

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109



FOR OGCC USE ONLY

REM 9864  
Document 2526999

## SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

## CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☐ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☒ Site/Facility Closure ☐ Other (describe): \_\_\_\_\_

OGCC Employee:

☐ Spill ☐ Complaint  
☐ Inspection ☐ NOAV

Tracking No:

## GENERAL INFORMATION

OGCC Operator Number: 10112

Name of Operator: Foundation Energy Management, LLC

Address: 16000 Dallas Parkway, Suite 875

City: Dallas State: TX Zip: 75248

Contact Name and Telephone

Name: Rachel Grant

No: 918-526-5592

Fax: 918-585-1660

API/Facility No: N/A

County: Garfield

Facility Name: Multiple - see Attachment A

Facility Number: Multiple - see Attachment A

Well Name: Multiple - see Attachment A

Well Number: Multiple - see Attachment A

Location (QtrQtr, Sec, Twp, Rng, Meridian): Multiple - see Attachment A

Latitude: 39.393105 Longitude: -108.975953

## TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Unknown

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☒ Y ☐ N

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Not yet determined

Potential receptors (water wells within 1/4 mi, surface waters, etc.): No receptors have been identified within 1/4-mile of the subject facilities

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):

Extent of Impact:

How Determined:

- ☐ Soils  
☐ Vegetation  
☐ Groundwater  
☐ Surface water

## REMEDIALATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

In September 2016, Foundation Energy Management, LLC (Foundation) completed the transfer of multiple assets from National Fuel Corporation to Foundation. This asset transfer included 10 locations with inactive pits, which were determined to serve no current or future purpose related to the operation of the associated wells (Figures 1 and 2). The subject pit Facility IDs, associated wells, and associated well API numbers were provided in Exhibit E of the Form 10; this Exhibit, with the pit legal descriptions appended, is included as Attachment A.

Site inspections were conducted by the COGCC in June 2016. Foundation is proposing to assess the pits, in preparation for development of remediation plans for each location, in order to begin formally closing the pits pursuant to COGCC regulations. Proposed assessment and remediation activities are described in the following sections.

Describe how source is to be removed:

Foundation will conduct assessment activities at each subject pit location to determine if soil impacts are present. If impacts are detected, horizontal and vertical soil impact delineation activities will be conducted, utilizing industry-standard methodologies (i.e., advancement of exploratory excavations, etc.). Based on discussions with the COGCC, pit soil sampling and analysis will be conducted as follows:

- One base sample from each pit: full Table 910-1 soil analytical suite;
- Four sidewall samples from each pit: BTEX, TPH-GRO, TPH-DRO, EC, and pH;
- Three composite background samples (one each) from the northern, southeastern, and southwestern groups of sites: arsenic.

Assessment activities are anticipated to be completed by December 31, 2016. Subsequent to the completion of assessment activities, Foundation will prepare and submit remediation plans to address any impacts discovered and close the pits pursuant to applicable COGCC regulations.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Foundation will prepare and submit remediation plans to address any impacts discovered and close the pits pursuant to applicable COGCC regulations.



## REMEDIATION WORKPLAN (CONT.)

OGCC Employee: \_\_\_\_\_

Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No.: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):  
Groundwater has not been encountered in any of the subject pits. Groundwater impacts are not anticipated to be encountered during assessment, remediation, or closure activities.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.  
Exploratory excavations will be backfilled with non-impacted native materials or imported clean fill. Future reclamation activities at the subject facilities will be compliant with applicable COGCC regulations.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.  
Is further site investigation required? ☒ Y ☐ N If yes, describe:  
Proposed assessment activities are described on the previous page.

Final disposition of E&P waste (land treated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):  
Not applicable - no E&P waste has been removed from the subject facilities as part of this assessment and remediation program.

## IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____	TBD	Date Site Investigation Completed: _____	TBD	Remediation Plan Submitted: _____	TBD
Remediation Start Date: _____	TBD	Anticipated Completion Date: _____	TBD	Actual Completion Date: _____	TBD

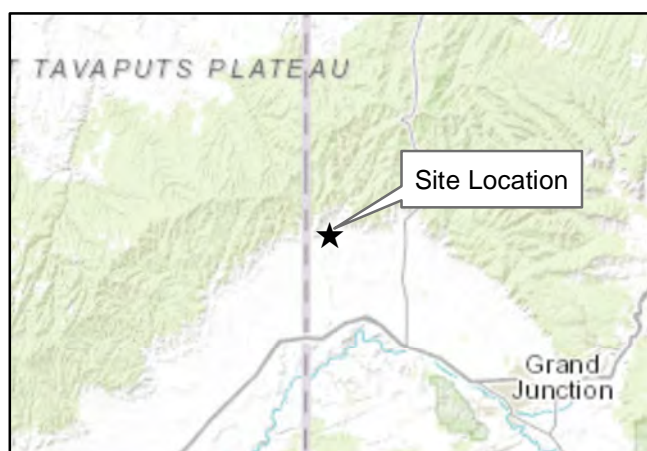
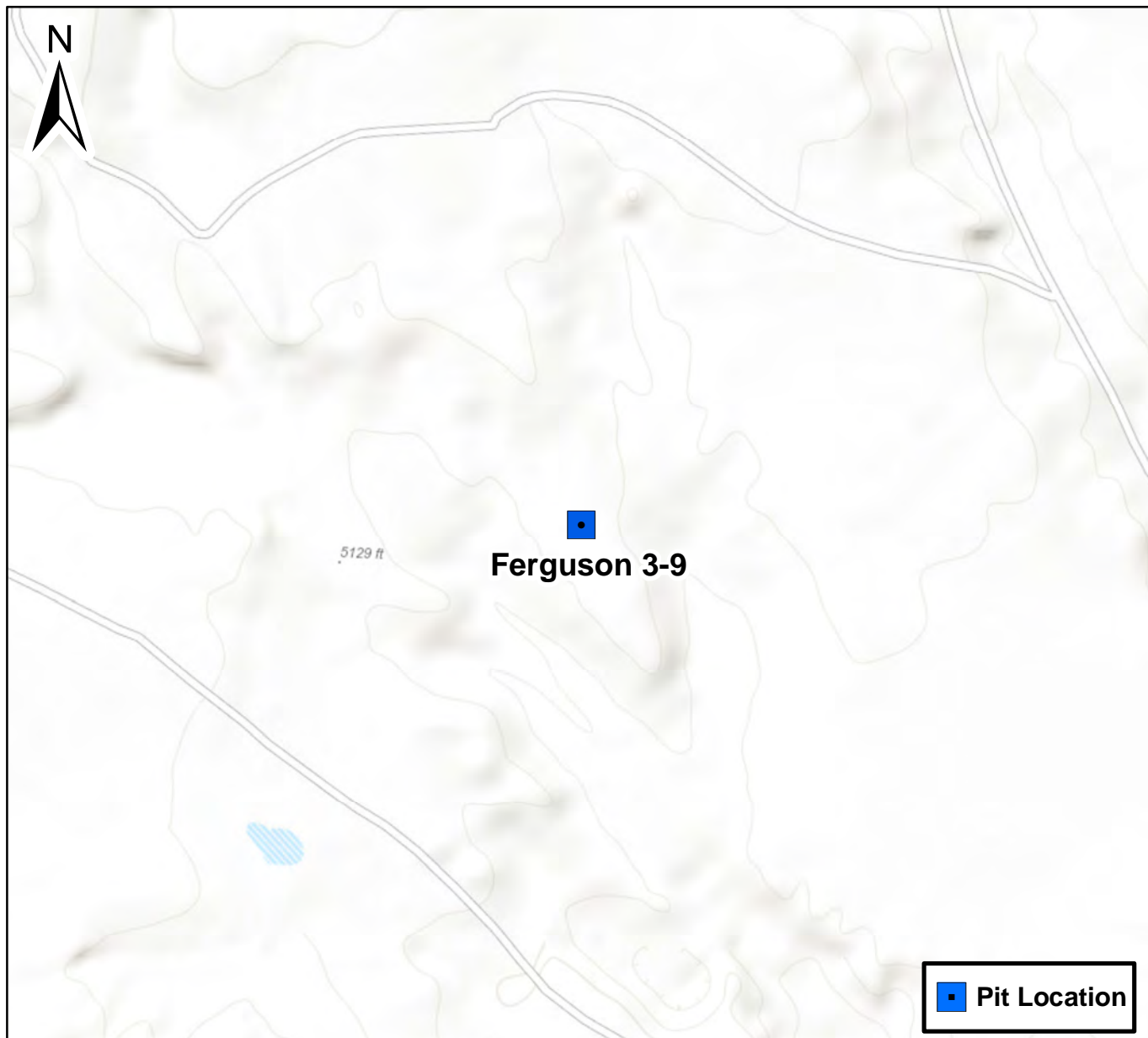
I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Rachel Grant

Signed: \_\_\_\_\_ Title: Senior HSE/Regulatory Technician Date: \_\_\_\_\_

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

## **FIGURES**

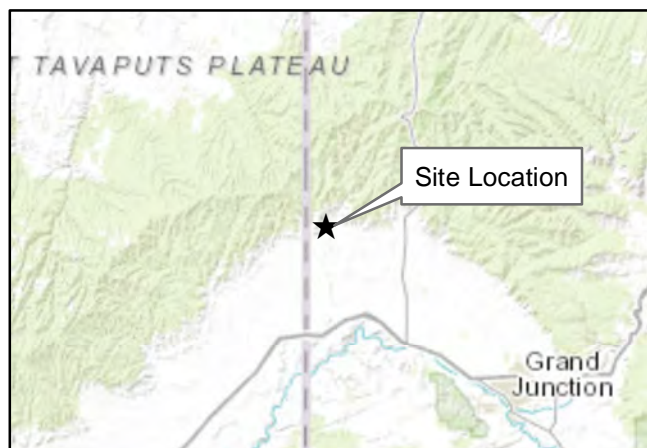


0 750 1,500 Feet

## Figure 1

Site Location Map  
Ferguson 3-9  
NESW S9 T8S R104W  
Garfield County, Colorado



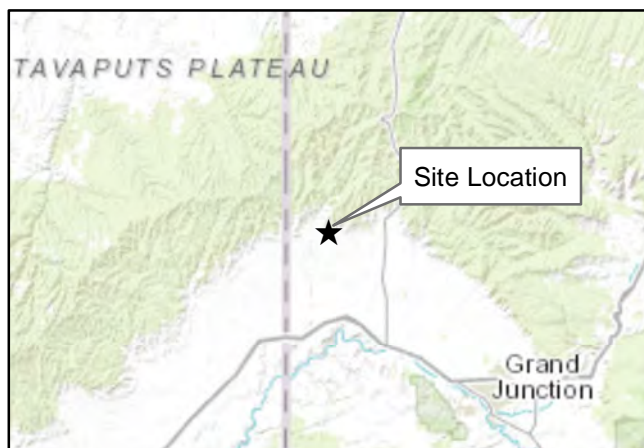
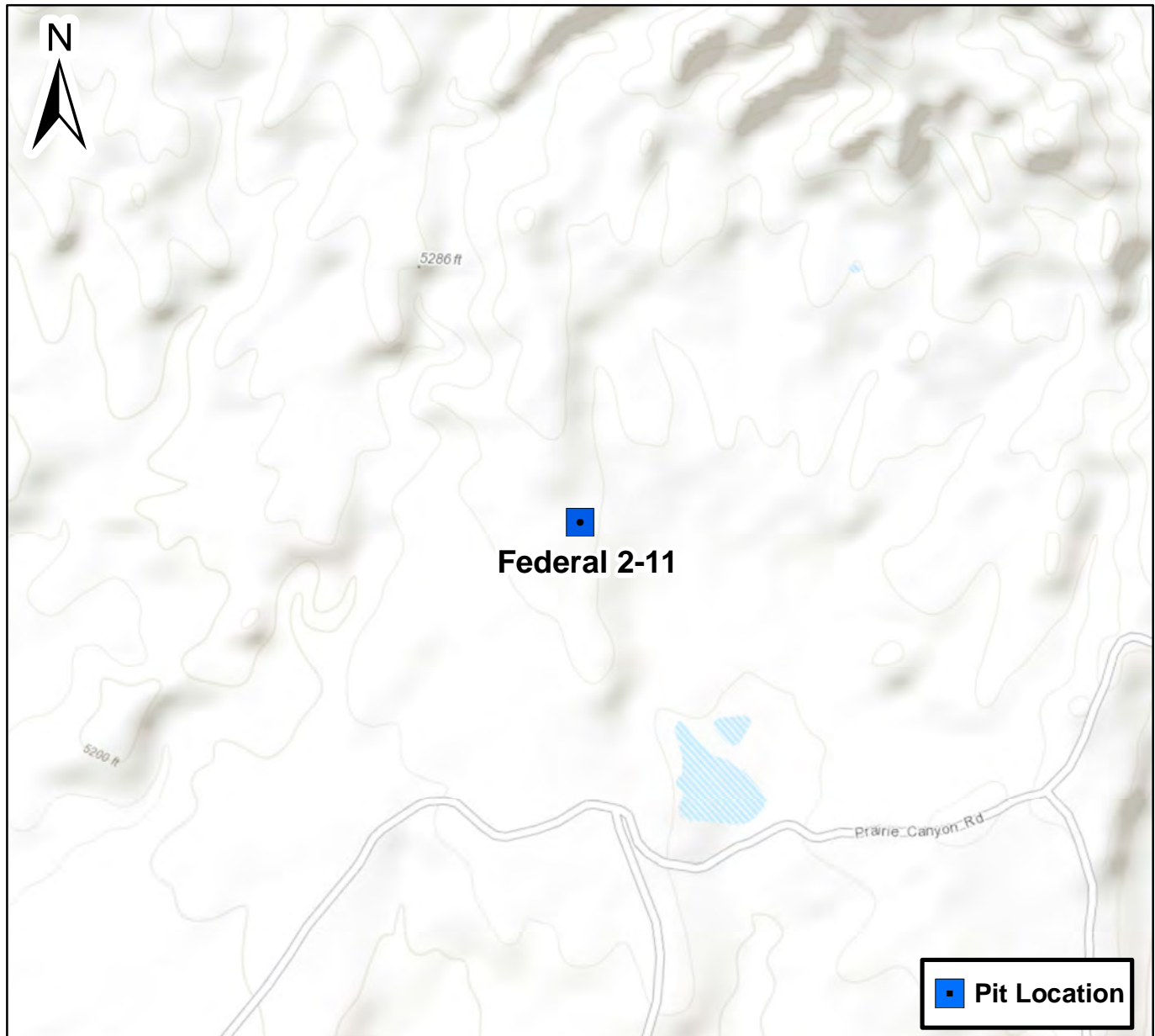


0 750 1,500 Feet

## Figure 1

Site Location Map  
Government 1-5  
SESE S5 T8S R104W  
Garfield County, Colorado



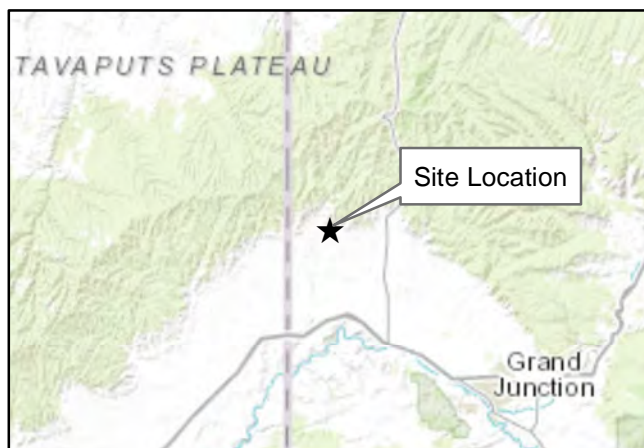
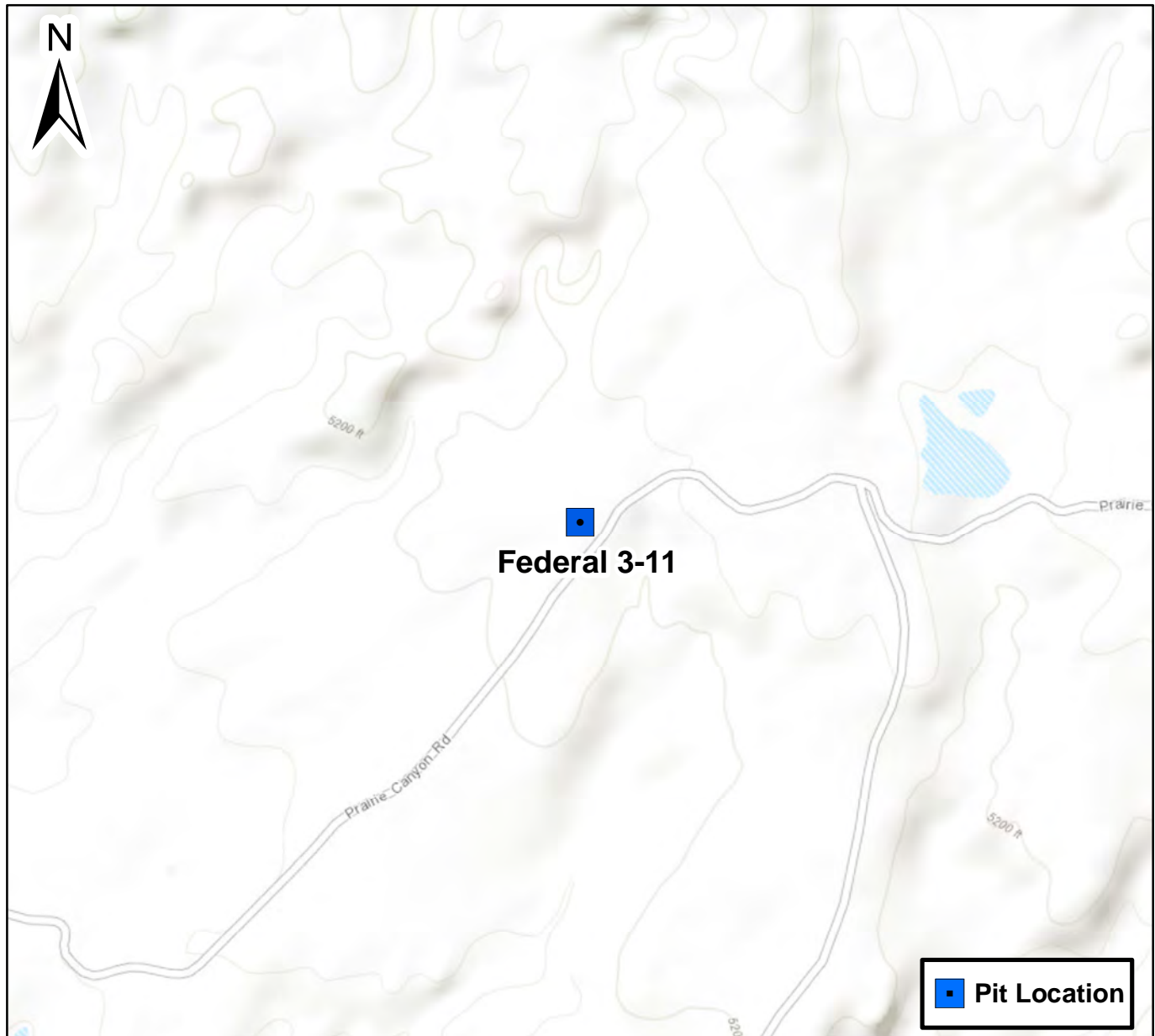


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 2-11  
SENE S11 T8S R104W  
Garfield County, Colorado



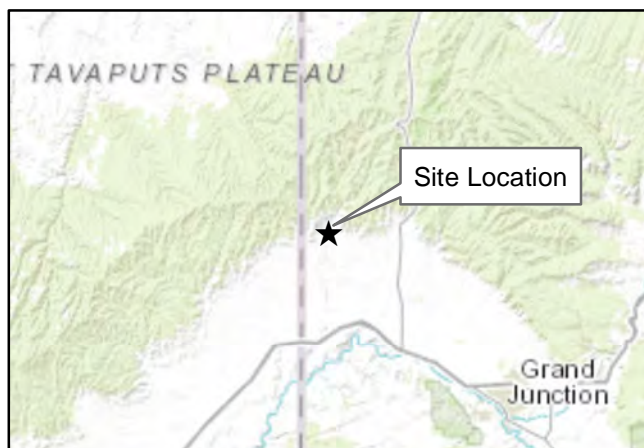
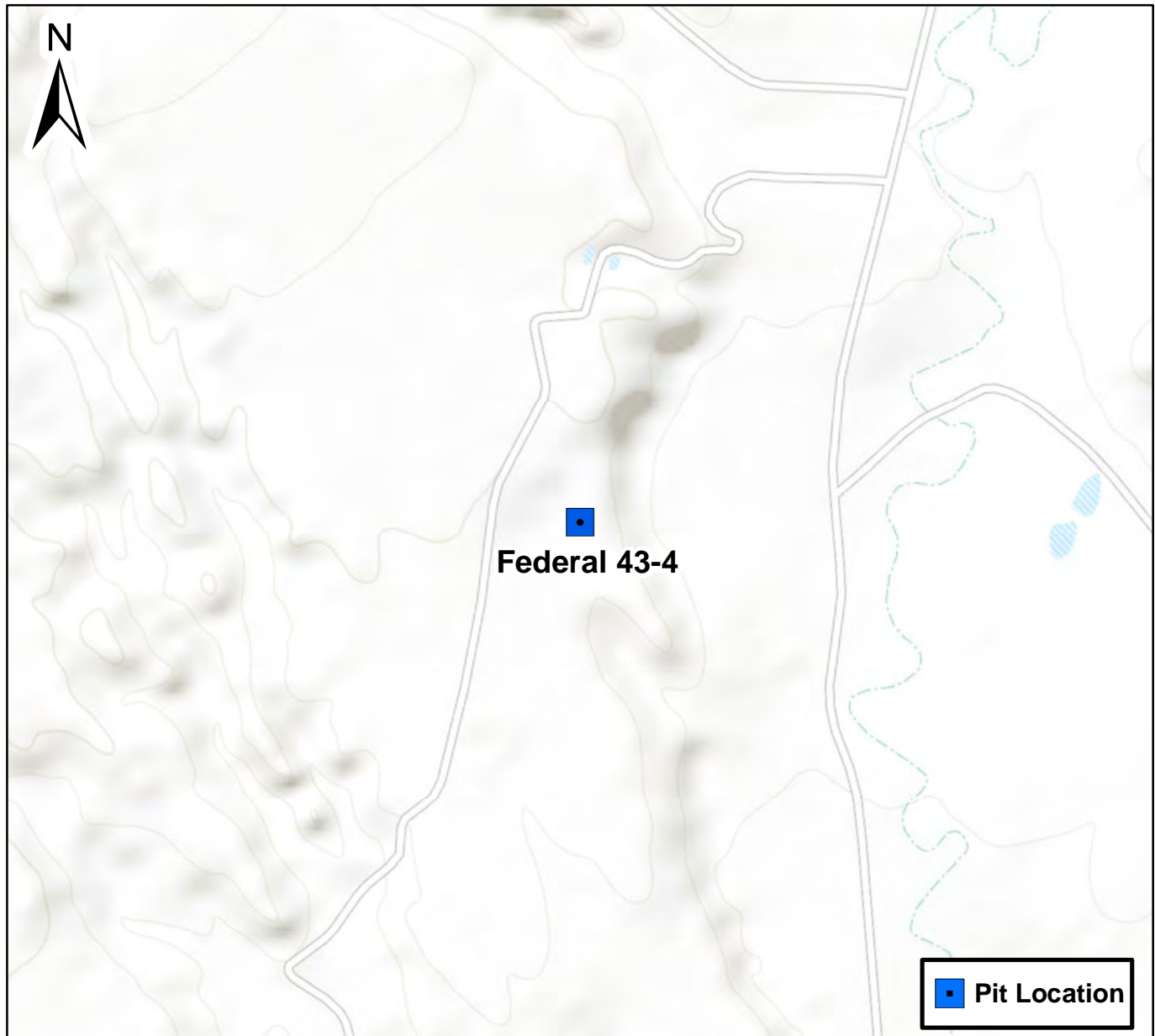


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 3-11  
NWSW S11 T8S R104W  
Garfield County, Colorado



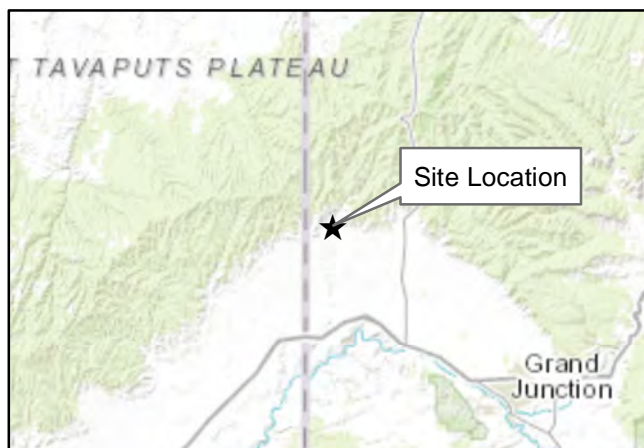
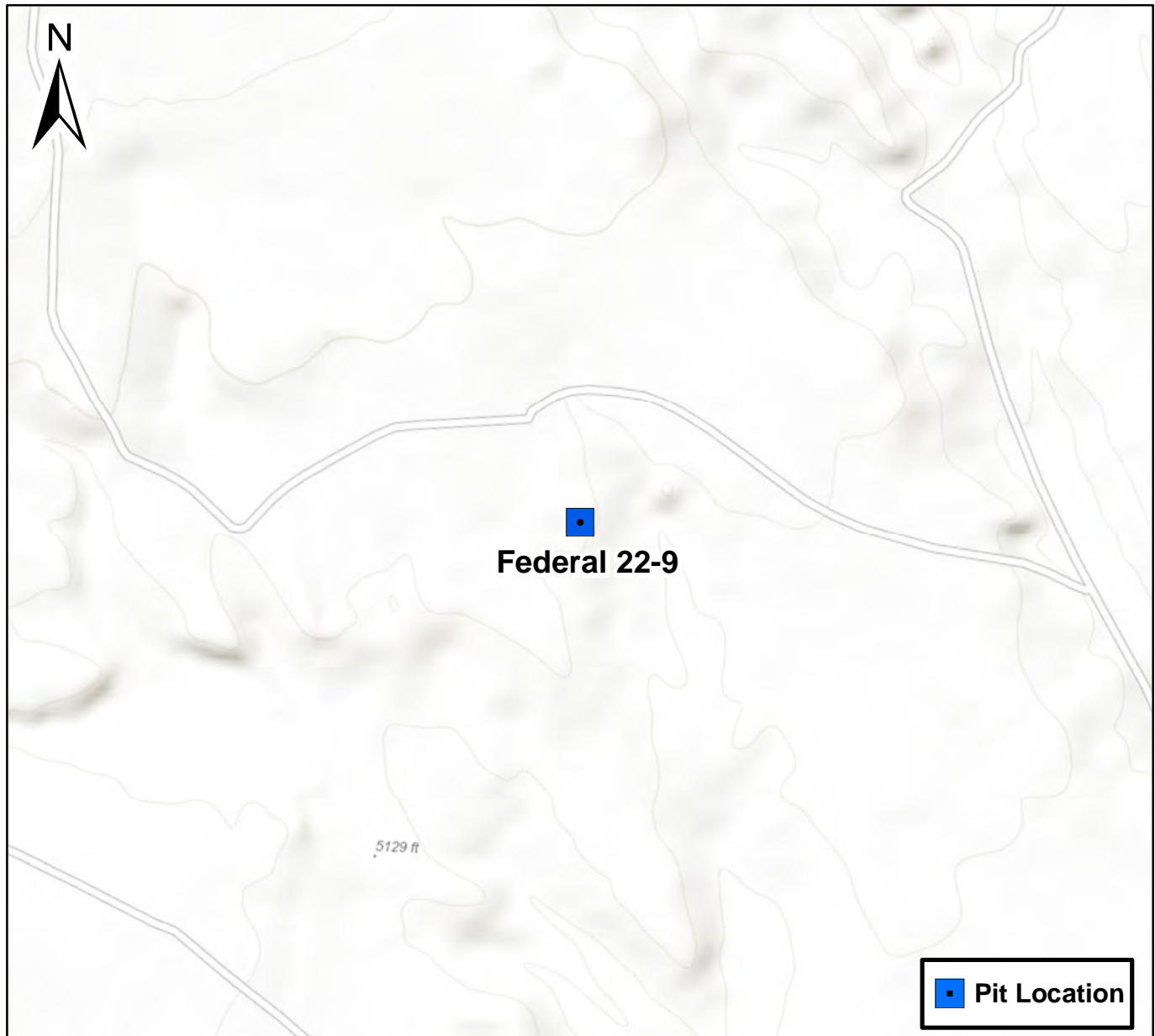


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## Figure 1

Site Location Map  
Federal 43-4  
NESE S4 T8S R104W  
Garfield County, Colorado



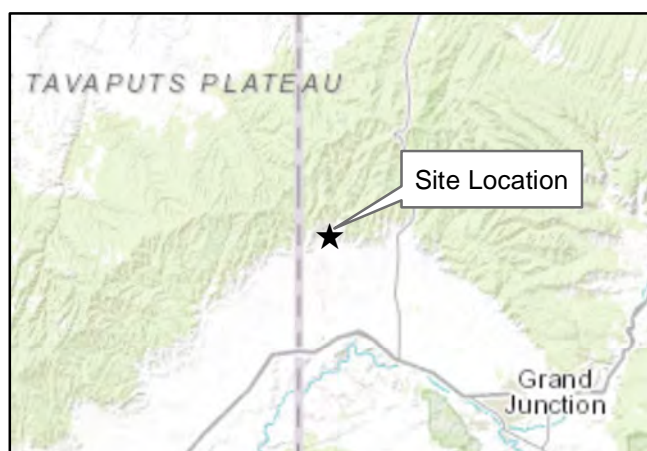
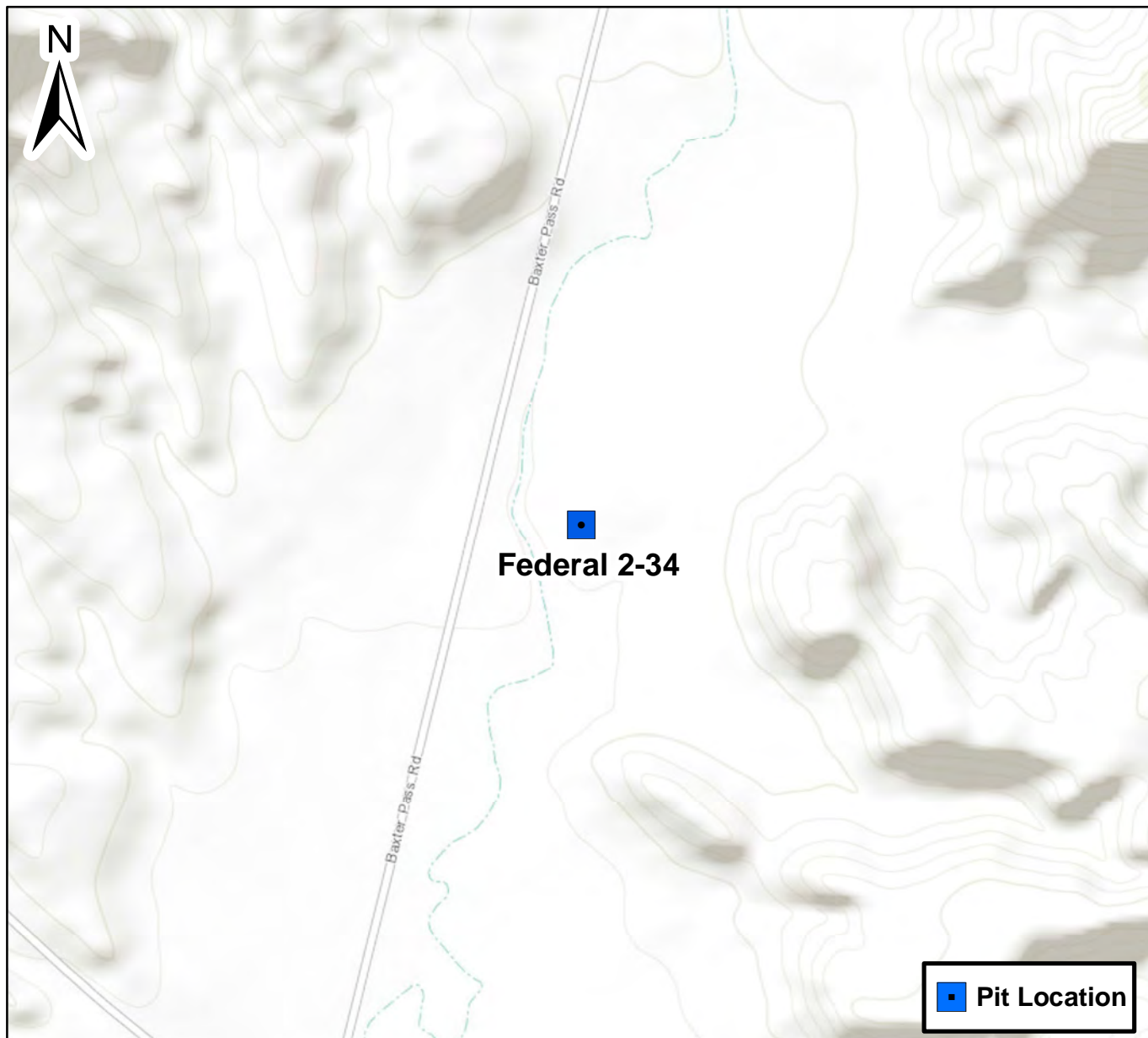


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 22-9  
SENW S9 T8S R104W  
Garfield County, Colorado



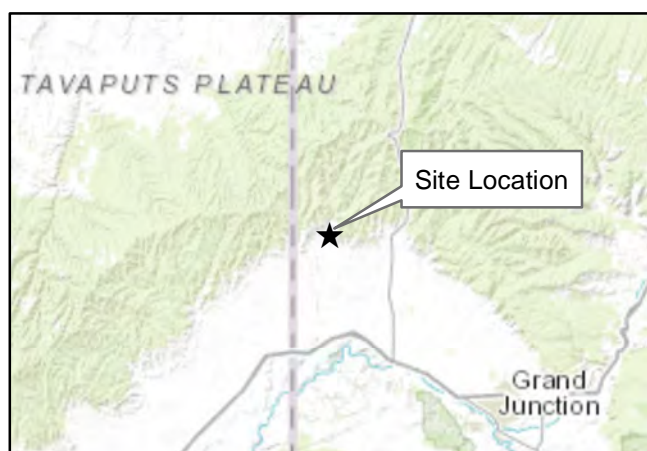
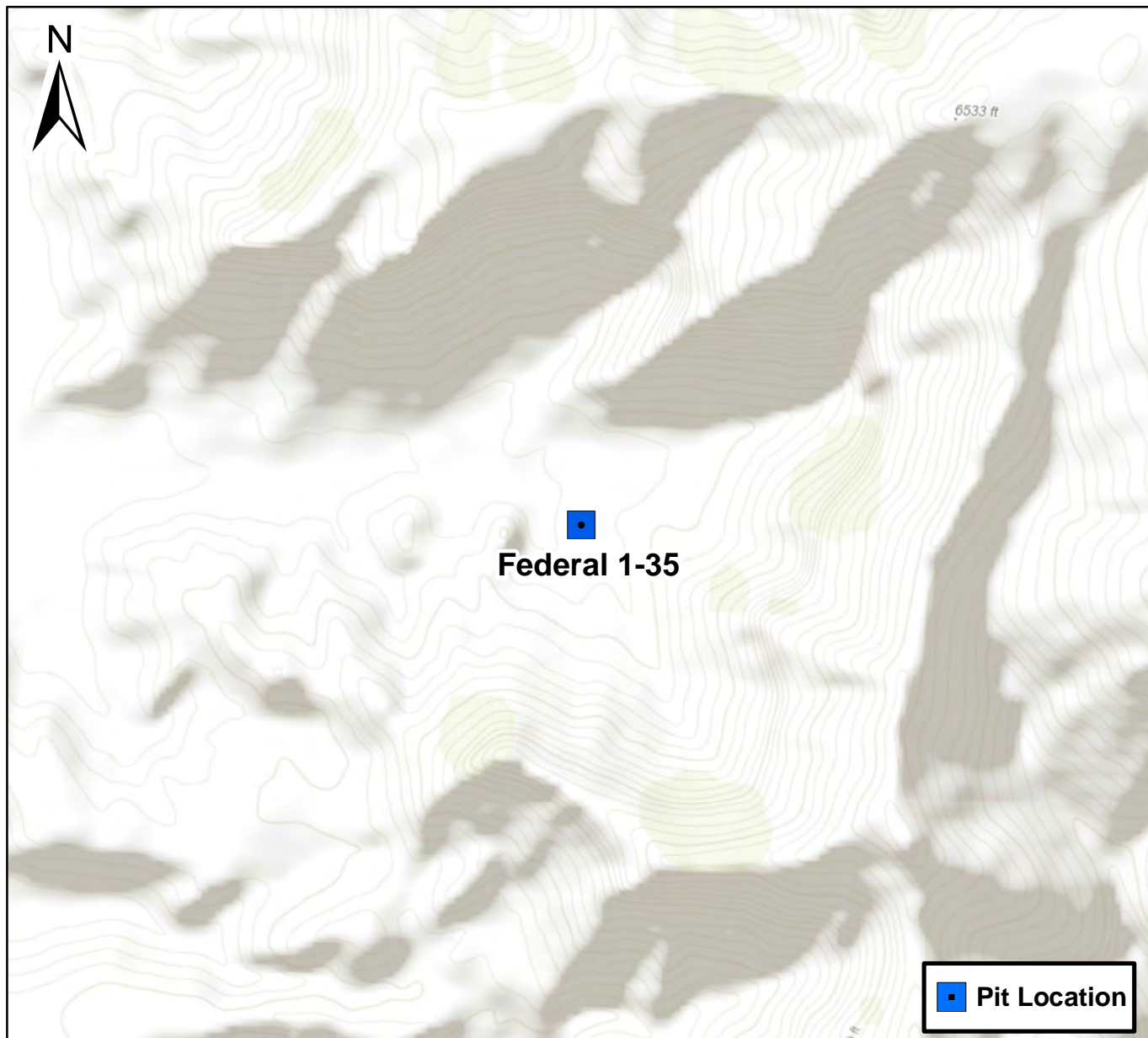


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 2-34  
SESW S34 T7S R104W  
Garfield County, Colorado



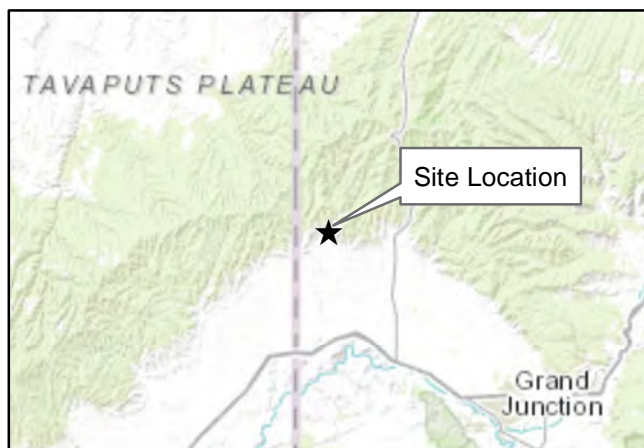
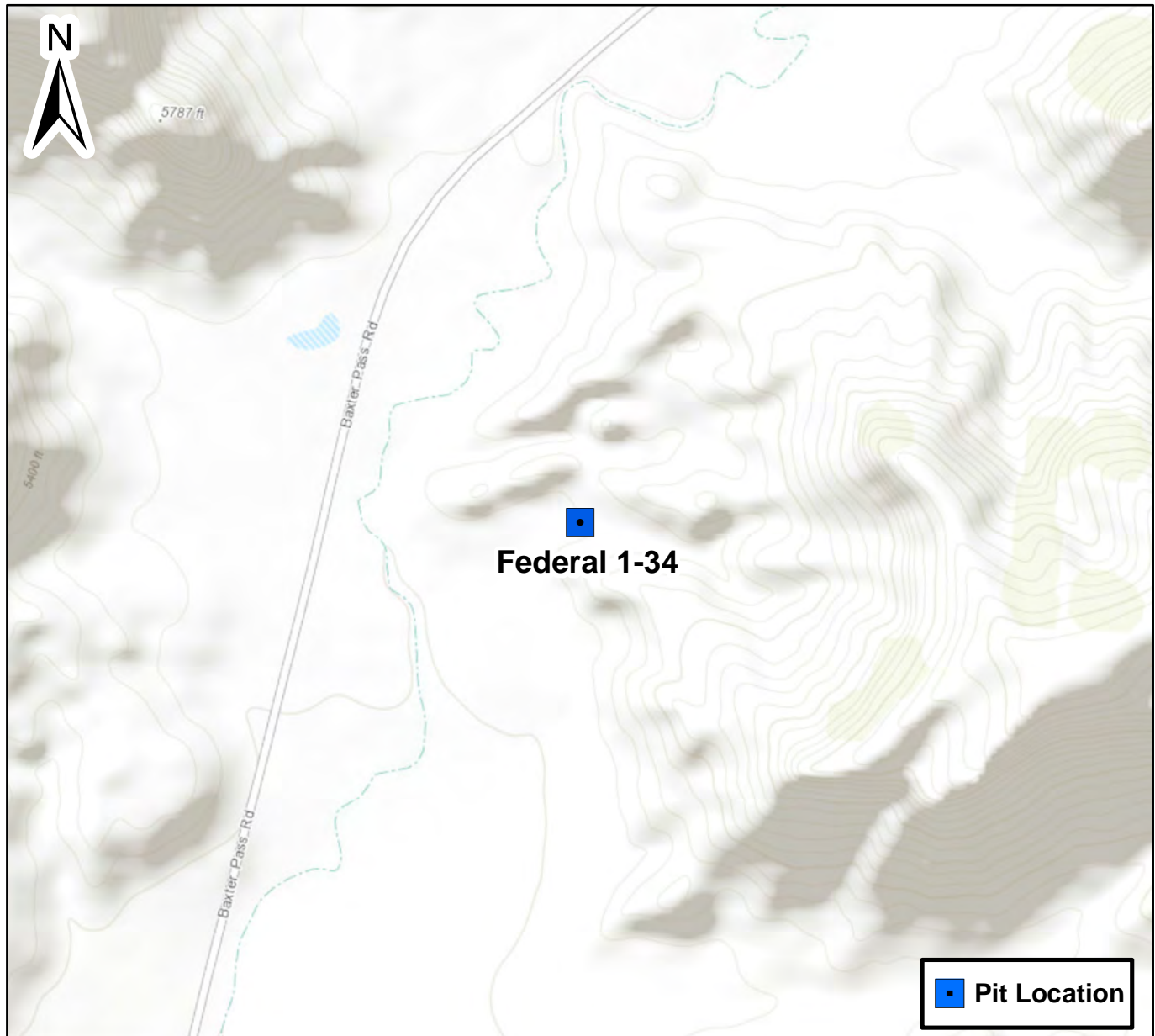


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 1-35  
NWSW S35 T7S R104W  
Garfield County, Colorado



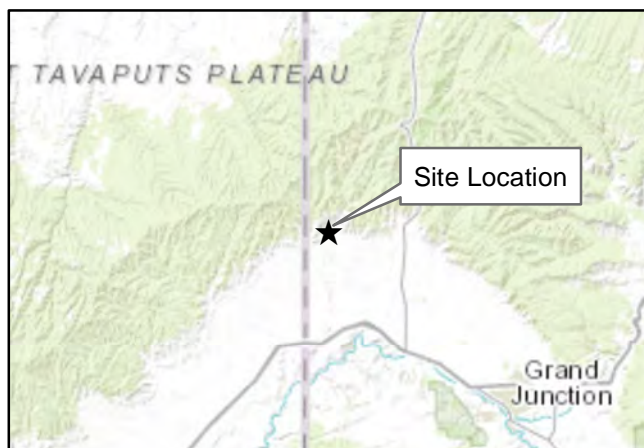
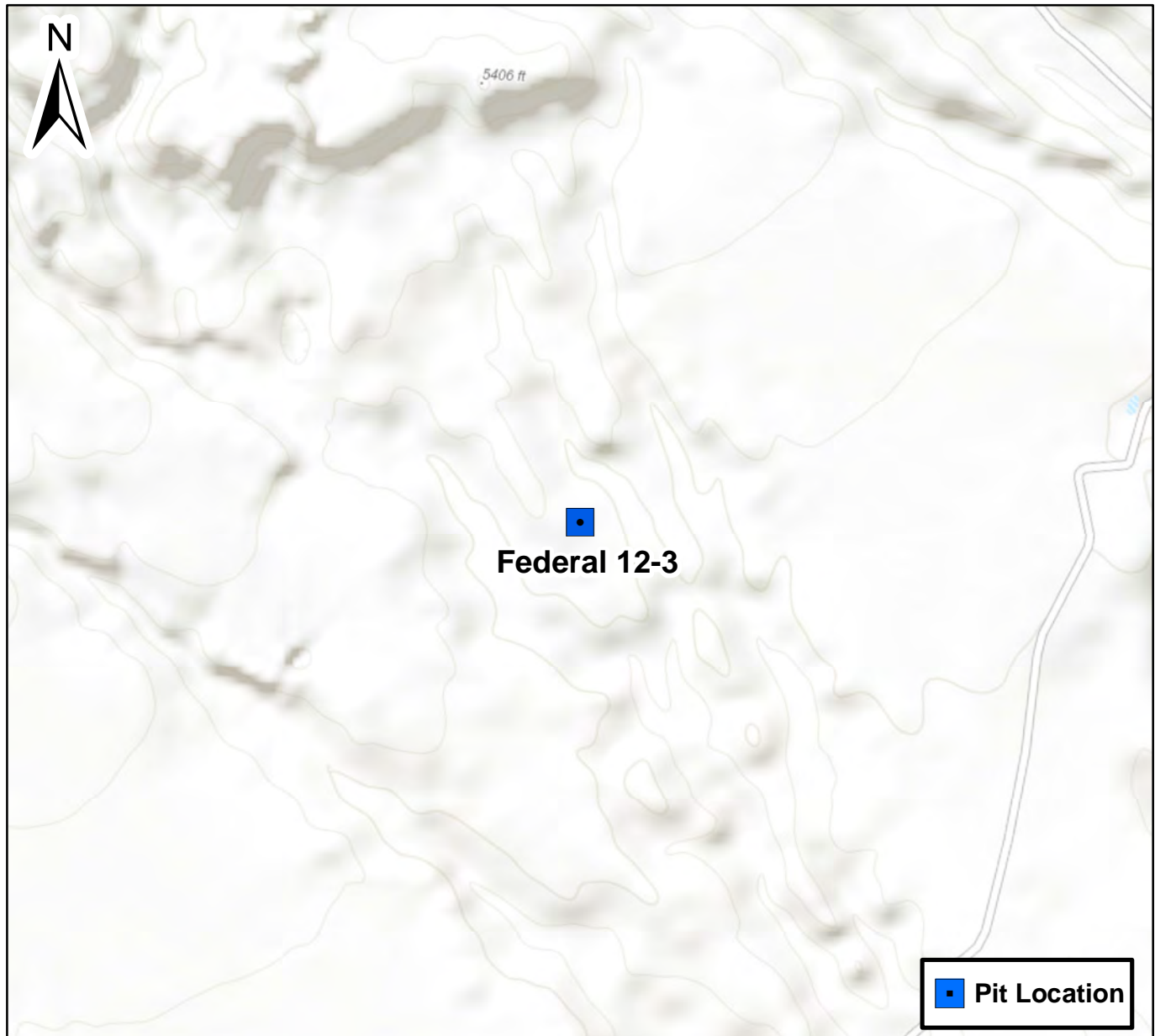


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 1-34  
NWNE S34 T7S R104W  
Garfield County, Colorado



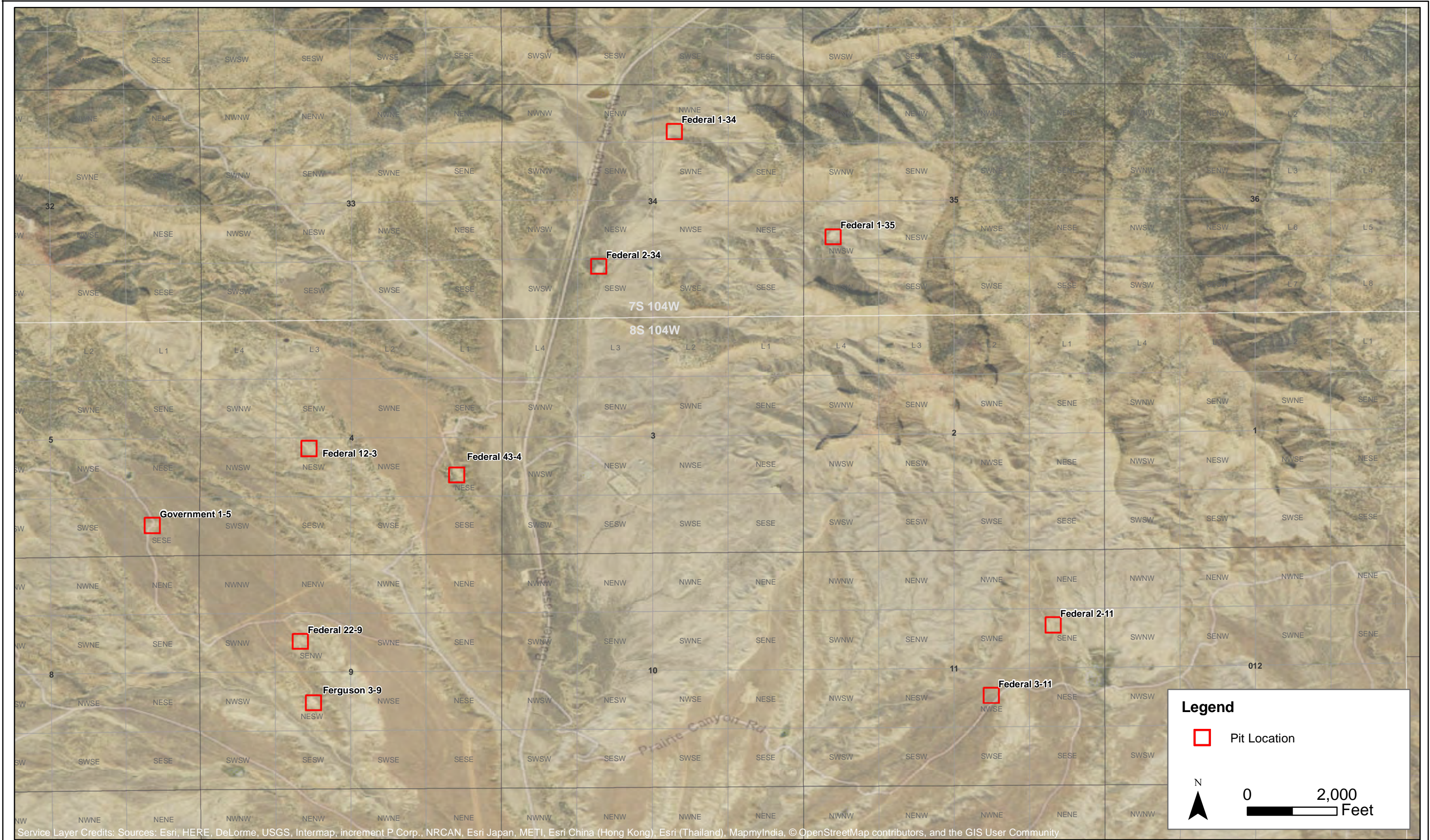


0 750 1,500 Feet

## Figure 1

Site Location Map  
Federal 12-3  
NESW S4 T8S R104W  
Garfield County, Colorado





DATE:	September 2016
DESIGNED BY:	R. Cornez
DRAWN BY:	D. Arnold



Tasman Geosciences, Inc.  
6899 Pecos Street - Unit C  
Denver, CO 80221

Foundation Energy Management, LLC  
Western Slope Pit Assessment  
Garfield County, Colorado

Site Locations Overview  
Map

Figure  
2

## **ATTACHMENT A**

**Exhibit E (Legal Description Added):**

Currently inactive and serve no current or future purpose related to the operation of the associated wells.

Facility ID	Associated API#	Associated Well	Legal Description
119463	045-06163	Ferguson 3-9	NESW S9 T8S R104W
112105	045-06189	Federal 1-5	SESE S5 T8S R104W
119494	045-06235	Federal 2-11	SENE S11 T8S R104W
119496	045-06237	Federal 3-11	NWSW S11 T8S R104W
119483	045-06130	Federal 43-4	NESE S4 T8S R104W
119475	045-06136	Federal 22-9	SENE S9 T8S R104W
119492	045-06282	Federal 2-34	SESW S34 T7S R104W
119490	045-06171	Federal 1-35	NWSW S35 T7S R104W
119489	045-06172	Federal 1-34	NWNE S34 T7S R104W
119478	045-06200	Federal 12-3	NESW S4 T8S R104W