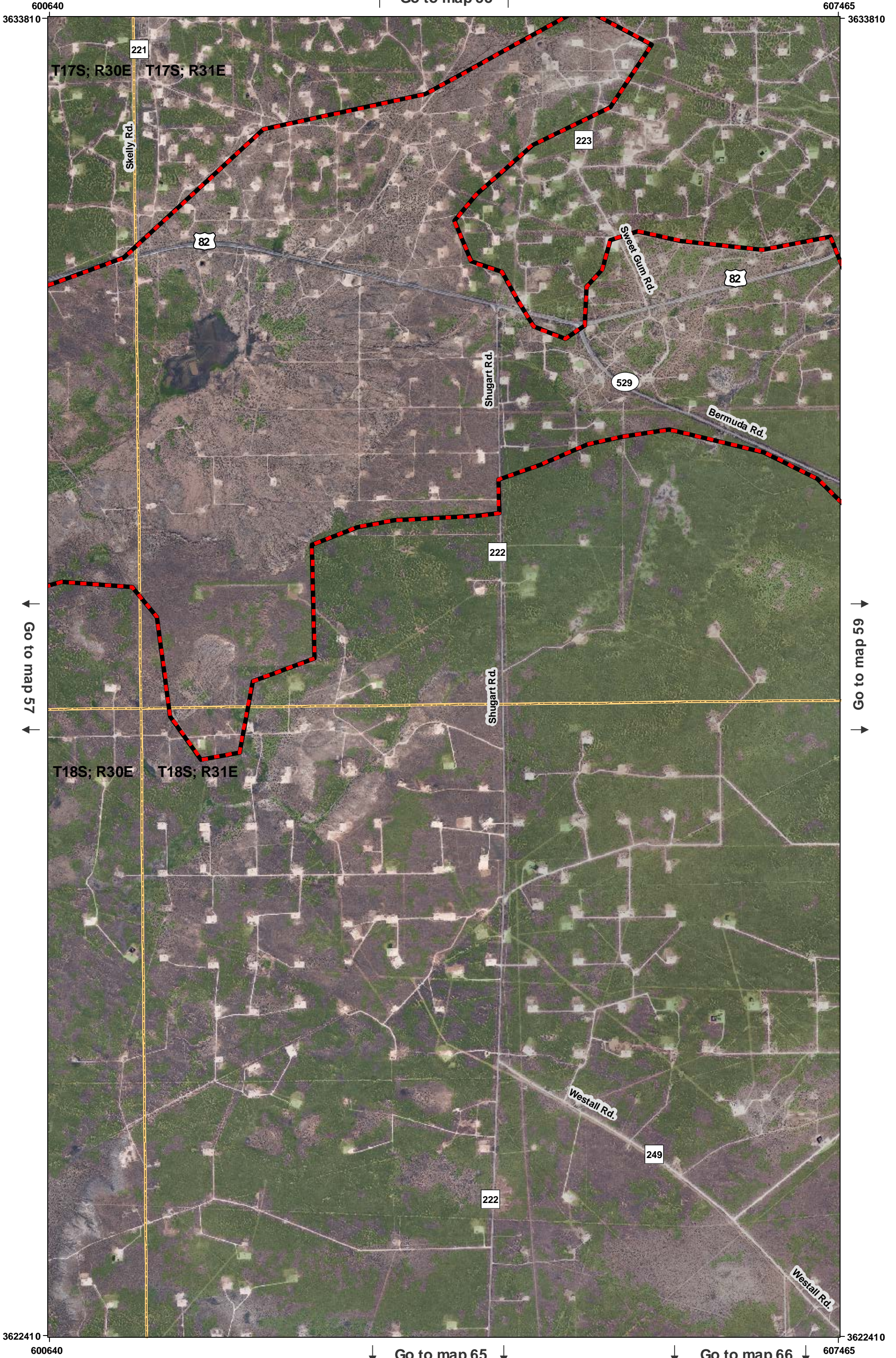
↓ Go to map 64 ↓

Go to map 65 ↓





↑ Go to map 53 ↑





↑ Go to map 54 ↑

607240  
3633810

614065  
3633810

T17S; R31E

T17S; R32E

82

Ripple Rd.

120

224

224A

224A

121

122

Bermuda Rd.

529

Bermuda Rd.

124

123

T18S; R31E

T18S; R32E

125

126A

126A

↑ Go to map 58 ↑

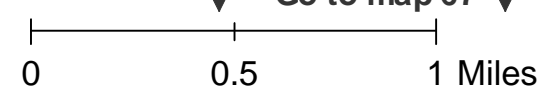
↓ Go to map 60 ↓

3622410  
607240

↓ Go to map 66 ↓

↓ Go to map 67 ↓

3622410  
614065

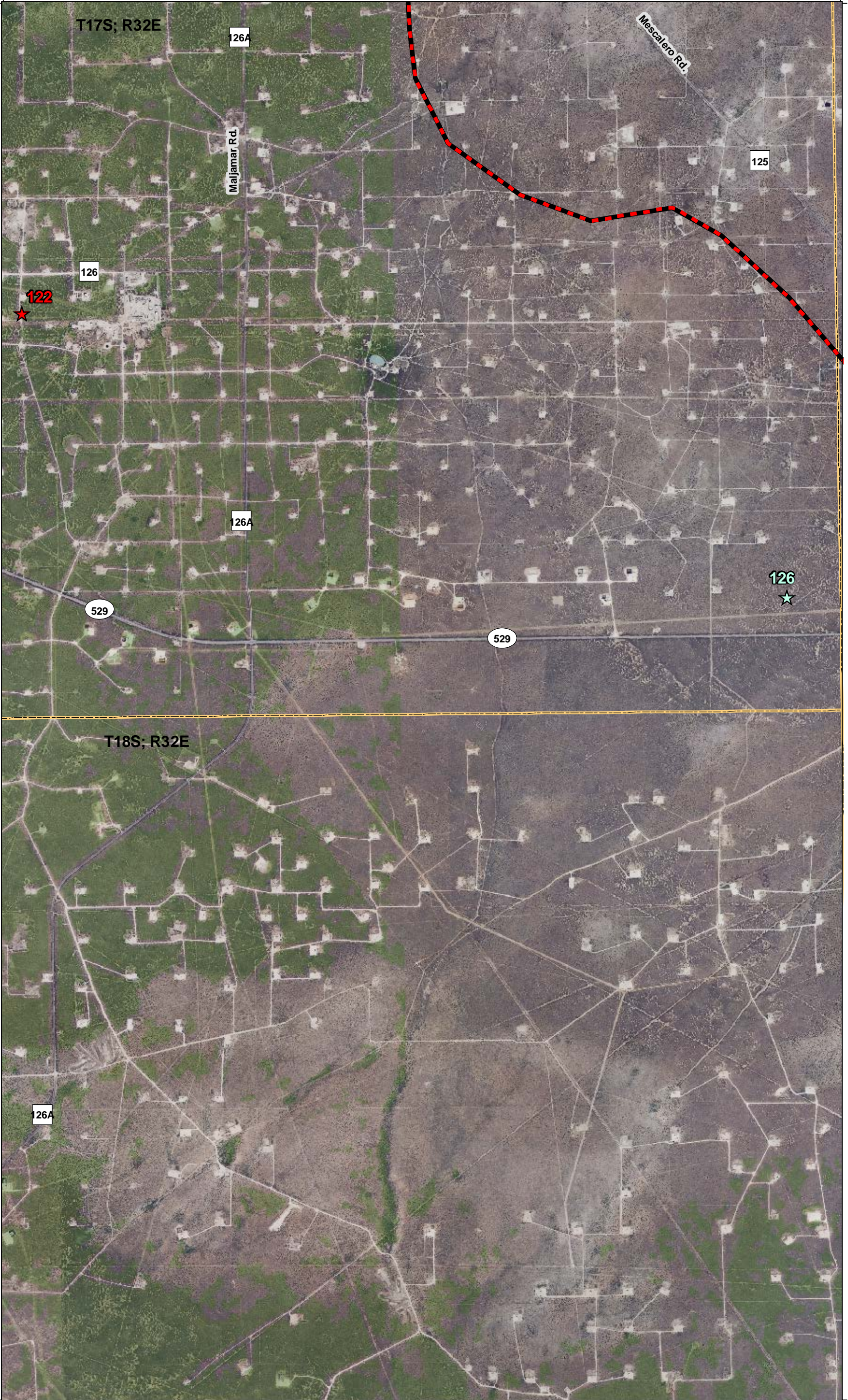




↑ Go to map 55 ↑

613845  
3633810

620670  
3633810



↑ Go to map 59 ↑

↓ Go to map 61 ↓

↓ Go to map 67 ↓

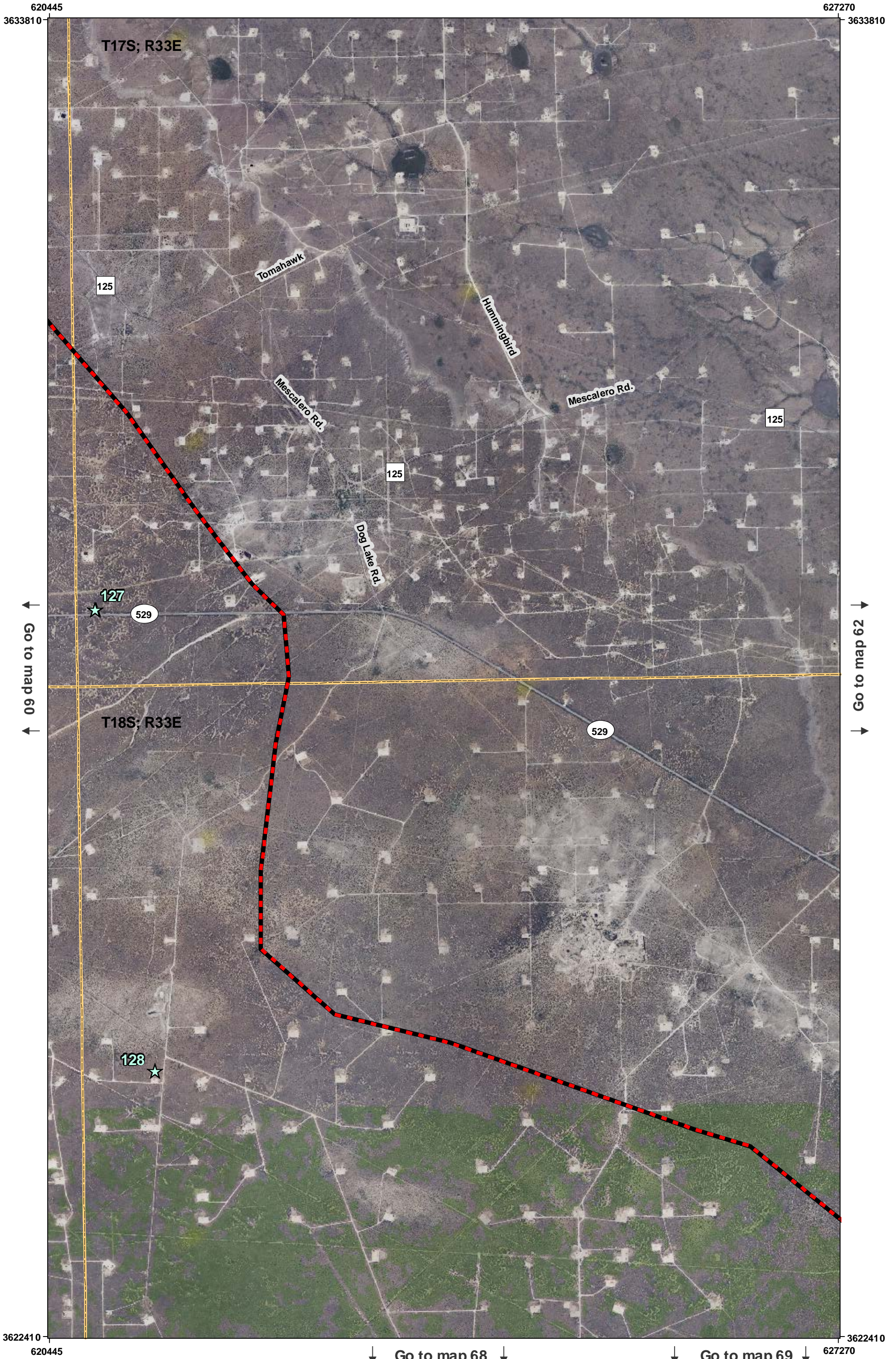
↓ Go to map 68 ↓

3622410  
613845

3622410  
620670

0 0.5 1 Miles





Note: Vegetation classification unavailable for northern portion of map.

0 0.5 1 Miles





↑ Go to map 61 ↓

↓ Go to map 69 ↓

↓ Go to map 70 ↓

Note: Vegetation classification unavailable for northern portion of map.

0 0.5 1 Miles

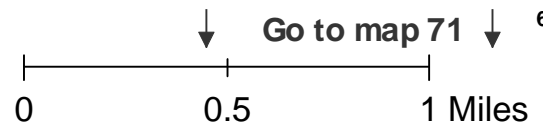
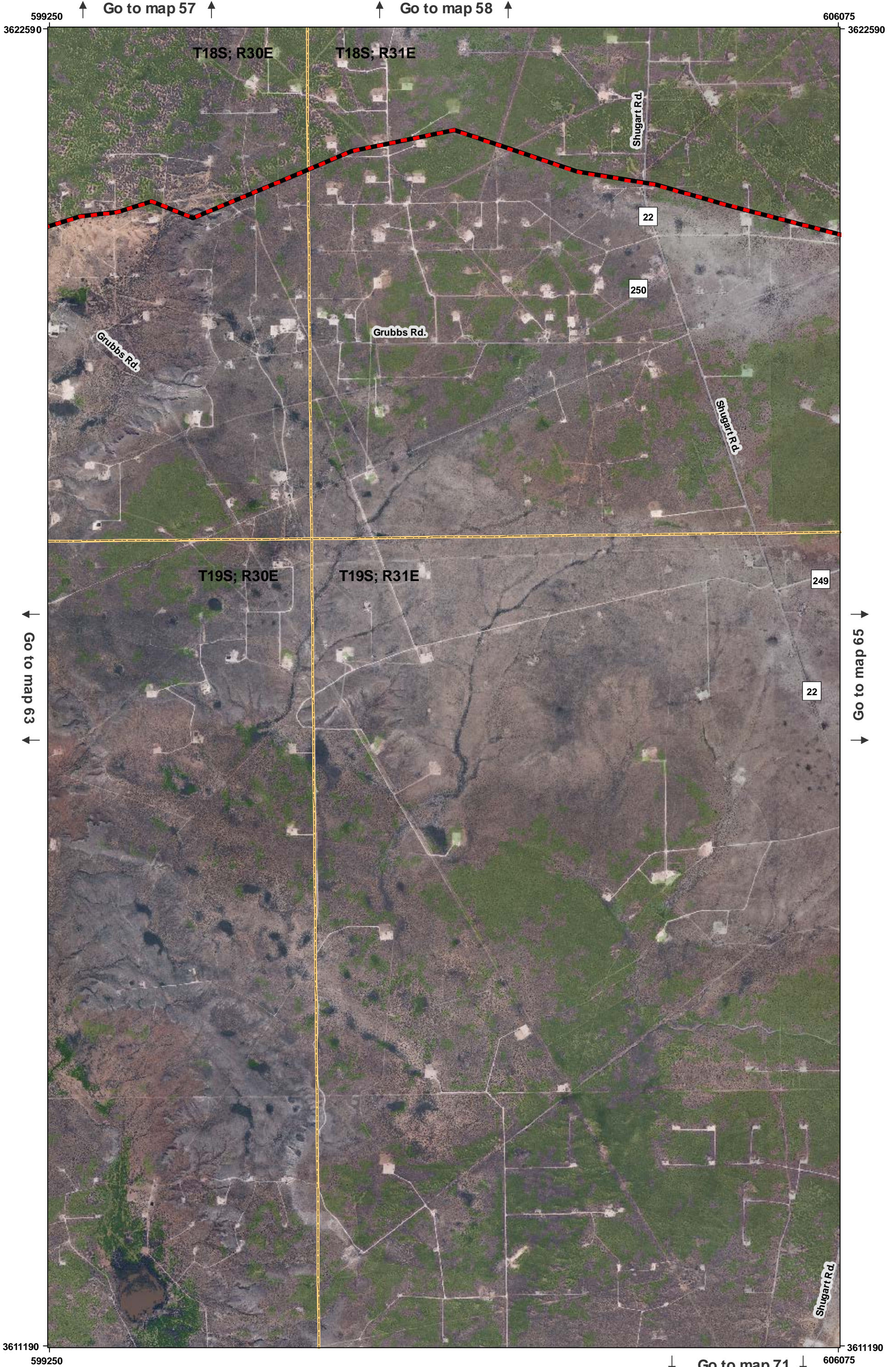


↑ Go to map 57 ↑

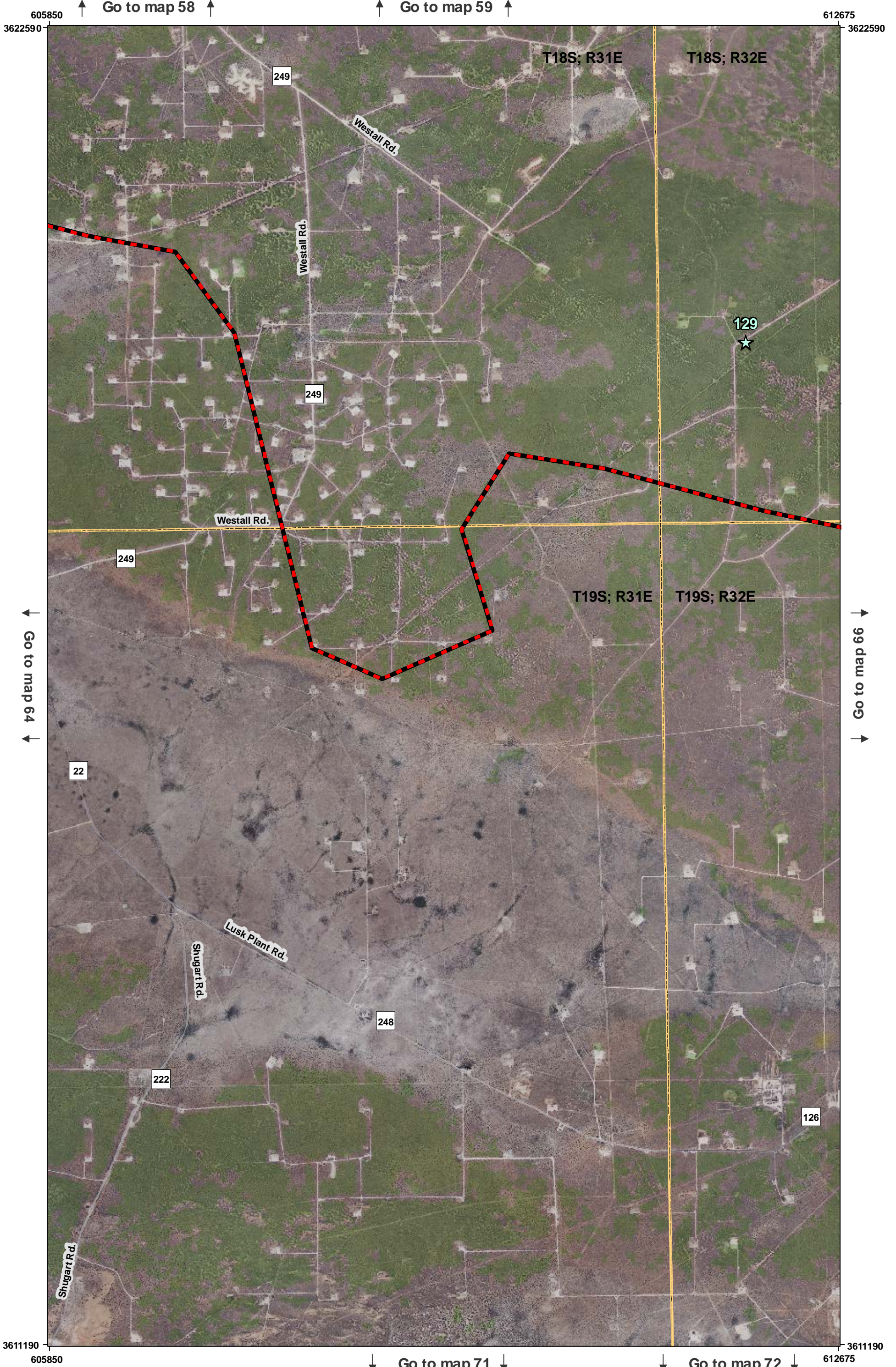


Note: Vegetation classification unavailable for western portion of map.









↑ Go to map 58 ↑

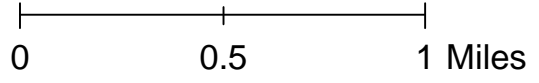
↑ Go to map 59 ↑

↑ Go to map 64 ↓

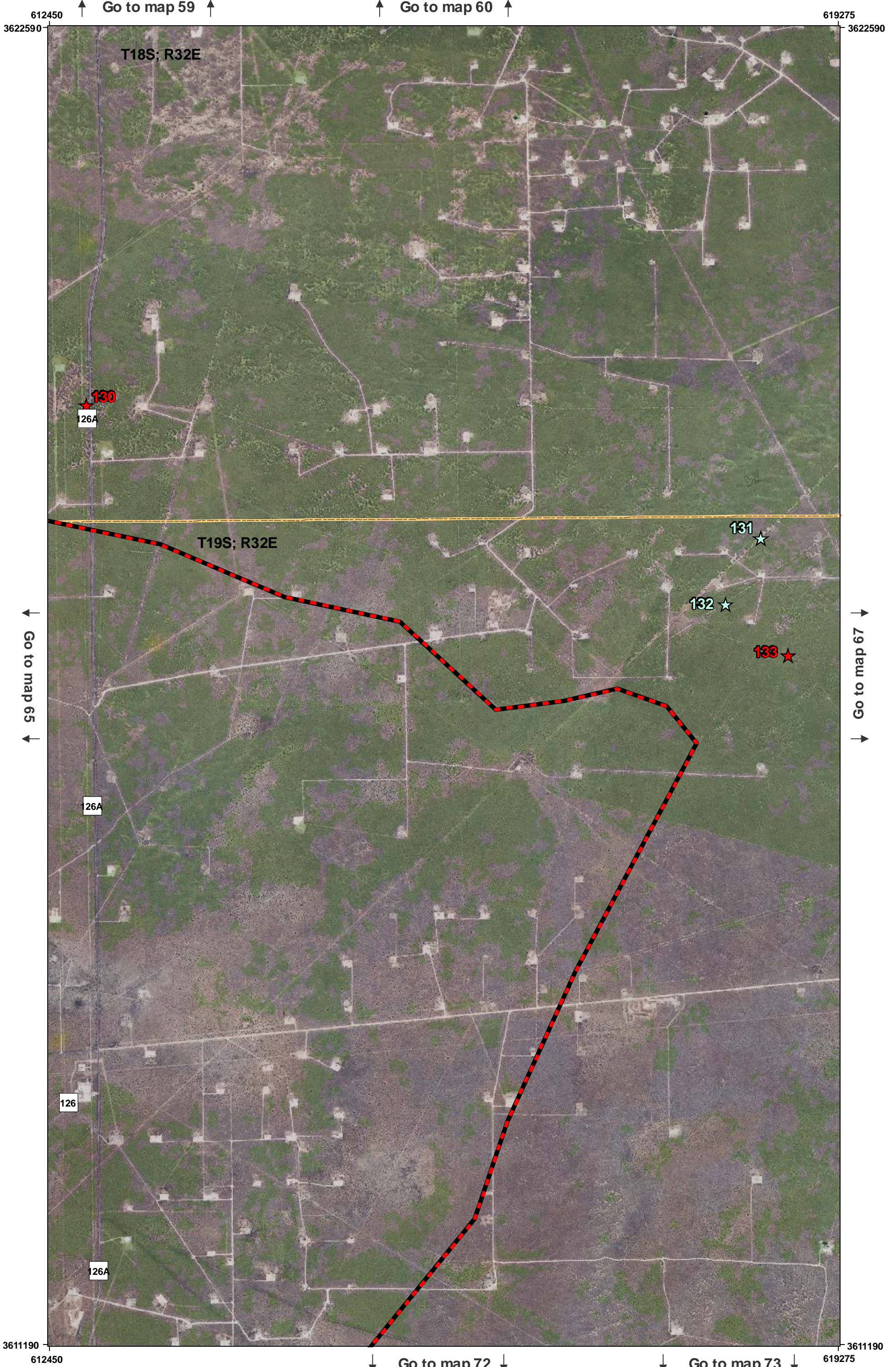
↓ Go to map 66 ↓

↓ Go to map 71 ↓

↓ Go to map 72 ↓







612450 ↑ Go to map 59 ↑

↑ Go to map 60 ↑

619275 3622590

T18S; R32E

130  
126A

T19S; R32E

131 ★

132 ★

133 ★

↑ Go to map 65 ↑

↓ Go to map 67 ↓

126A

126

126A

3611190 612450

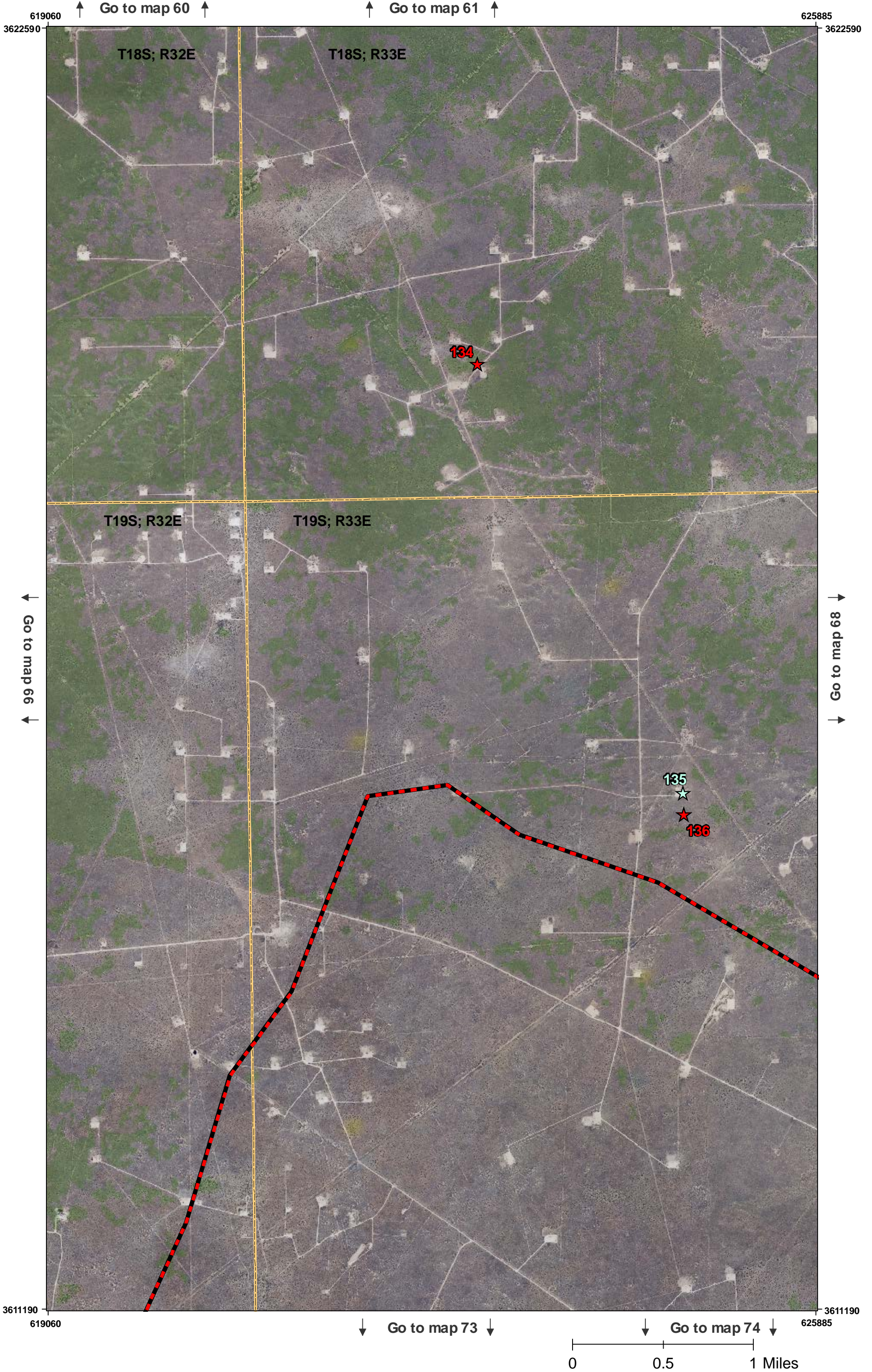
↓ Go to map 72 ↓

↓ Go to map 73 ↓

3611190 619275

0 0.5 1 Miles





↑ Go to map 60 ↑

↑ Go to map 61 ↑

619060  
3622590

625885  
3622590

T18S; R32E

T18S; R33E

T19S; R32E

T19S; R33E

↑ Go to map 66 ↑

↓ Go to map 68 ↓

3611190  
619060

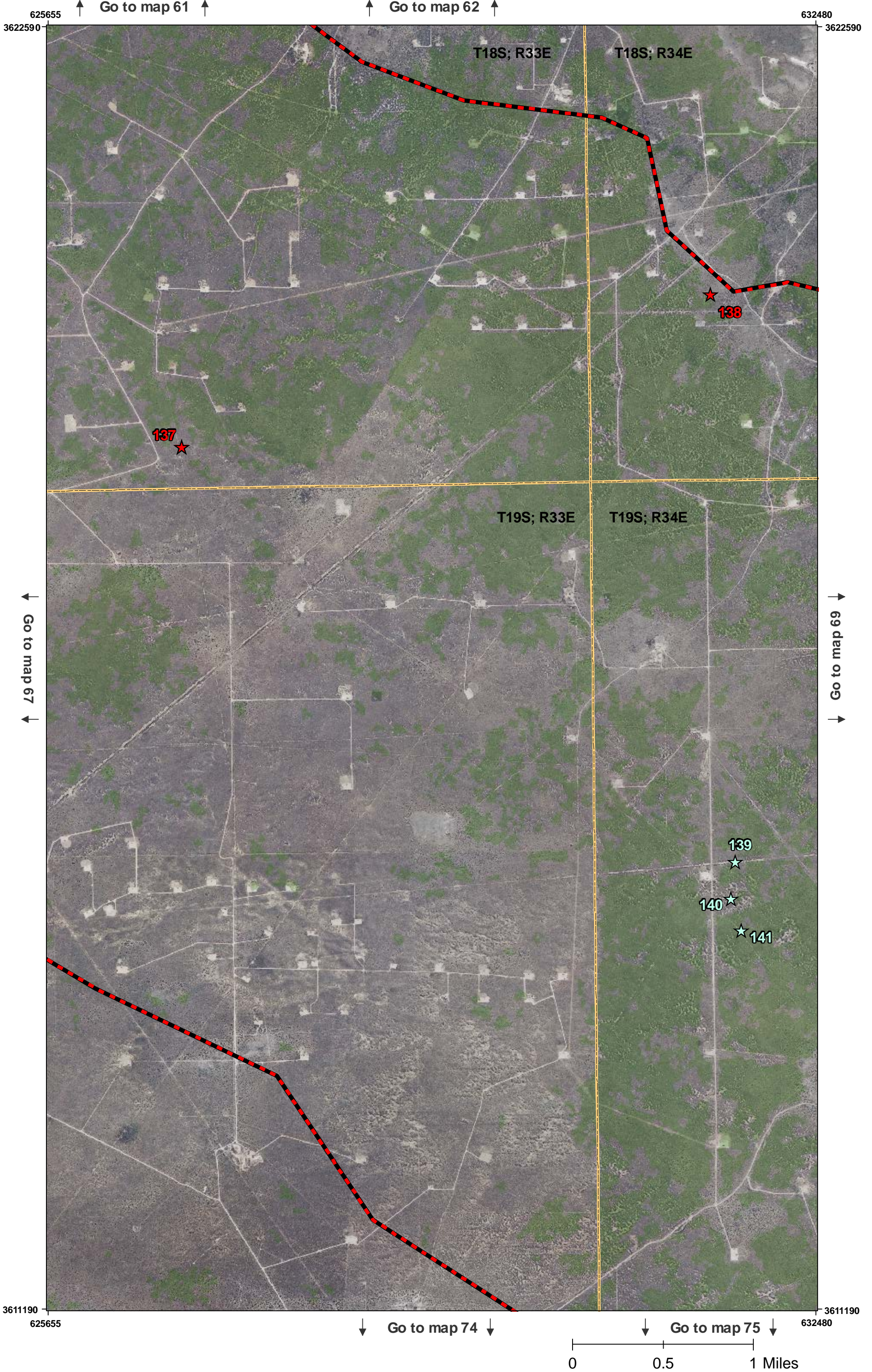
3611190  
625885

↓ Go to map 73 ↓

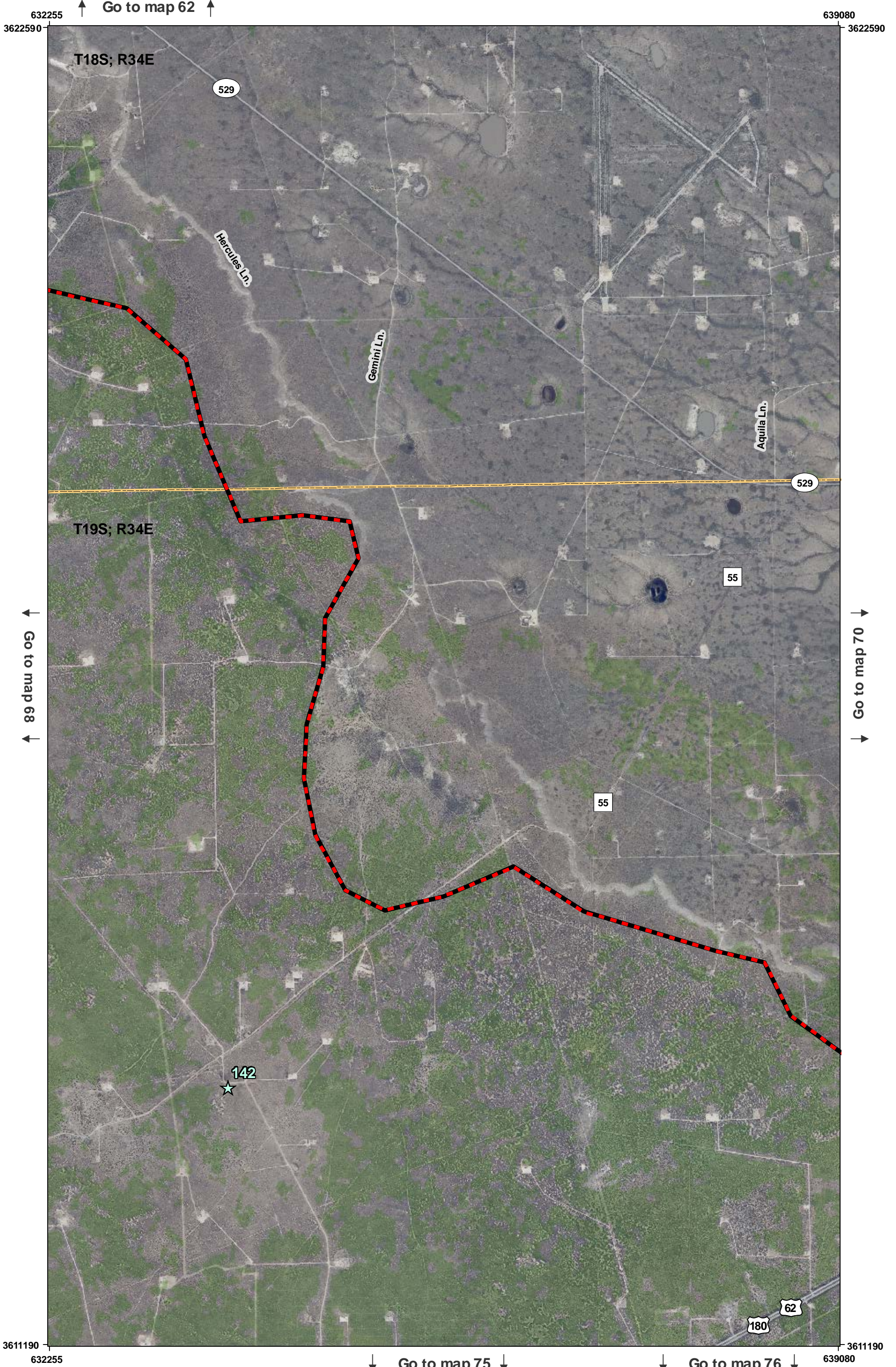
↓ Go to map 74 ↓

0 0.5 1 Miles









↑ Go to map 62 ↑

↑ Go to map 68 ↑

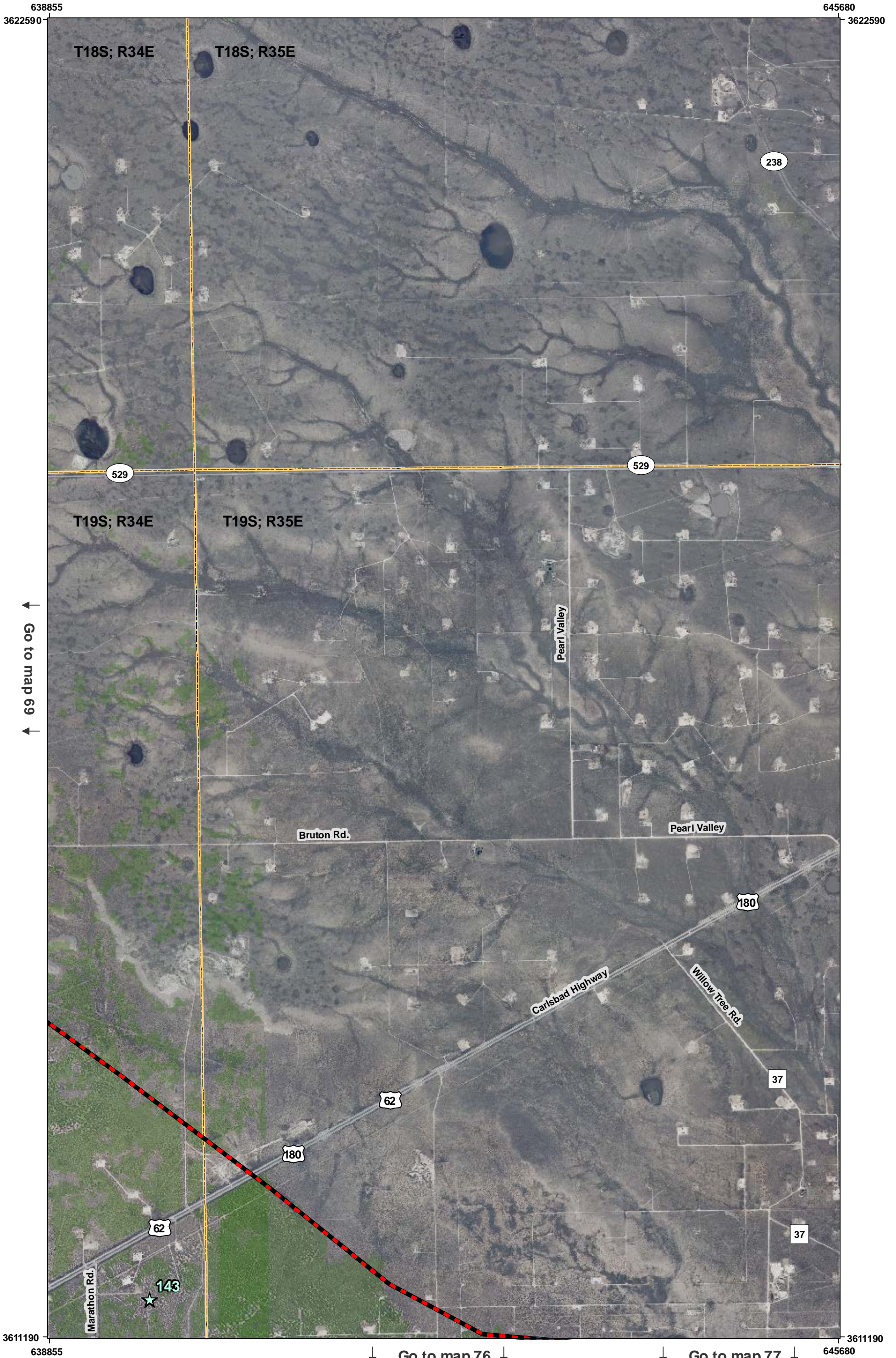
↓ Go to map 70 ↓

↓ Go to map 75 ↓

↓ Go to map 76 ↓

0 0.5 1 Miles

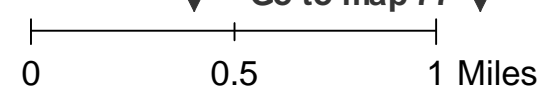




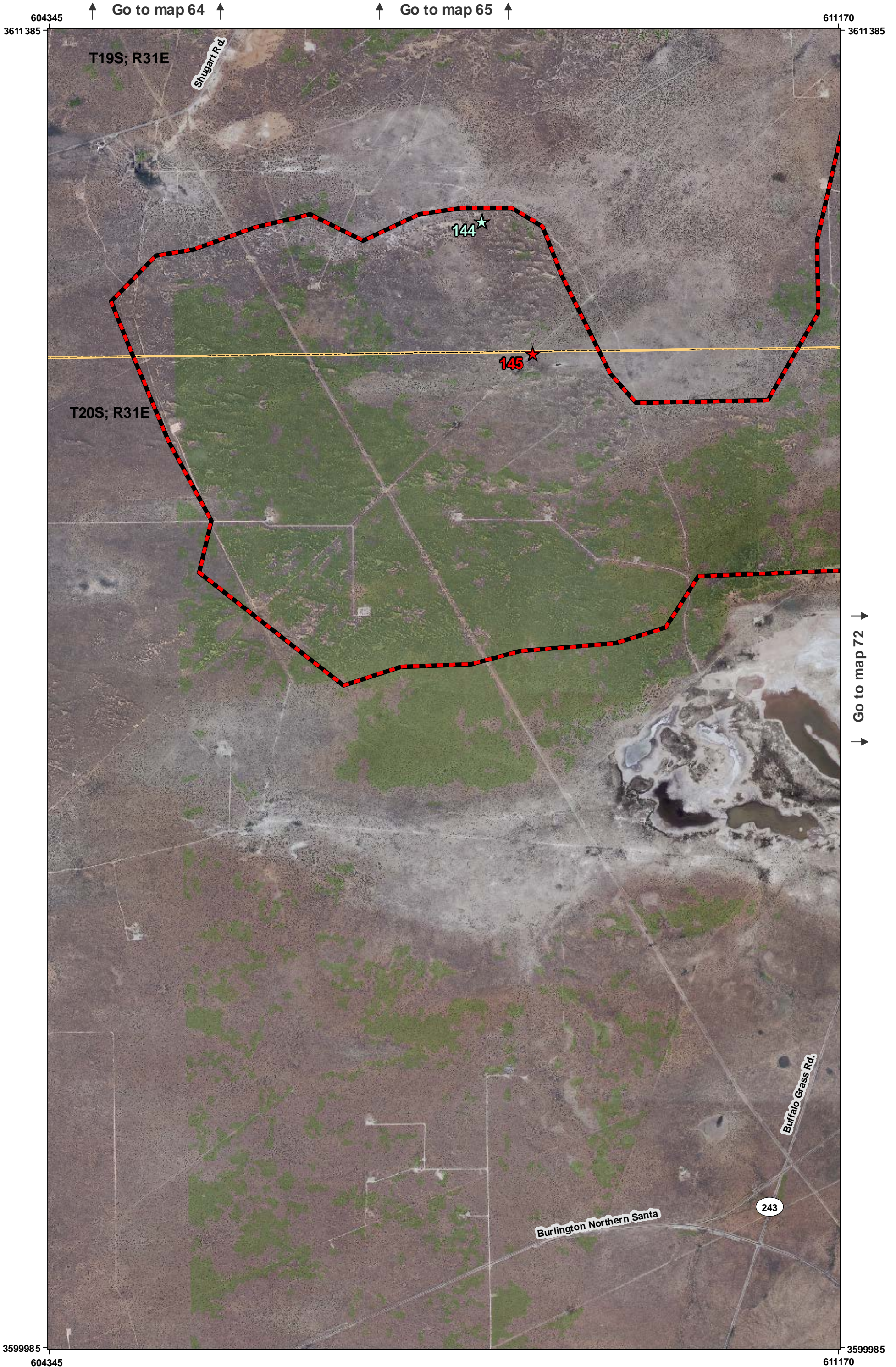
↑ Go to map 69 ↓

↓ Go to map 76 ↓

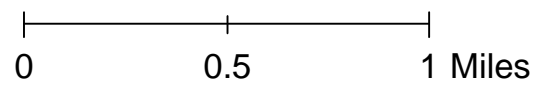
↓ Go to map 77 ↓



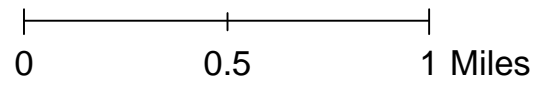
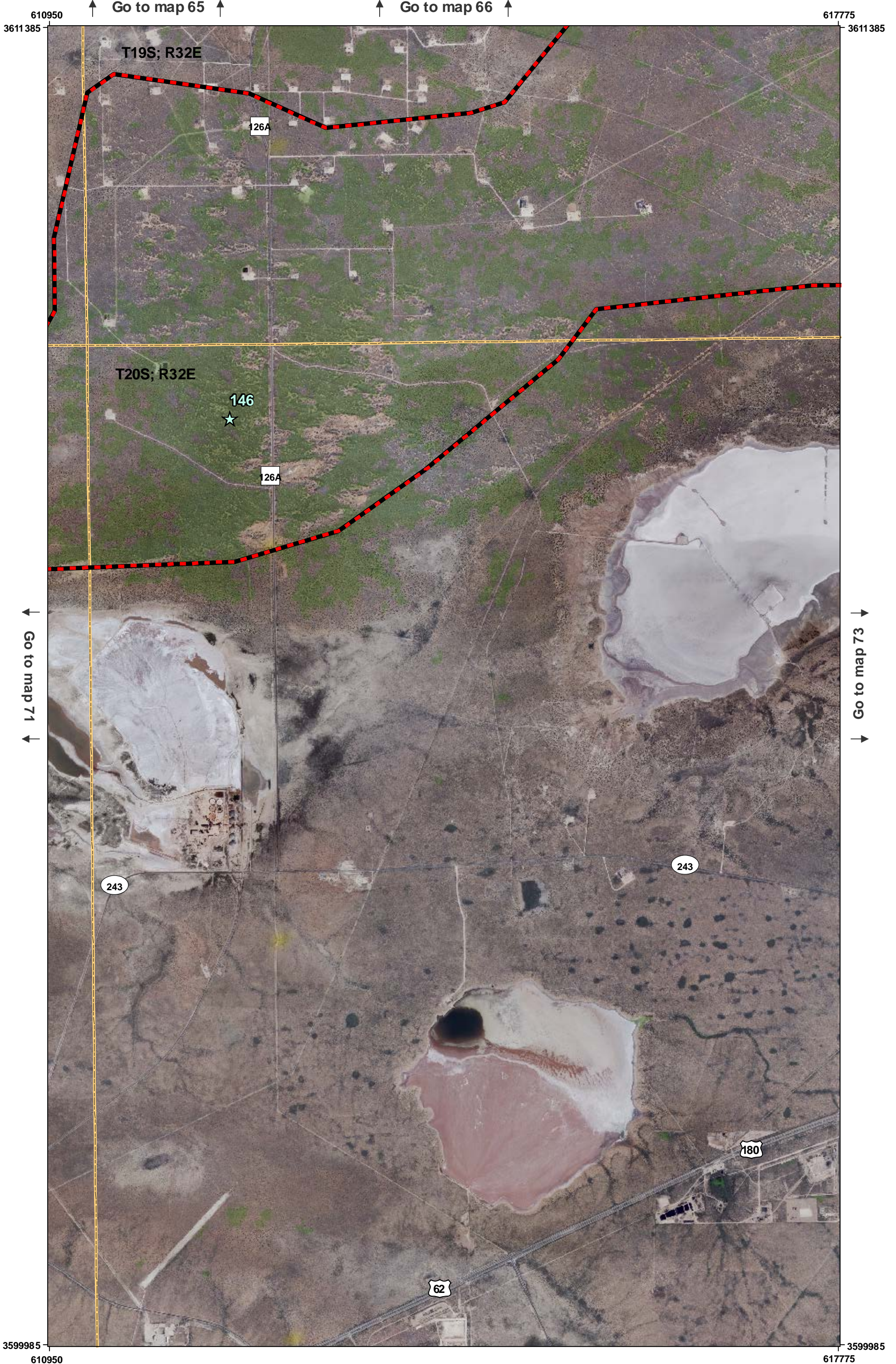




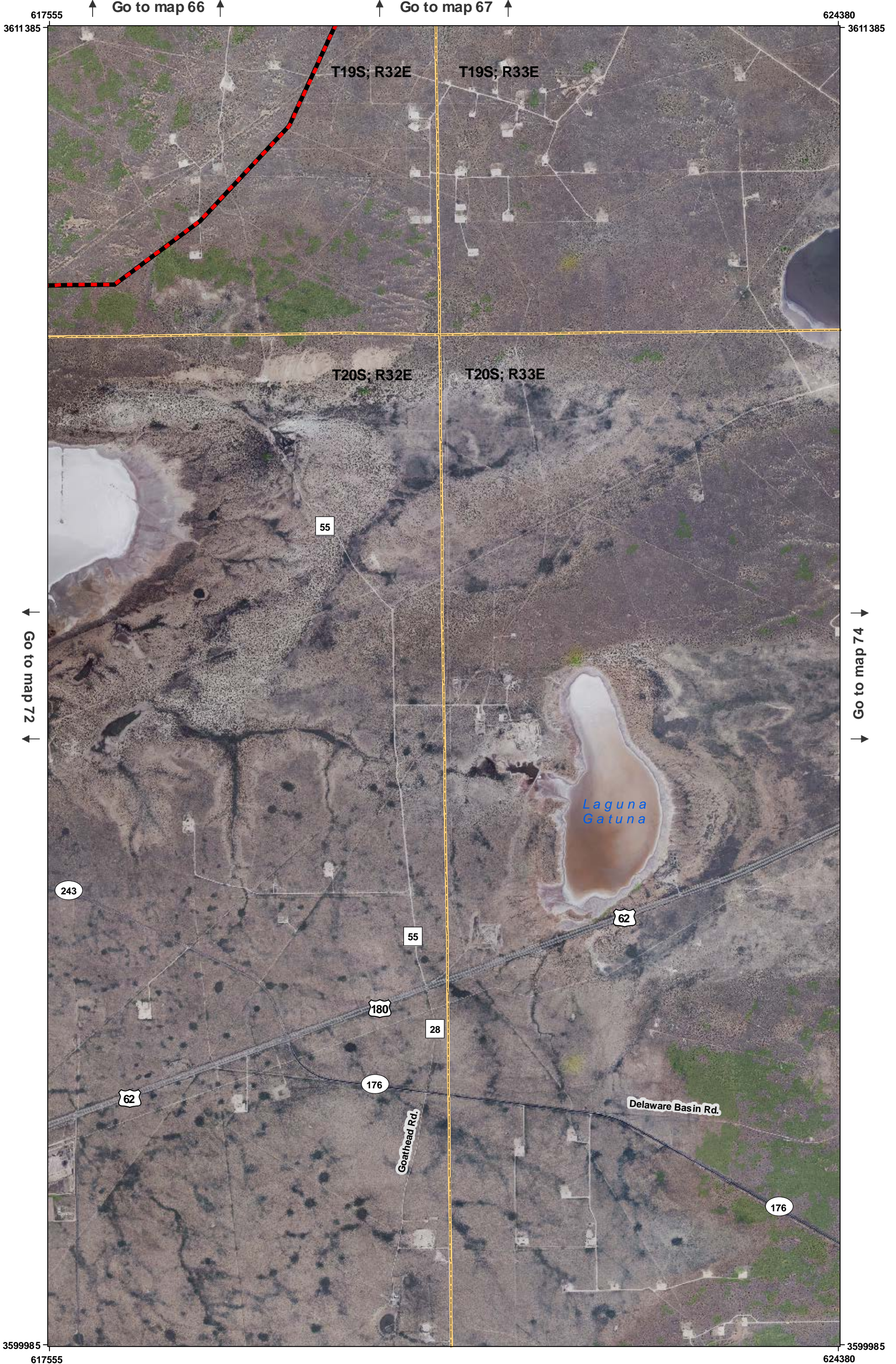
Note: Vegetation classification unavailable for western portion of map.











↑ Go to map 66 ↑

↑ Go to map 67 ↑

↑ Go to map 72 ↓

↓ Go to map 74 ↓

0 0.5 1 Miles



624155  
3611385

↑ Go to map 67 ↑

↑ Go to map 68 ↑

630980  
3611385

T19S; R33E

T20S; R33E

Smith Ranch Rd

62

180

62

Delaware Basin Rd

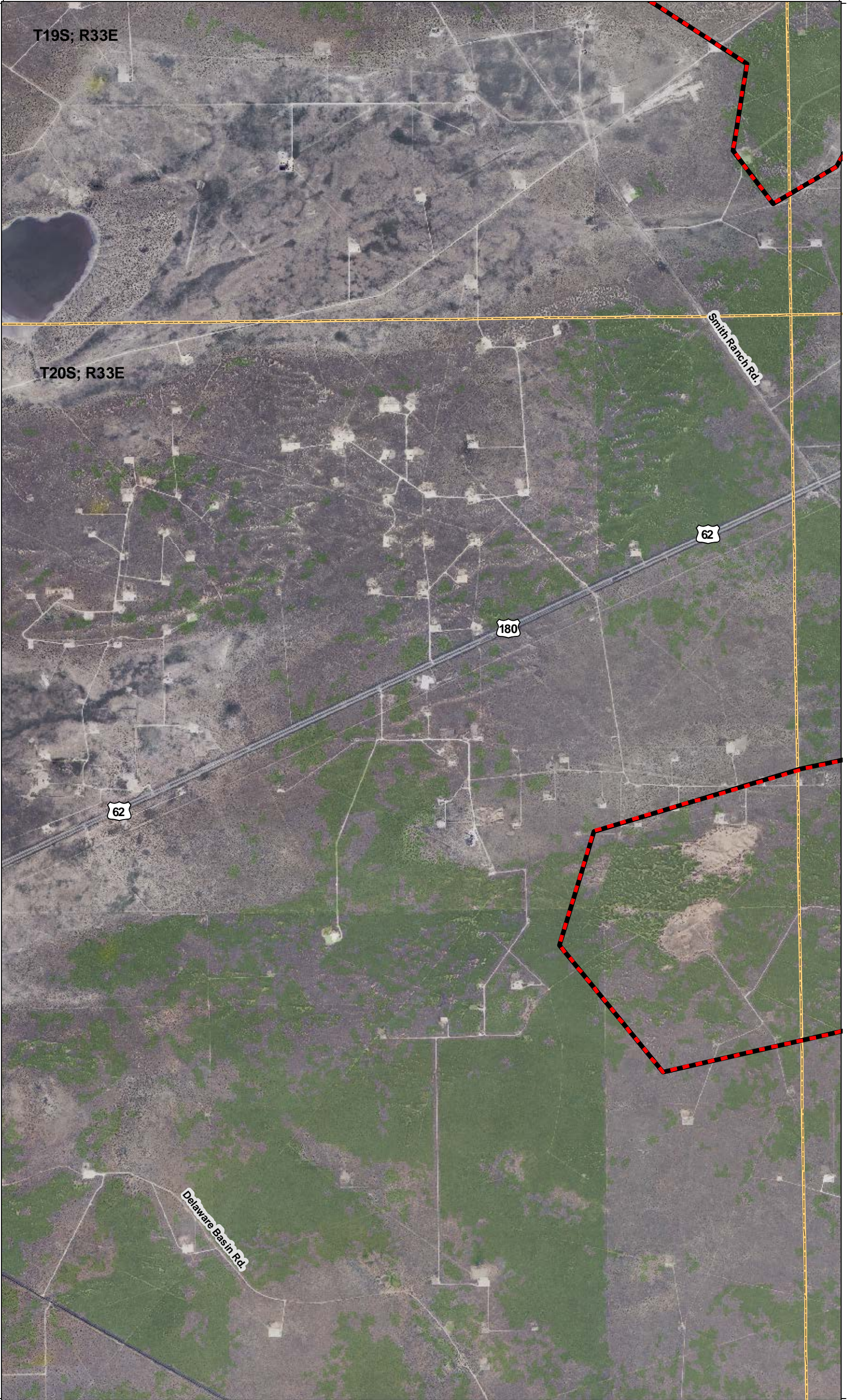
↑ Go to map 73 ↓

↓ Go to map 75 ↓

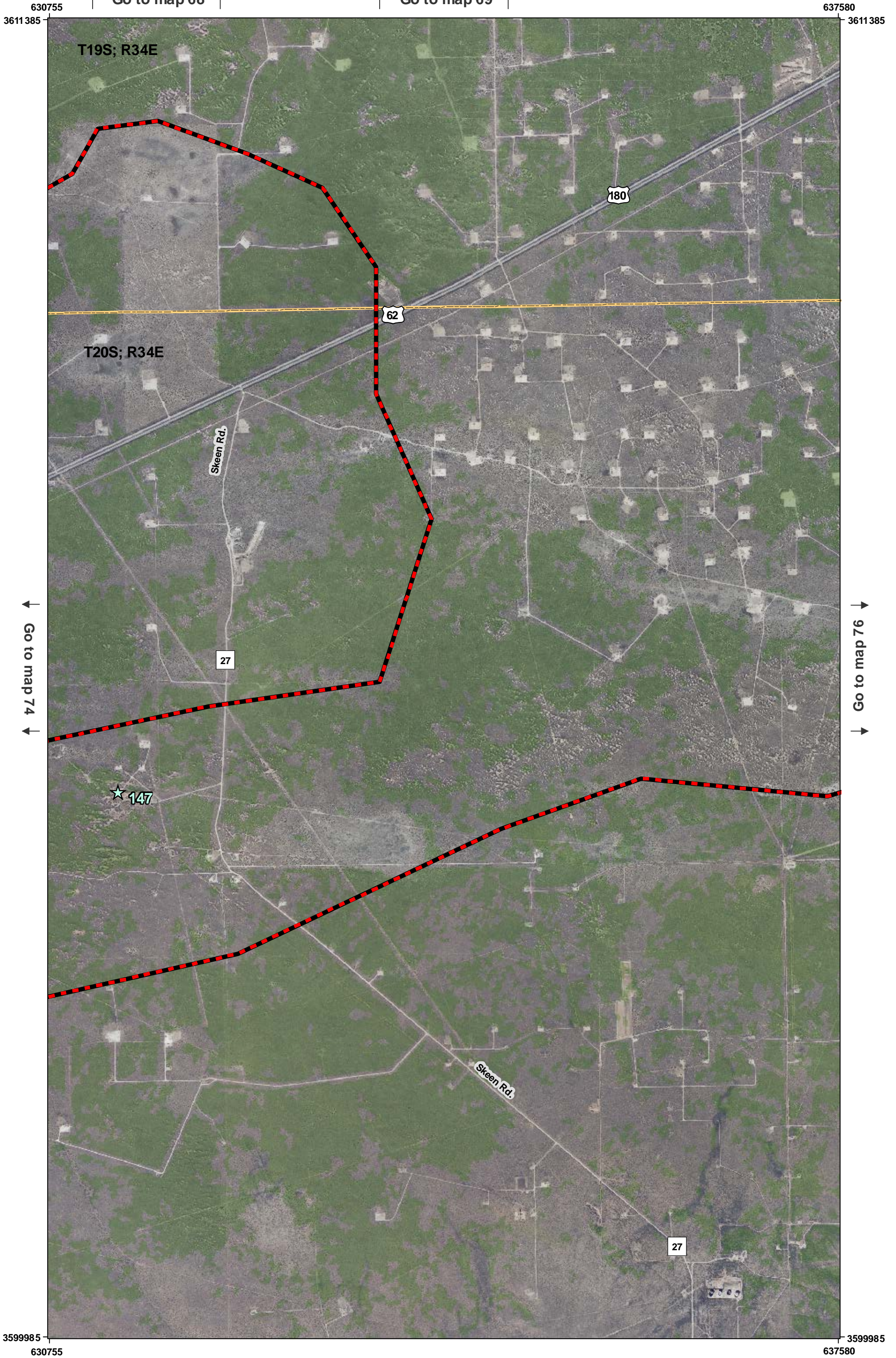
3599985  
624155

3599985  
630980

0 0.5 1 Miles





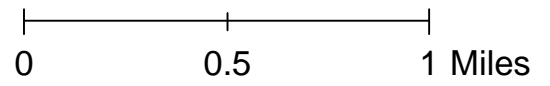


↑ Go to map 68 ↑

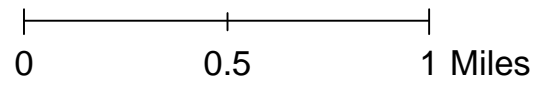
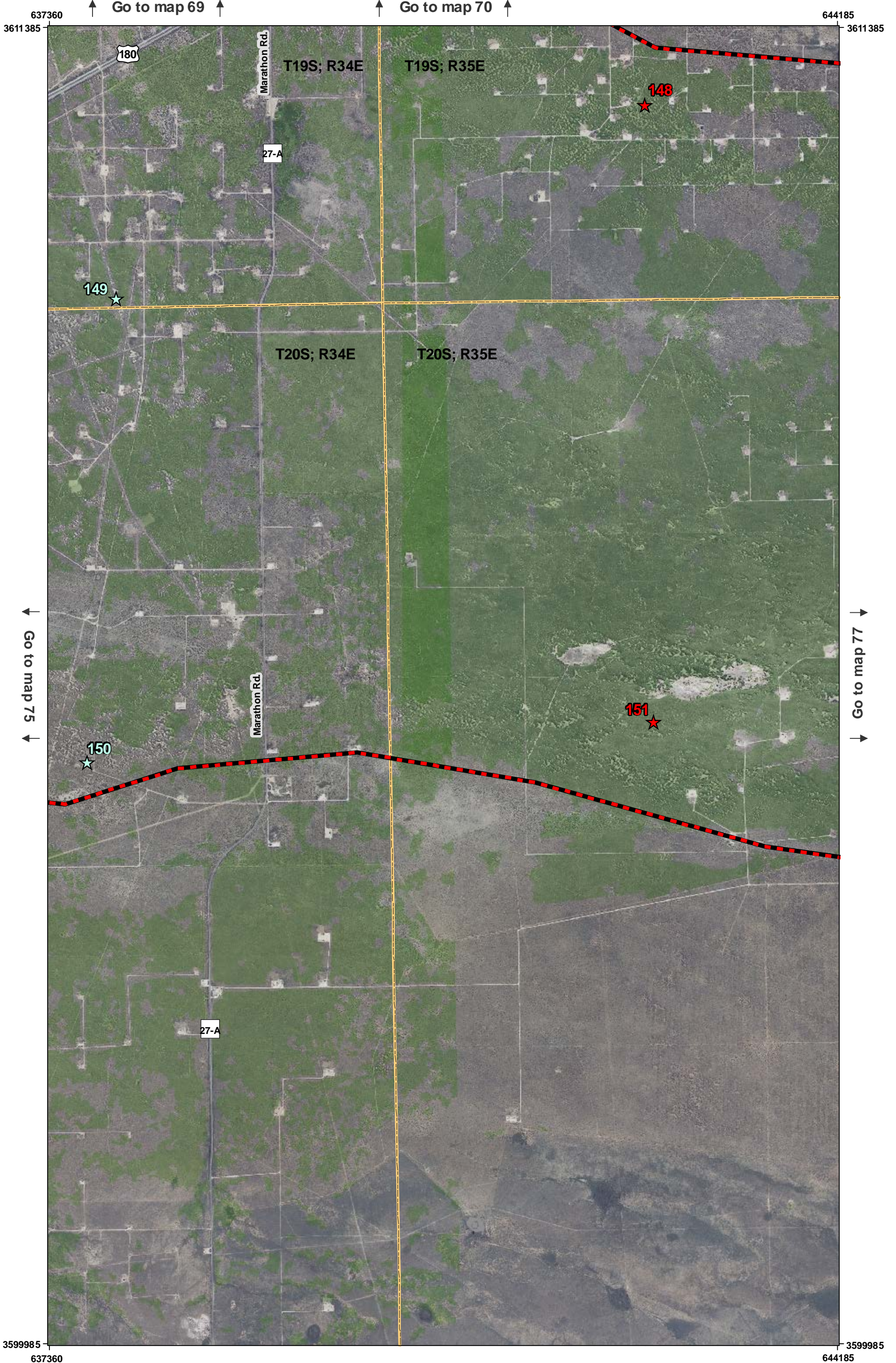
↑ Go to map 69 ↑

↑ Go to map 74 ↓

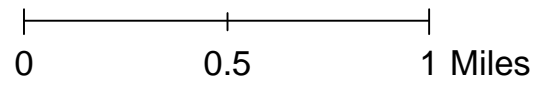
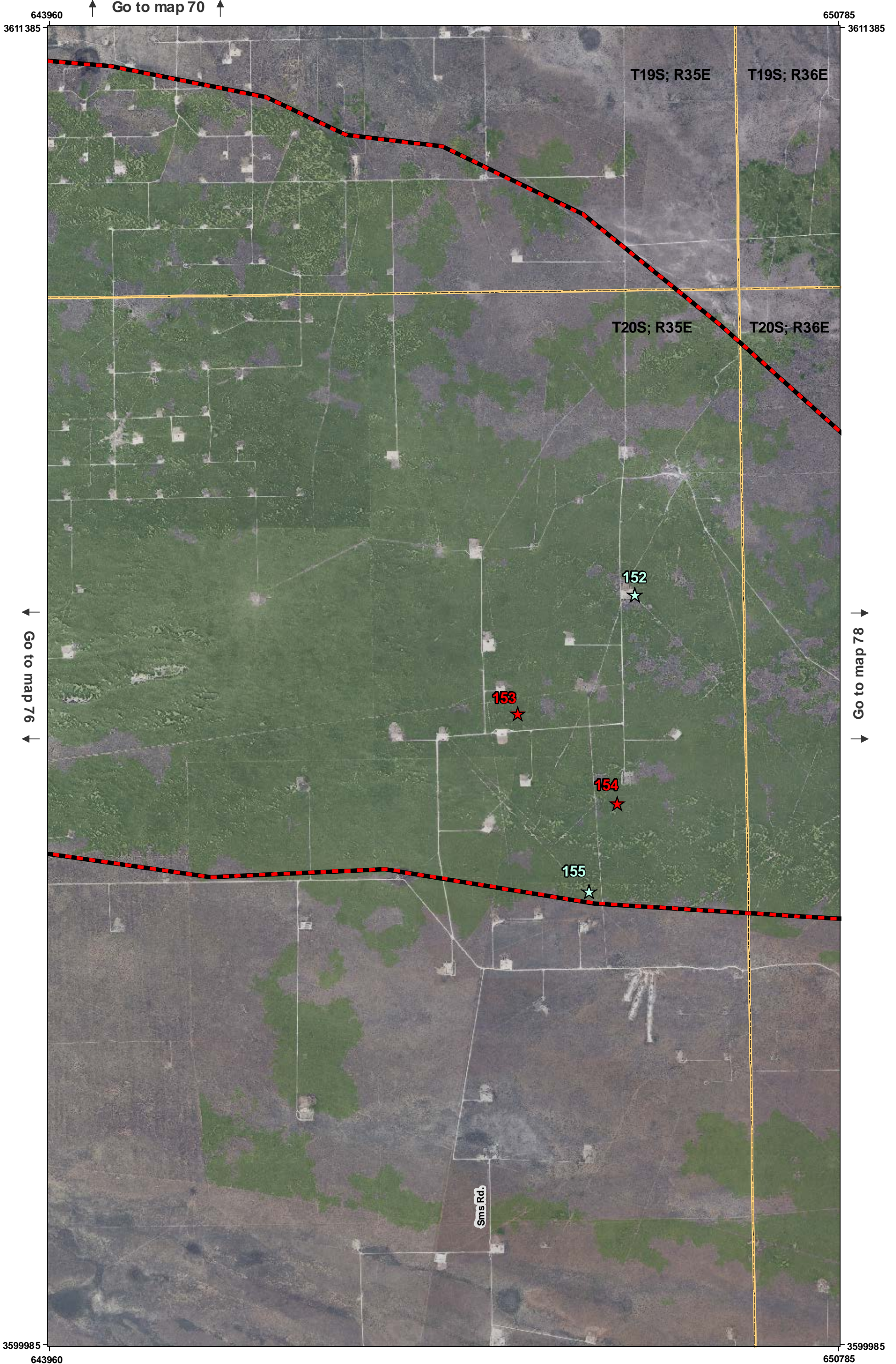
↓ Go to map 76 ↓



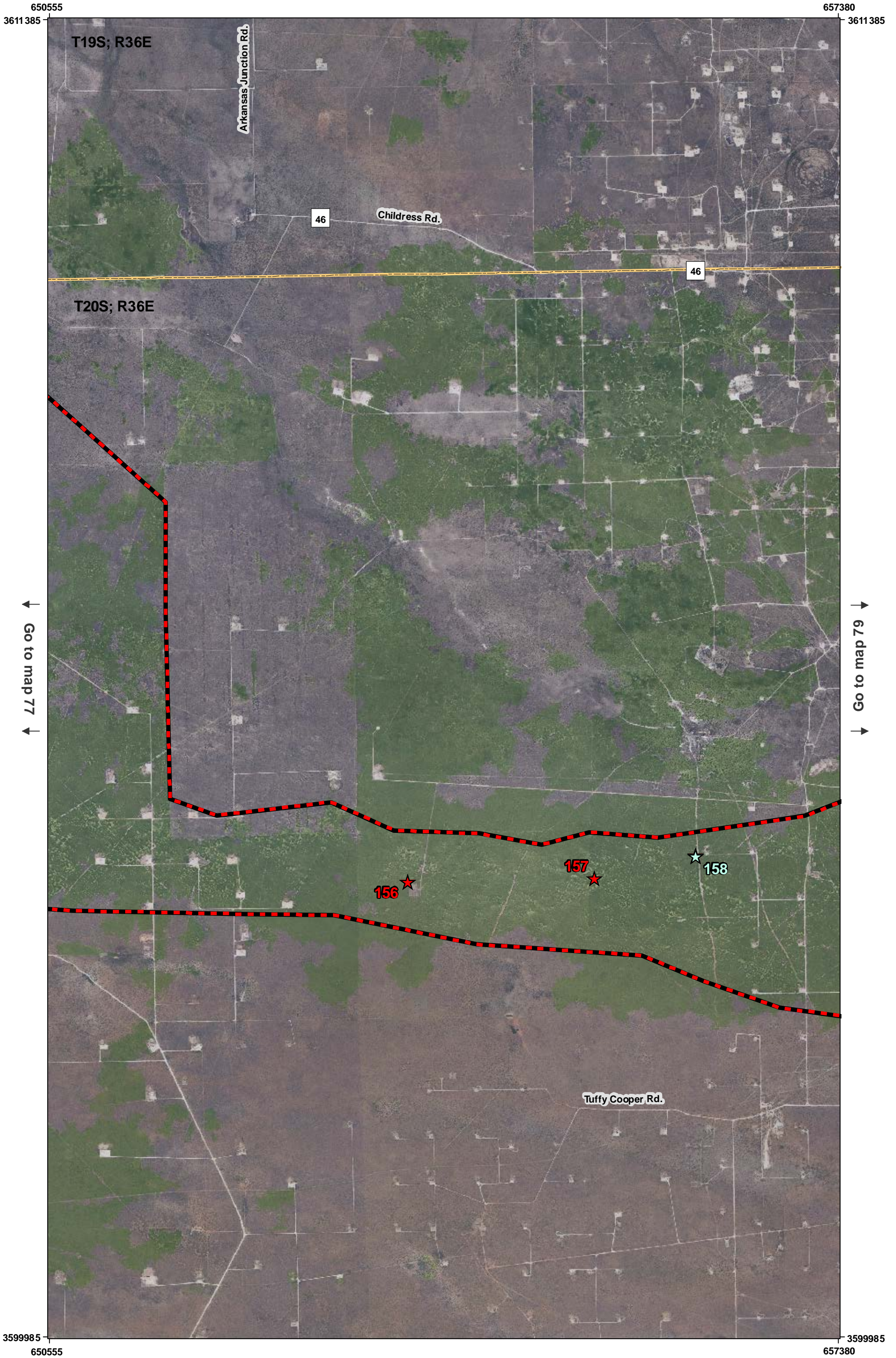






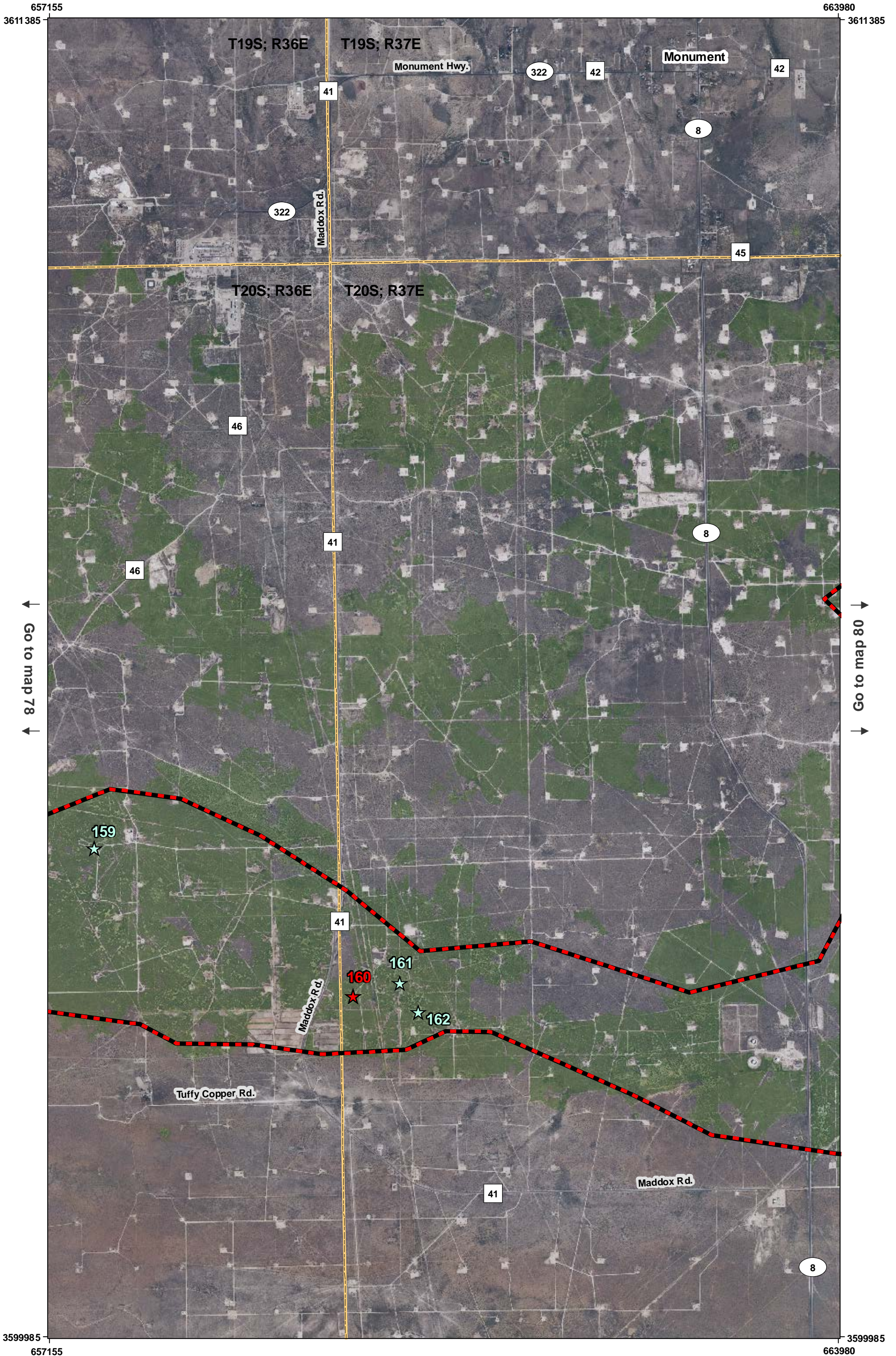






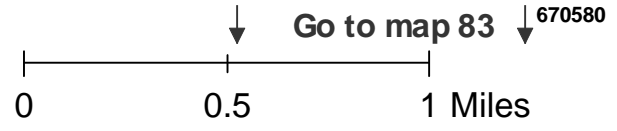
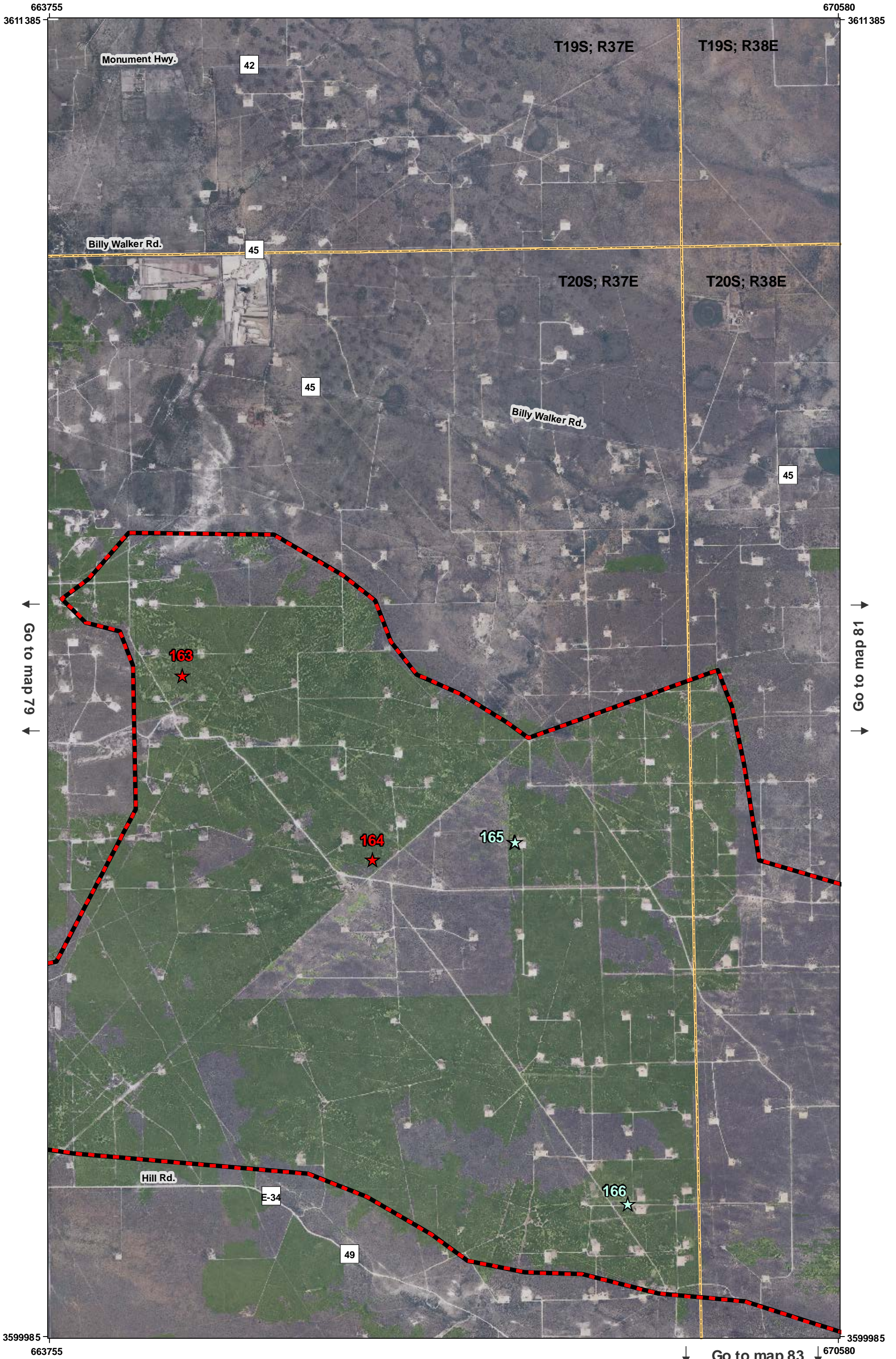
0 0.5 1 Miles



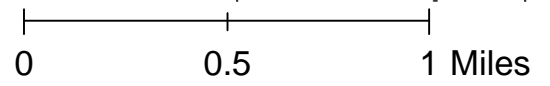
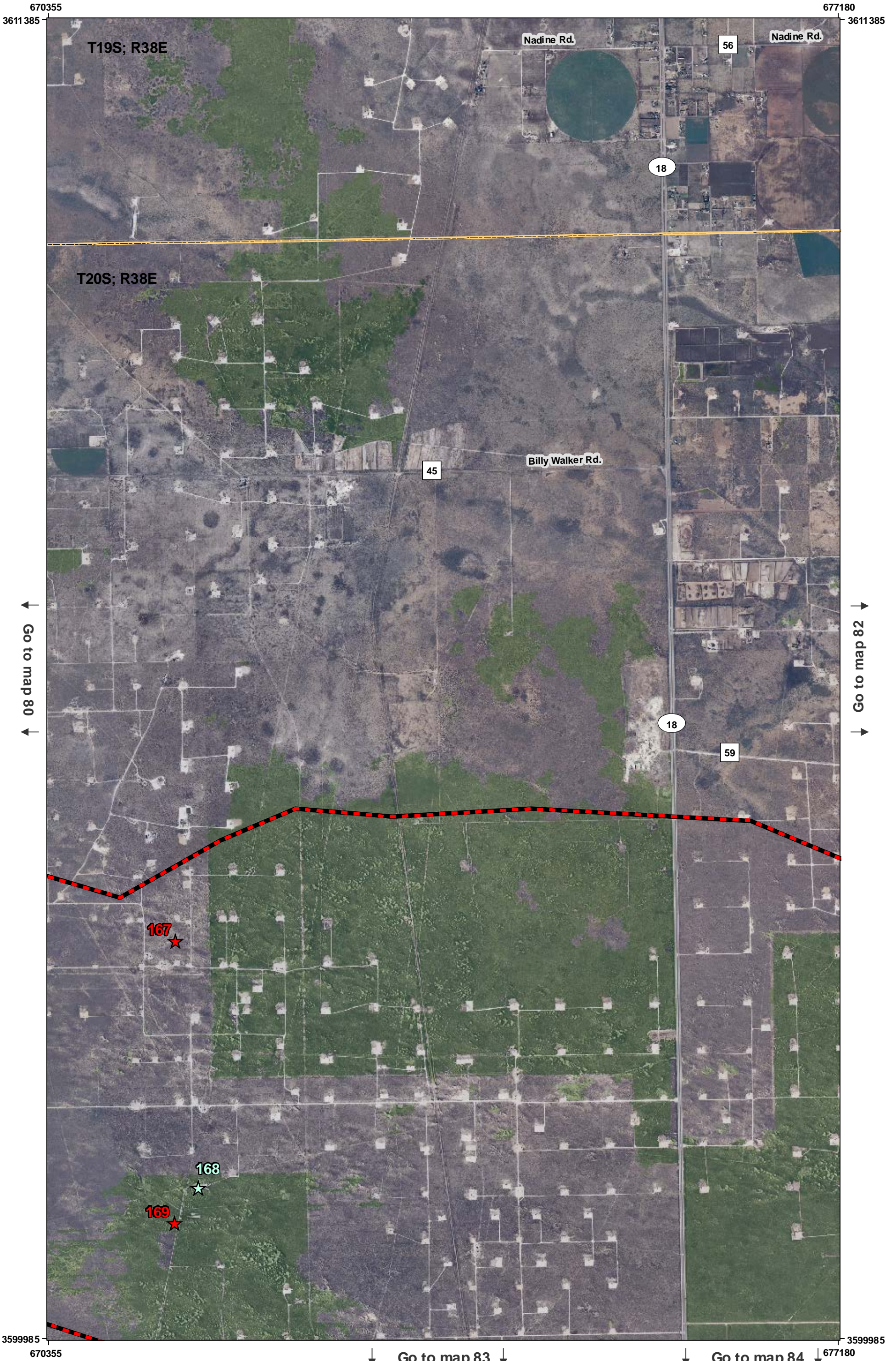


0 0.5 1 Miles

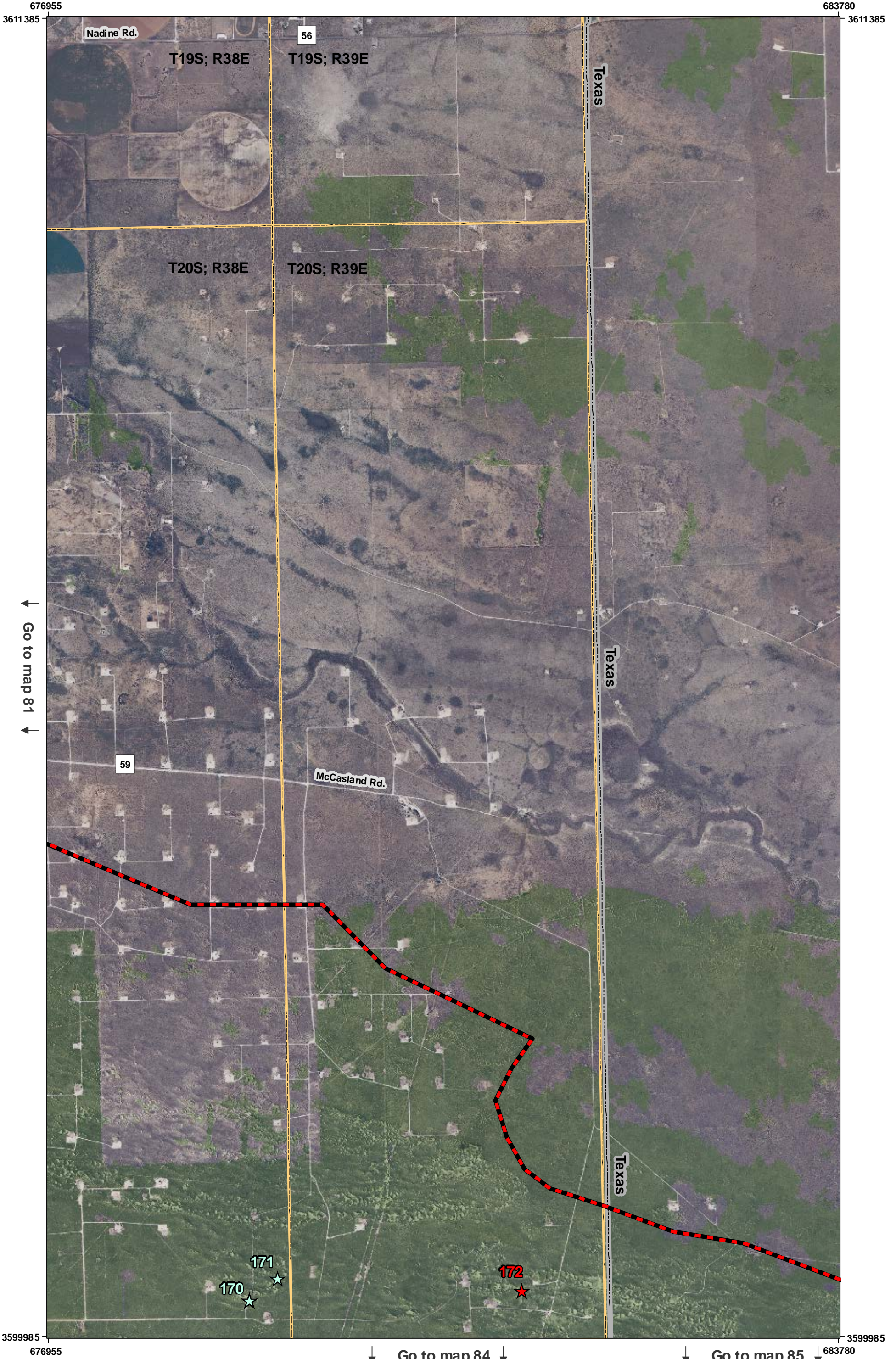












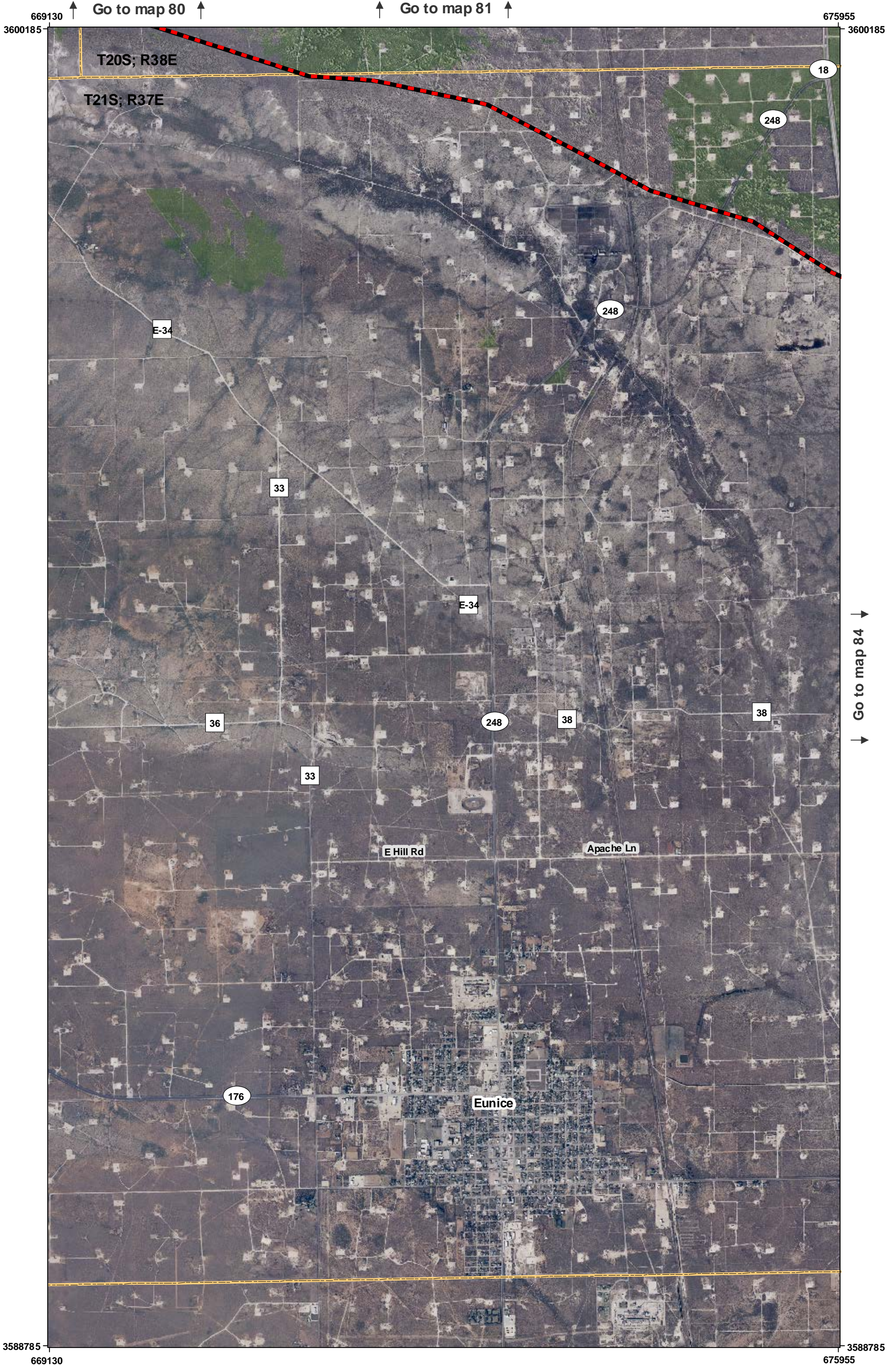
Go to map 81

Go to map 84

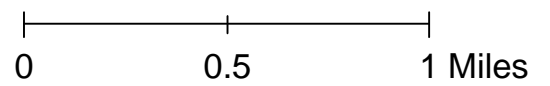
Go to map 85

0 0.5 1 Miles

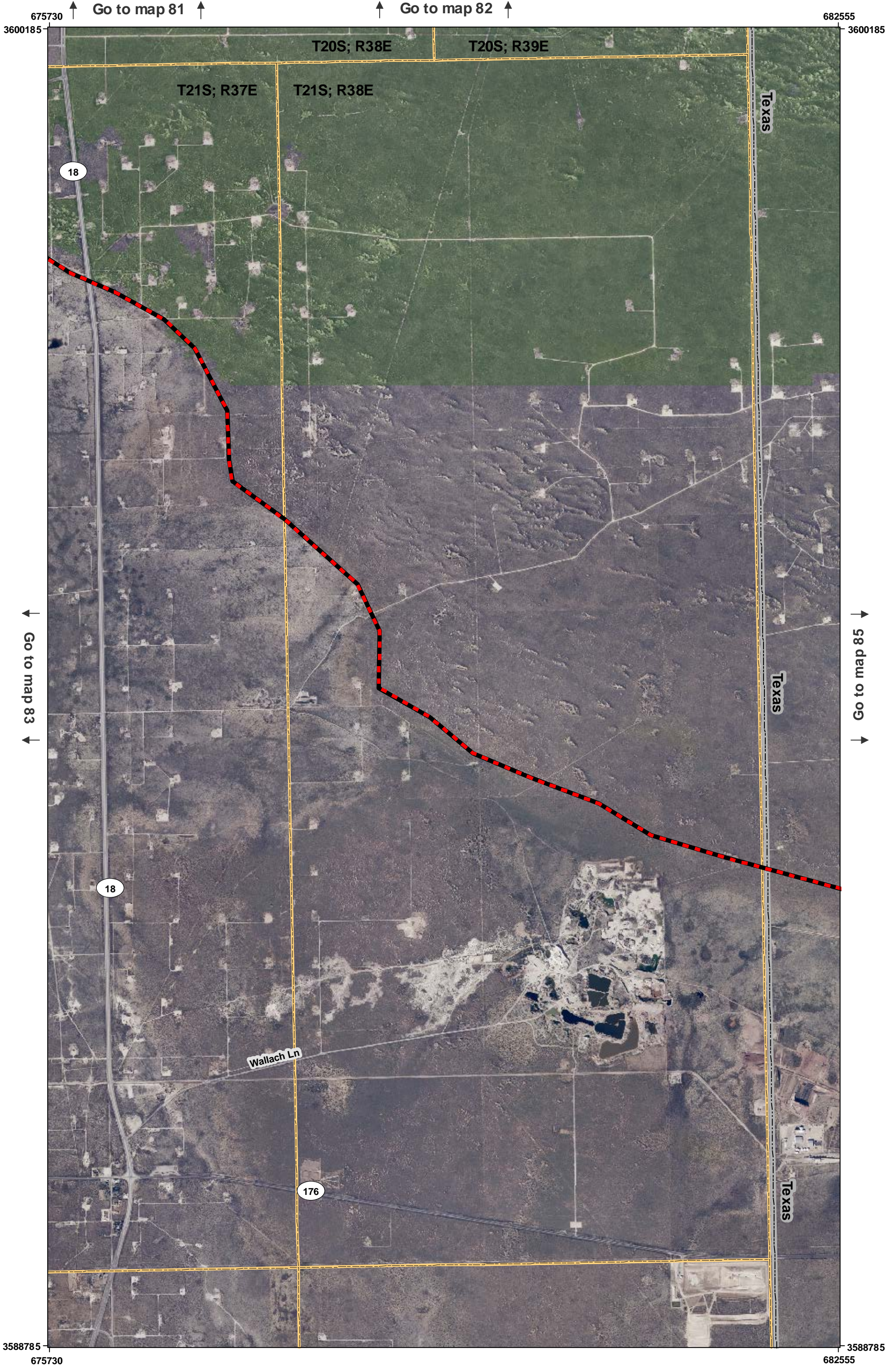




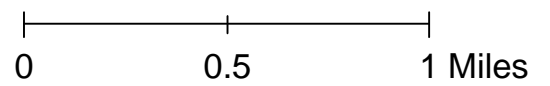
Note: Vegetation classification unavailable for southern portion of map.







Note: Vegetation classification unavailable for southern portion of map.









## Appendix

Coordinates and specimen information are shown for each numbered locality on the maps. Multiple specimens exist for some localities. Separate line entries show different years specimens were collected at the same locality. The natural history collection (museum) where specimens are deposited is indicated by its symbolic code, "MSB" for Museum of Southwestern Biology, University of New Mexico and "TCWC" for Texas Cooperative Wildlife Collection, Texas A&M University. In a few cases collection catalog numbers have not been assigned to specimens recently collected; these are indicated by "TBC" (waiting to be catalogued).

Locality #	Map #	Year Collected	Museum	Catalogue Number	NAD 83 - UTM 13N	
					E	N
1	1	1994	MSB	57609, 57610, 57611	596373	3750093
		2008	MSB	75038	596374	3750093
2	1	2008	MSB	74981	596358	3750003
3	1	2008	MSB	74667	596055	3748700
4	1	1994	MSB	57613, 57614	596316	3748266
5	2	2008	MSB	74670	596847	3749417
6	2	1994	MSB	57615	598211	3748862
		2008	MSB	75045	598209	3748859
7	2	2005	MSB	72698	598451	3747859
8	2	1994	MSB	57520	601412	3747137
9	2	1994	MSB	57521	600884	3746816
10	2	1994	MSB	57522	600562	3746923
11	4	1994	MSB	57519	593945	3743379
12	5	1995	MSB	59948	600898	3738927
		2010	MSB	TBC	600895	3738928
13	6	2003	TCWC	90352, 90362, 90375, 90376, 90377, 90378, 90379, 90380	606437	3744860
14	6	2008	MSB	75007	606531	3744844
15	6	1995	MSB	59862, 59863	606535	3744779
16	7	1994	MSB	57704, 57705, 57706	610762	3735863
		2010	MSB	TBC	610764	3735866
17	9	1994	MSB	57694, 57695	609211	3732023
		2010	MSB	TBC	609205	3732022
18	10	1993	MSB	55936, 55937	612044	3730521
19	10	1993	MSB	56245	613638	3729591
20	10	1995	MSB	59870	615397	3725680
		2010	MSB	TBC	615398	3725685
21	11	2003	TCWC	90510, 90511, 90513, 90514	622790	3731930
22	11	2006	TCWC	91378	619874	3728020
23	11	2006	TCWC	91383	619967	3728060
24	11	2006	TCWC	91377	619997	3728010
25	12	2006	TCWC	91384	625416	3729284
26	12	2006	TCWC	91382	625769	3729143
27	12	1995	MSB	59925, 59926	628878	3729440
		2010	MSB	TBC	628877	3729439
28	16	2004	MSB	72888	653845	3730665
29	16	1994	MSB	57625, 57626, 57627	654487	3731080
		2010	MSB	TBC	654485	3731083
30	16	2009	MSB	75804	654324	3729597
31	16	1995	MSB	59930	656328	3729625
		2010	MSB	TBC	656326	3729626
32	17	1995	MSB	59937	657411	3731489
33	25	1995	MSB	59593, 59594, 59595, 59596, 59597, 59598, 59599, 59600	604292	3701721
34	26	1994	MSB	56810	608744	3703158
35	26 & 38	2008	MSB	74978, 75029	609649	3700861
		2009	MSB	75766	609649	3700861
36	26	1995	MSB	59878	610480	3701545
37	26	2009	MSB	75765	610728	3701672
38	26	2009	MSB	75776	611306	3702461



39	26	2002	MSB	71964	611544	3701685
40	26	2006	TCWC	91497	611647	3701506
		2006	MSB	72709	611647	3701506
		2008	MSB	74985, 75021, 75026	611647	3701506
41	26	2009	MSB	75770	611726	3701793
42	26	2004	MSB	71963	611964	3701982
43	26	2003	TCWC	90349, 90354, 90355	612195	3702320
44	26	2007	TCWC	92573	612253	3702002
		2008	MSB	75019	612253	3702002
		2009	MSB	75767	612253	3702002
45	26	1995	MSB	59879	612439	3701814
46	27	1995	MSB	59882, 59884	614967	3706540
47	27	2005	MSB	72735, 72736, 72737	614028	3703837
48	27	1995	MSB	59880, 59881	613857	3703523
		1996	MSB	60736, 61023	613857	3703523
		2008	MSB	74987	613842	3703528
49	27	2009	MSB	75771	613054	3701903
50	28	1995	MSB	59885	624446	3703665
		2003	TCWC	90508	624443	3703672
51	28	2003	TCWC	90350, 90351	624670	3704106
52	28	2010	MSB	TBC	625116	3704158
53	29	1996	MSB	60410	627966	3708974
54	29	2010	MSB	TBC	627997	3704975
55	31	2008	MSB	75006	639801	3705128
56	31	1996	MSB	60407, 60408	643193	3705472
		2008	MSB	75022	643195	3705475
57	31	1996	MSB	60409, 60411	643382	3702148
		2008	MSB	75025	643300	3702141
58	32	1996	MSB	60403, 60404, 60405	651134	3701859
		2008	MSB	75014	651040	3701981
59	33	1996	MSB	60406	653440	3702043
60	33	1996	MSB	60402	654221	3700480
61	33	1993	MSB	55932, 55933, 55934	655210	3700490
62	37	1993	MSB	56238, 56239, 56240, 56241, 56242, 56251, 56255, 56256, 56537, 56553, 56581	605508	3696705
63	37	2005	MSB	72687	602101	3696118
64	37	2005	MSB	72686	602318	3695513
65	37	2005	MSB	72690	601960	3695087
66	37	1993	MSB	56247	600699	3695112
67	37	1994	MSB	57284, 57285, 57286	601704	3694195
68	38	2008	MSB	74278, 74982, 75028	609780	3700425
		2009	MSB	75772, 75823	609780	3700425
69	38	2003	TCWC	90356	607231	3698229
70	38	1993	MSB	56246	607135	3696721
		1994	MSB	56835, 56836	607135	3696721
		1995	MSB	58171, 59614	607182	3696705
71	38	2006	TCWC	91500	610139	3698753
72	38	2006	TCWC	91501	610193	3698968
73	38	1993	MSB	56252, 56253	610271	3698282
74	39	1967	MSB	23623	615268	3700769
		1968	MSB	23621, 23622	615268	3700769
75	39	1968	MSB	23624, 23625	615287	3699160
76	40	1993	MSB	56236	592767	3682020
77	40	1993	MSB	56248, 56249, 56250	593456	3682237
		1994	MSB	57093	593456	3682237
78	40	1993	MSB	56243	595066	3680628
79	41	1993	MSB	56237	601454	3686979
		1994	MSB	56837, 56838, 56839	601503	3687065



80	41	1994	MSB	57680	602583	3683995
81	41	2008	MSB	74976	602927	3683931
82	41	1994	MSB	56840	598284	3682236
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84	41	1994	MSB	57297	599089	3679018
85	43	2010	MSB	TBC	592942	3673511
86	43	2008	MSB	74993	592232	3672840
87	43	1994	MSB	57690	590924	3671416
		2008	MSB	75020	590859	3671413
88	43	2008	MSB	75011	590056	3668107
89	43	1994	MSB	57287, 57288	590136	3667959
90	44	1994	MSB	57684	594012	3675230
91	44	1994	MSB	57264	598284	3675800
92	44	1994	MSB	57300, 57301	597898	3674711
93	44	2005	TCWC	91335	597467	3674271
94	45	1994	MSB	57298, 57299	600888	3677717
95	45	2010	MSB	TBC	601364	3676925
96	45	1994	MSB	56815, 56816	601503	3675799
		1995	MSB	59565, 59566, 59567, 59568, 59569, 59570, 59571, 59572, 59620, 59621, 59622, 59623	601572	3675718
97	45	1994	MSB	57282, 57283	600673	3675045
98	45	1995	MSB	59666	600779	3667765
		2008	MSB	75013	600806	3667834
99	46	1994	MSB	57295	607411	3674252
		2008	MSB	75005	607406	3674248
100	48	2010	TCWC	TBC	599394	3659909
101	48	2010	TCWC	TBC	599258	3658950
102	49	2010	TCWC	TBC	600565	3667124
103	49	1995	MSB	59710	599967	3666118
104	49	2008	MSB	74980	600037	3660592
105	49	1995	MSB	59712	599972	3659520
		2008	MSB	74990	600014	3659574
106	50	1995	MSB	59649	599400	3655940
		2008	MSB	75012	599396	3655952
107	50	1995	MSB	59641	597296	3649050
		2008	MSB	74979	597302	3649184
108	50	2006	TCWC	91360, 91361	599461	3646675
109	51	2006	TCWC	91370, 91371, 91372, 91373	600949	3654156
110	51	2010	TCWC	TBC	601317	3651126
111	51	2010	MSB	TBC	601694	3648946
112	53	1970	MSB	23626	600534	3642963
113	53	2010	TCWC	TBC	601040	3642726
114	53	1995	MSB	59671	600476	3641409
		2008	MSB	74977, 74988	600474	3641411
115	53	2008	MSB	75015	600295	3638803
116	53	1995	MSB	59902	604068	3638784
		2008	MSB	74986	604065	3638787
117	57	2008	MSB	75041	595580	3624232
118	57	1994	MSB	57566	596341	3624327
119	57	1994	MSB	57289, 57290, 57291	597606	3623893
120	59	1995	MSB	59658	611037	3632865
		2010	MSB	TBC	611036	3632864
121	59	1995	MSB	59911	611844	3631835
122	59 & 60	1995	MSB	59907	613997	3631277
123	59	1994	MSB	57640, 57641, 57642, 57643	611057	3627911
		1998	MSB	61332, 61333	611057	3627911
		2003	TCWC	90353	610970	3627920
		2008	MSB	74984	611054	3627908



124	59	2008	MSB	75004	613733	3628186
125	59	1995	MSB	61065, 61066, 61067	612286	3627547
126	60	2010	MSB	TBC	620235	3628962
127	61	1995	MSB	59913, 59914, 59915	620841	3628705
		2008	MSB	74983	620862	3628703
128	61	1995	MSB	59918	621360	3624712
		2008	MSB	75016	621216	3624585
129	65	1994	MSB	57646, 57647	611874	3619862
		2008	MSB	75018	611876	3619868
130	66	2001	MSB	63131	612782	3619250
131	66	2007	MSB	73105, 73109	618613	3618175
132	66	2007	MSB	73102	618303	3617598
133	66	1997	MSB	60811	618848	3617157
134	67	1997	MSB	60816	622876	3619608
135	67	2008	MSB	74989	624704	3615784
136	67	1996	MSB	60391, 60396	624707	3615596
137	68	1997	MSB	60812, 60813	626841	3618856
138	68	1995	MSB	59825	631549	3620214
139	68	2006	TCWC	91345	631763	3615164
140	68	2007	TCWC	92574	631729	3614840
141	68	2007	TCWC	92575	631817	3614561
142	69	1995	MSB	59823	633884	3613389
		2008	MSB	74992	633758	3613477
143	70	1995	MSB	59822	639721	3611512
		2008	MSB	75023	639723	3611515
144	71	1994	MSB	57678, 57679	608091	3609733
		2010	MSB	TBC	608086	3609736
145	71	1994	MSB	57563, 57564	608528	3608594
146	72	1994	MSB	57654, 57655, 57656	612512	3608011
		2008	MSB	74991	612398	3608129
147	75	1994	MSB	57659	631269	3604775
		2008	MSB	75008	631347	3604705
148	76	1995	MSB	59831	642520	3610720
149	76	2006	TCWC	91356	637936	3609044
150	76	2010	MSB	TBC	637687	3605023
151	76	1995	MSB	59834	642596	3605374
152	77	1996	MSB	60393, 60394, 60395	649026	3606486
		2010	MSB	TBC	649022	3606482
153	77	1997	MSB	60814	648010	3605457
154	77	1997	MSB	60815	648872	3604678
155	77	1996	MSB	60392	648626	3603912
		2010	MSB	TBC	648629	3603914
156	78	1997	MSB	60822, 60823	653661	3603931
157	78	1997	MSB	60819	655272	3603957
158	78	1996	MSB	60400	656151	3604155
		2008	MSB	75017	656148	3604151
159	79	1996	MSB	60399	657543	3604215
		2008	MSB	75009	657546	3604218
160	79	1996	MSB	60397, 60398, 60401	659786	3602937
161	79	2008	MSB	75027	660190	3603052
162	79	2006	TCWC	91495	660349	3602799
163	80	1997	MSB	60824	664908	3605711
164	80	1997	MSB	60820	666549	3604123
165	80	1995	MSB	59713	667779	3604270
		2010	MSB	TBC	667782	3604273
166	80	2008	MSB	75024	668762	3601144
167	81	1997	MSB	60818	671448	3603421
168	81	1995	MSB	59711	671754	3601227



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		2008	MSB	75010	671652	3601288
169	81	1997	MSB	60817	671441	3600983
170	82	1994	MSB	57660, 57661	678690	3600300
		2008	MSB	74975	678674	3600293
171	82	2006	TCWC	91374	678936	3600489
172	82	1997	MSB	60821	681045	3600379

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