


WORK PLAN

**ZAFIRO STATE 32 COM #1
26.7 MILES WEST OF HOBBS, NEW MEXICO
HOBBS, LEA COUNTY, NEW MEXICO**

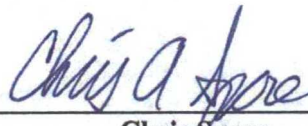
TALON/LPE PROJECT NO. 701162.053.01

**PREPARED FOR:
CIMAREX ENERGY
600 NORTH MARIENFIELD SUITE 600
MIDLAND, TX 79701**

Prepared By:



**Melissa Decker
Environmental Scientist**



**Chris Spore
District Manager**

**Talon/LPE
2901 State Highway 349
Midland, Texas 79706**

May 1, 2014

30025 34508

3208

1.0 INTRODUCTION

1.1 Site Description & Background

Talon/LPE (Talon) has prepared this Work Plan for Cimarex Energy (Cimarex) to provide a detailed account of proposed action at the site. Cimarex contacted Talon to provide environmental consulting services at the Cimarex operated Zafiro State 32 Com #1 (site). A condensate oil release occurred as a result of a release of condensate oil from a faulty load line. Remediation activities will occur on site utilizing the New Mexico Energy, Natural Resources Department (EMNRD), New Mexico Oil Conservation Division (OCD) rules (*NMAC 19.15.30 Remediation and NMAC 20.6.2 Ground and Surface Water Protection*) and the New Mexico EMNRD *OCD Guidelines for Remediation of Leaks, Spills and Releases* as guidance. The site is located approximately 26.7 miles west of the City of Hobbs, in Lea County, New Mexico. The release site is located 11.5 miles northeast of the intersection of Highway 62 and Farm to Market Road 529. The GPS coordinates for the site are 32.70510° North latitude and 103.58040° West longitude.

On December 12, 2013, a release of condensate and produced water occurred at the referenced site from a faulty load line connection to water tank. The release was determined to be approximately 49 barrels (bbl) of oil condensate lost with zero (0) bbl recovered. Cimarex completed a C-141 Release Notification and Corrective Action on December 12, 2013. The release impacted the surface area located inside the unlined containment firewall and off of the well pad. The impacted area ranged from two (2) to six (6) feet wide and approximately 18 feet in length inside the firewall containment. The release breached the containment and spilled onto surrounding vegetation. The impacted vegetation area measured one (1) to four (4) feet wide and 12 feet in length. A Topographic Map depicting the location of the Site is included as Figure 1. An Aerial Photograph of the Site is attached as Figure 2. Site Details are provided as Figure 3.

A search of the New Mexico Water Rights (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE), did not provide information for Section 32, Township 18S, Range 34. A search of nearby locations close to the site provided information indicating that groundwater should be encountered at approximately 50 feet below ground surface (bgs). A search of the NMWRRS database indicated there are no water wells within 1000 feet of the release. There are no surface water bodies within 5000 feet of the release. Based on depth to groundwater and proximity to surface water, guidelines for this release site is listed below:

- Benzene-10mg/kg (ppm)
- BTEX- 50 mg/kg (ppm)
- TPH- 100 mg/kg (ppm)

1.2 Project Objective

Following a site meeting conducted with Talon personnel, Cimarex personnel and an NMOC Environmental Specialist, guidelines were established for the remediation of the site.

The objective of Talon's work plan for site remediation:

- Excavate the impacted vegetation area east of the tank battery to a depth of eight (8) feet below ground surface (bgs) utilizing a trackhoe. The excavation area will measure approximately 20 feet in length and 12 feet in width. Excavated material will be immediately transported to an approved disposal facility.
- Talon personnel will collect soil samples for analysis of benzene, toluene, ethylbenzene and total xylenes (BTEX), and total petroleum hydrocarbons (TPH) at a depth of eight (8) feet bgs, in addition to sidewall samples in all four (4) cardinal directions. The sample collected at eight (8) feet bgs will also be submitted for analysis of chloride concentration.
- The excavation area will be backfilled with uncontaminated caliche to a depth of four (4) feet bgs. The caliche will be provided by Cimarex using material gathered from the adjacent well pad.
- A liner will be placed at a depth of four (4) feet bgs to prevent further distribution of the contaminated area.
- The remaining excavation area will be backfilled with material collected from the surrounding sand dunes which contain native seeds and vegetation.

1.3 Standard of Care

Talon's services will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Talon makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Talon does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services will be performed in accordance with the scope of work agreed with the client.

1.4 Soil Sampling Activities

All soil samples will be collected by Talon using industry accepted standard operating procedures. These procedures include wearing new, clean nitrile gloves, and collecting laboratory samples using decontaminated or disposable hand tools (when applicable) to prevent cross-contamination. Soil samples will be collected in laboratory provided sample containers, immediately placed on ice, and transported to TraceAnalysis in Midland, Texas.

2.0 LABORATORY ANALYTICAL METHODS

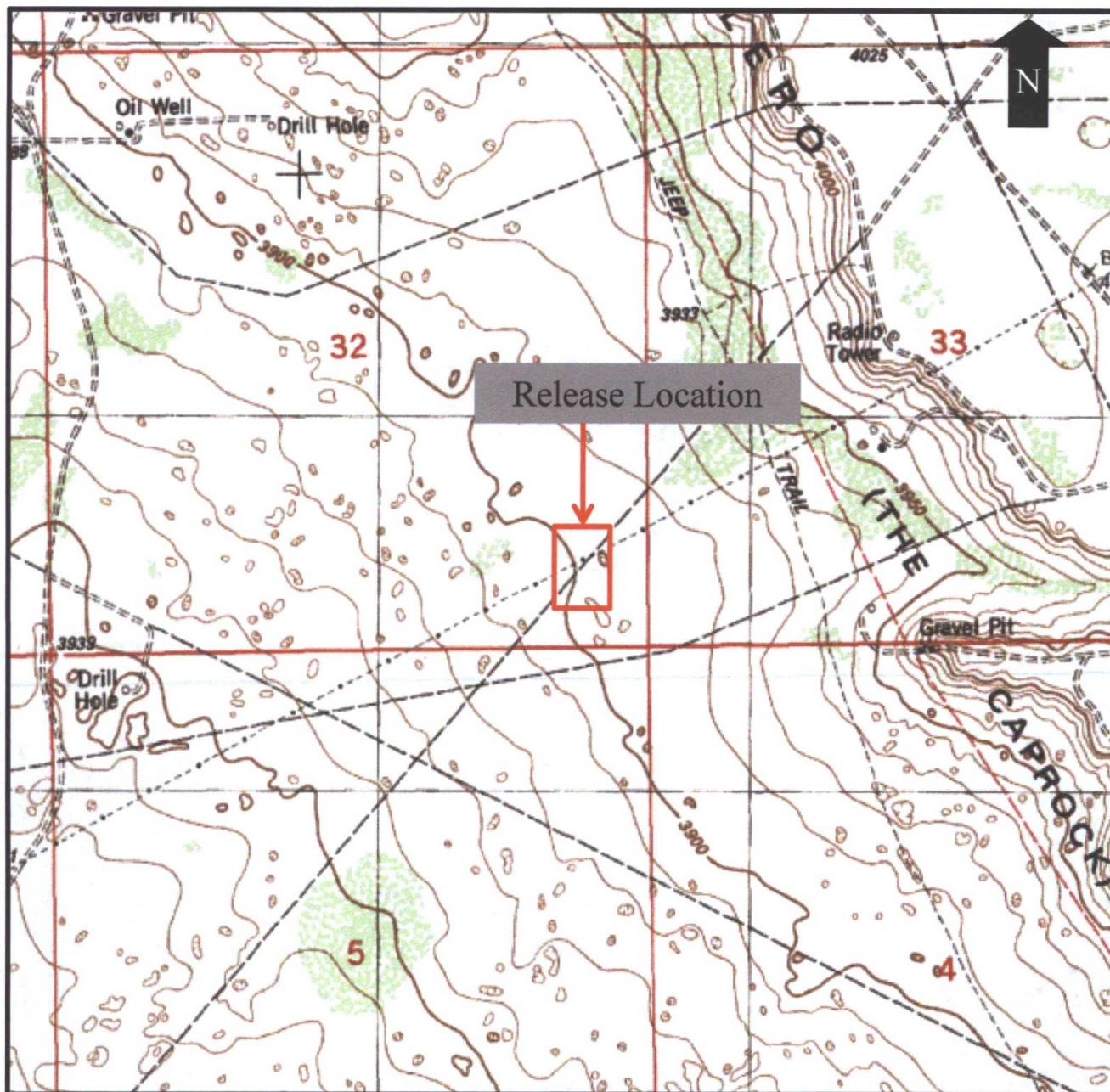
The confirmation soil samples will be analyzed for TPH GRO/DRO utilizing EPA method 8015 and BTEX using method 8021B.

3.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to crude oil releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19-15-30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

4.0 SITE RESTORATION

Following the completion of the activities described in Section 1.2, Talon will recommend no further actions at the site to complete environmental remediation. Talon will discuss all findings, analytical data, and finding with Cimarex personnel prior to any further actions. Talon will provide a Site Remediation and Closure Report following the completion of all remediation activities.



Scale: 1:24000

Source: Ironhouse Well, dated 1984

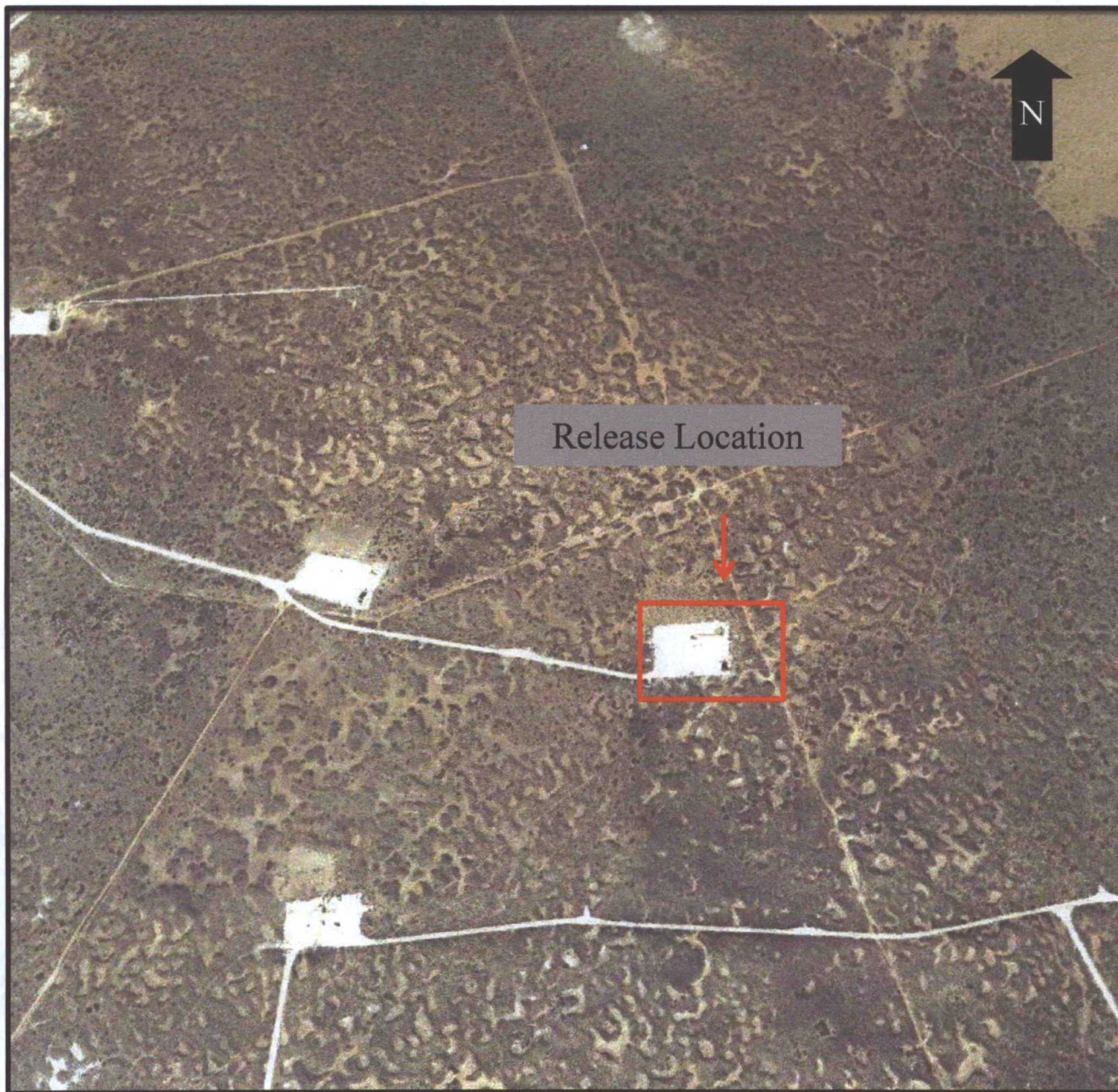


FIGURE 1
Topographic Map
Zafiro State 32 Com #1
26.7 miles West of Hobbs, NM
Lea County
Prepared for: Cimarex

Work Order No.:
701162.053.01

Report Date:
5/1/2014

Drawn By:
MMD



Scale: Not to Scale
 Source: Google Earth dated 2012 and Talon Field Observations



FIGURE 2
 AERIAL PHOTOGRAPH
 Zafiro State 32 Com #1
 26.7 miles West of Hobbs, NM
 Lea County
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Scale: Not to Scale
 Source: Google Earth dated 2012 and Talon Field Observations

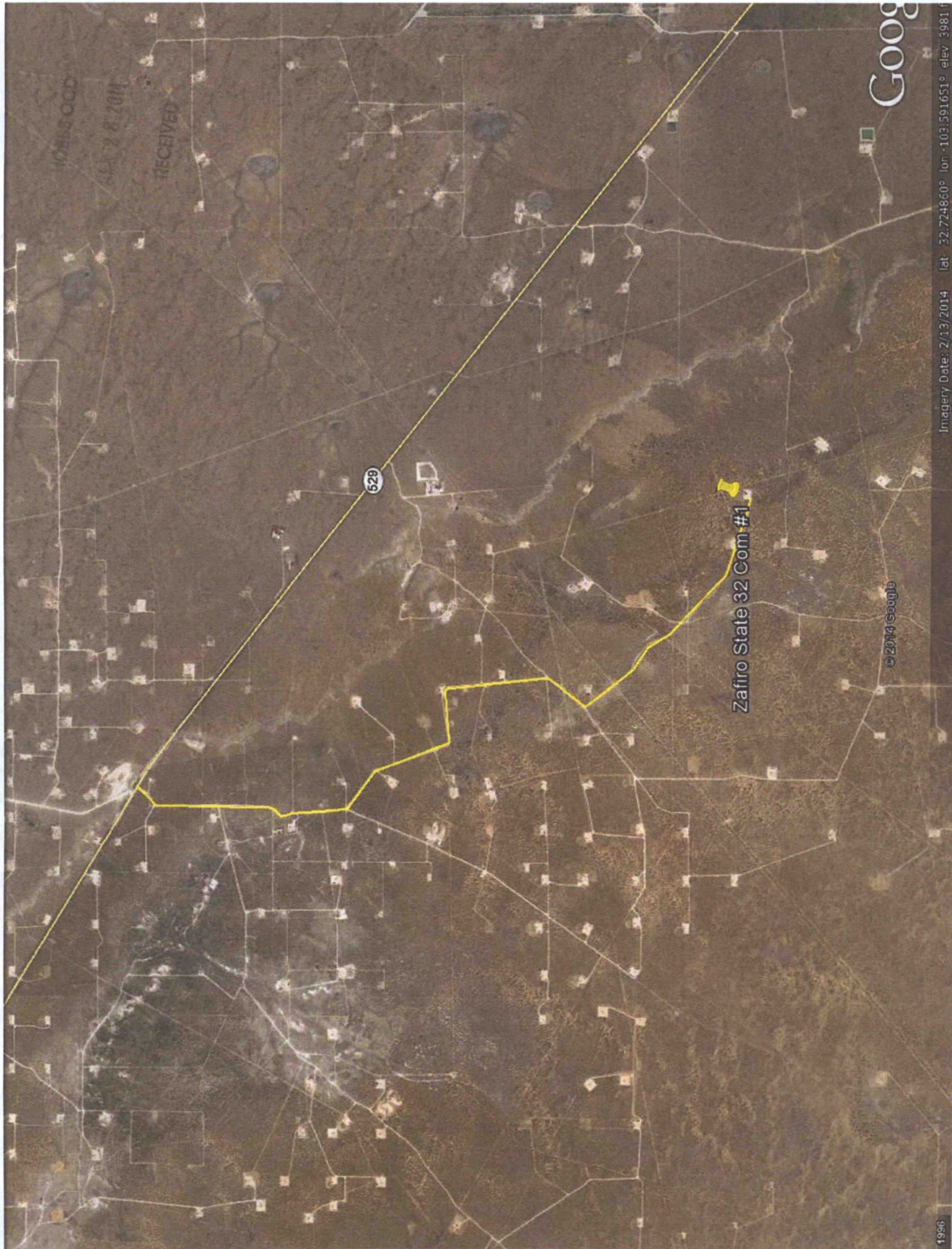


FIGURE 3
SITE DETAILS
 Zafiro State 32 Com #1
 26.7 miles West of Hobbs, NM
 Lea County
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 5/1/2014

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 MMD



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RECEIVED

529

Zafiro State 32 Com #1

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Imagery Date: 2/13/2014 lat 32.724860° lon -103.591651° elev 3981 ft

1996

CIMAREX ZAFIRO STATE 32 COM 001 4/28/14



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APR 28 2014
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529

Zafiro State 32 Com #1

MH DEPT-001

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Google

Imagery Date: 2/13/2014 lat 32.713566° lon -103.505988° elev 3962 ft

CIMAREX ZAFIRO STATE 32 COM 001 H128114

Leking, Geoffrey R, EMNRD

From: Melissa Decker <mdecker@talonlpe.com>
Sent: Monday, April 28, 2014 4:44 PM
To: Leking, Geoffrey R, EMNRD
Subject: Directions-Cimarex Zafiro State 32 Location
Attachments: zaf 2.jpg; zaf.jpg

Mr. Leking,

To get to Zafiro State 32 Location-
From the intersection of Highway 62 and 529.
14.3 miles Northwest on 529
South on Lease Road for 0.1 miles
Southeast on Lease Road for 1.0 mile
West on Lease Road for 0.25 miles
South on Lease Road for 0.5 miles
Southwest on Lease Road for 0.25 miles
Southeast on Lease Road for 1.4 miles.
Arrive at Zafiro Location

GPS: Latitude :32.70460300, Longitude: -103.57973000

The easiest direct access to Zafiro is a private road and no oilfield traffic is allowed. This is the second quickest route.

I have attached two maps with a highlighted route for some help.

Thank you,

Melissa Decker
Environmental Scientist
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Office: 432.522.2133
Fax: 432.522.2180

