Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: NESE / 2377 FSL / 520 FEL / TWSP: 20S / RANGE: 29E / SECTION: 19 / LAT: 32.5582545 / LONG: -104.1074711 (TVD: 0 feet, MD: 0 feet)

PPP: NESE / 1870 FSL / 330 FEL / TWSP: 20S / RANGE: 29E / SECTION: 19 / LAT: 32.5568606 / LONG: -104.1068534 (TVD: 0 feet, MD: 0 feet)

BHL: LOT 3 / 1870 FSL / 240 FWL / TWSP: 20S / RANGE: 29E / SECTION: 19 / LAT: 32.55688 / LONG: -104.1216399 (TVD: 7065 feet, MD: 11053 feet)

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

09/16/2021

Well Name: STEBBINS 19 FED COM	**Well Location:** T20S / R29E / SEC 19 / NESE / 32.5582545 / -104.1074711	**County or Parish/State:** EDDY / NM
Well Number: 203H	**Type of Well:** CONVENTIONAL GAS WELL	**Allottee or Tribe Name:**
Lease Number: NMNM03677	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300154417300S1	**Well Status:** Approved Application for Permit to Drill	**Operator:** MATADOR PRODUCTION COMPANY

Notice of Intent

Sundry ID: 2634609

Type of Submission: Notice of Intent

Type of Action: Surface Disturbance

Date Sundry Submitted: 09/16/2021

Time Sundry Submitted: 09:28

Date proposed operation will begin: 10/15/2021

Procedure Description: BLM Bond No. NMB001079 Surety Bond No. RLB0015172 Per WIS Electronic Submission 526739 submitted 8/21/2020: Matador requests to lay two (2) buried pipelines being composed of poly or steel designed for the transportation of oil, gas or water each being up to 10 inches in diameter being placed within the approved 30 feet wide and 317.03 feet long permanent easement described as Segment B1, Exhibit 21 in DOI-BLM-NM-P020-2017-0111-EA. This easement is located in the NESE of Section 19 Township 20 South Range 29 East.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Sundry_Submitted__526739_20210916085252.pdf

Well Name: STEBBINS 19 FED COM

Well Location: T20S / R29E / SEC 19 / NESE / 32.5582545 / -104.1074711

County or Parish/State: EDDY / NM

Well Number: 203H

Type of Well: CONVENTIONAL GAS WELL

Allottee or Tribe Name:

Lease Number: NMNM03677

Unit or CA Name:

Unit or CA Number:

US Well Number: 300154417300S1

Well Status: Approved Application for Permit to Drill

Operator: MATADOR PRODUCTION COMPANY

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: NICKY FITZGERALD

Signed on: SEP 16, 2021 08:53 AM

Name: MATADOR PRODUCTION COMPANY

Title: Regulatory

Street Address: 5400 LBJ FREEWAY STE 1500

City: DALLAS **State:** TX

Phone: (972) 371-5448

Email address: nicky.fitzgerald@matadorresources.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM03677

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
STEBBINS 19 FED COM 203H

2. Name of Operator
MATADOR PRODUCTION COMPANY

Contact: CADE LABOLT
E-Mail: cade.labolt@matadorresources.com

9. API Well No.
30-015-44173

3a. Address
5400 LBJ FWY SUITE 1500
DALLAS, TX 75240

3b. Phone No. (include area code)
Ph: 972-629-2158

10. Field and Pool or Exploratory Area
BURTON FLAT EAST; UPPERWC

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T20S R29E Mer NMP 2347FSL 410FEL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
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BLM Bond No. NMB001079
Surety Bond No. RLB0015172

Matador requests to lay two (2) buried pipelines being composed of poly or steel designed for the transportation of oil, gas or water each being up to 10 inches in diameter being placed within the approved 30 feet wide and 317.03 feet long permanent easement described as Segment B1, Exhibit 21 in DOI-BLM-NM-P020-2017-0111-EA. This easement is located in the NESE of Section 19 Township 20 South Range 29 East.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #526739 verified by the BLM Well Information System
For MATADOR PRODUCTION COMPANY, sent to the Carlsbad

Name *(Printed/Typed)* CADE LABOLT — Title LANDMAN

Signature (Electronic Submission) — Date 08/21/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office _____

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

BUREAU OF LAND MANAGEMENT
PECOS DISTRICT, CARLSBAD FIELD OFFICE

ENVIRONMENTAL ASSESSMENT
DOI-BLM-NM-P020-2017-0111-EA

Matador Production Company

Stebbins 19 Federal Com
Well Nos. 203H, 133H, 123H, 113H (Slot 3 Pad),
Stebbins 19 Federal
Well Nos. 204H, 134H, 124H, 114H (Slot 4 Pad),
Stebbins Federal 20
Well Nos. 203H, 133H, 123H, 113H, (Slot 3 Pad),
Stebbins Federal 20
Well Nos. 204H, 134H, 124H, 114H, (Slot 4 Pad),
Access Road, Gas Pipeline, and Power Line

Serial Lease Nos. NMNM 003677, NMNM 004825

PREPARER:
Permits West, Inc.

DATE:
January 3, 2016

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION

1.1. Background

Matador Production Company (Applicant) has filed Applications for Permit to Drill (APDs) to drill 16 horizontal wells on Federal lands. The Applicant is also applying to construct the associated infrastructure including: four well pads, a 2,804.61-foot long access road connecting the four well pad locations, a 2,804.61-foot long buried gas sales pipeline, and a 3205.86-foot long overhead, raptor-safe electric power line.

The proposed project is located on Federal lands, approximately 11 miles northeast of Carlsbad, in Sections 19 and 20, Township 20 South, Range 29 East, Eddy County, New Mexico (Exhibit 1).

The locations of the proposed wells are as follows:

Section 19, Slot 3 Pad
Stebbins 19 Federal Com 113H
Surface Hole Location: 2287 ft. FSL and 520 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal Com 123H
Surface Hole Location: 2317 ft. FSL and 520 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal Com 133H
Surface Hole Location: 2347 ft. FSL and 520 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FNL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal Com 203H
Surface Hole Location: 2377 ft. FSL and 520 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FNL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Section 19, Slot 4 Pad
Stebbins 19 Federal 114H
Surface Hole Location: 330 ft. FSL and 130 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal 124H
Surface Hole Location: 360 ft. FSL and 130 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal 134H
Surface Hole Location: 390 ft. FSL and 130 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Stebbins 19 Federal 204H
Surface Hole Location: 420 ft. FSL and 130 ft. FEL; Section 19, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FWL; Section 19, T. 20 S., R. 29 E.

Section 20, Slot 3 Pad
Stebbins 20 Federal 113H
Surface Hole Location: 1663 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Stebbins 20 Federal 123H (formerly Yates Stebbins Federal 20)
Surface Hole Location: 1693 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Stebbins 20 Federal 133H
Surface Hole Location: 1723 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Stebbins 20 Federal 203H
Surface Hole Location: 1753 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 1870 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Section 20, Slot 4 Pad
Stebbins 20 Federal 114H
Surface Hole Location: 331 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Stebbins 20 Federal 124H
Surface Hole Location: 361 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Stebbins 20 Federal 134H
Surface Hole Location: 391 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

Section 20, Slot 4 Pad (continued)
Stebbins 20 Federal 204H
Surface Hole Location: 421 ft. FSL and 130 ft. FWL; Section 20, T. 20 S., R. 29 E.
Bottom Hole Location (at proposed production zone): 330 ft. FSL and 240 ft. FEL; Section 20, T. 20 S., R. 29 E.

The Proposed Action is analyzed by this Environmental Assessment (EA). A map of the project area is provided in Exhibit 1. Plats of the well pads, access road, gas sales pipeline, and overhead, raptor-safe electric powerline are provided in Exhibits 2 - 22.

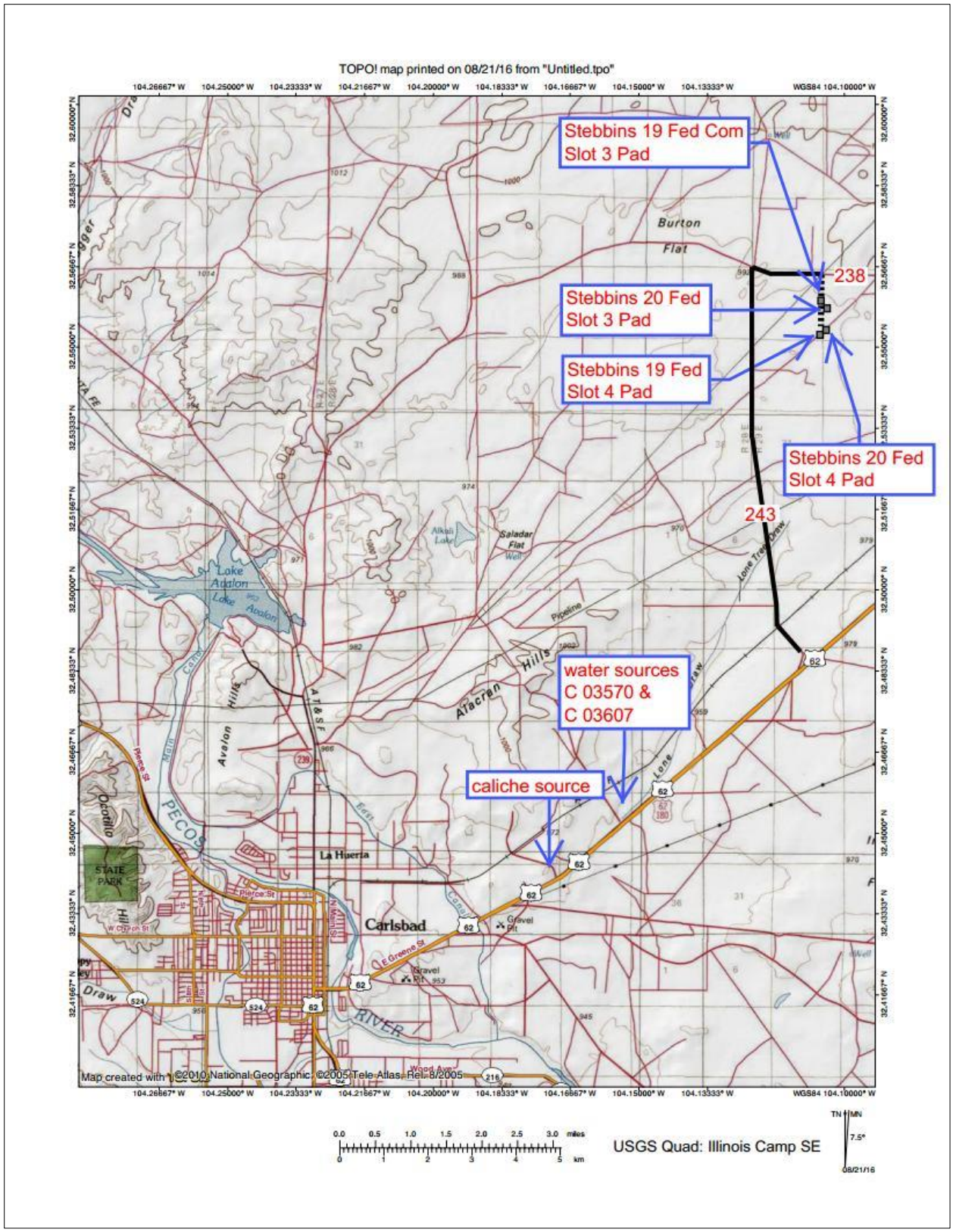

TOPO! map printed on 08/21/16 from "Untitled.tpo"
Stebbins 19 Fed Com
Slot 3 Pad
Stebbins 20 Fed
Slot 3 Pad
Stebbins 19 Fed
Slot 4 Pad
Stebbins 20 Fed
Slot 4 Pad
238
243
water sources
C 03570 &
C 03607
caliche source
Burton
Flat
Lake
Avalon
Carlsbad
La Huerta
PECOS
RIVER
STATE
PARK
Map created with TOPO! ©2010 National Geographic, ©2005 Tele Atlas, Rel. 8/2005
USGS Quad: Illinois Camp SE

Exhibit 1.

1.2. Purpose and Need for Action

The purpose of the action is to provide the Applicant with reasonable access to develop two Federal oil and gas leases. The Applicant filed APDs and rights-of-way (ROW) applications with the Bureau of Land Management (BLM) to develop the wells and install the associated infrastructure.

The need for the action is established by the BLM's responsibility under the Mineral Leasing Act of 1920; the Mining and Minerals Policy Act of 1970; the Federal Land Policy and Management Act of 1976; the National Materials and Minerals Policy, Research, and Development Act of 1980 and the Federal Onshore Oil and Gas Leasing Reform Act of 1987 to allow reasonable access to develop a Federal oil and gas lease.

1.3. Decision to be Made

The BLM would decide whether or not to approve or reject the APDs associated with the Stebbins 19-20 Federal project (Proposed Action), and if so, under what terms and conditions.

Under the National Environmental Policy Act of 1969 (NEPA), the BLM Carlsbad Field Office (CFO) must determine if there are any significant environmental impacts associated with the proposed action warranting further analysis in an Environmental Impact Statement (EIS). The BLM CFO Field Manager is the responsible officer who would decide one of the following:

- To approve the APDs with the design features as submitted;
- To approve the APDs with additional mitigation measures added;
- To analyze the effects of the Proposed Action in an EIS; or
- To deny the APDs.

1.4. Conformance with Applicable Land Use Plan(s)

The site-specific analysis contained in this document incorporates information contained in the 2014 CFO's Analysis of the Management Situation, 1988 Carlsbad Resource Management Plan (RMP), and 1997 Carlsbad Approved Resource Management Plan Amendment and Record of Decision, by reference (USDI BLM).

The 1988 Carlsbad Resource Management Plan, as amended by the 1997 Carlsbad Approved Resource Management Plan Amendment and Record of Decision, and the 2008 Special Status Species Approved Resource Management Plan Amendment have been reviewed, and it has been determined that the Proposed Action conforms with the land use plan terms and conditions as required by 43 CFR 1610.5 (USDI BLM).

Name of Plan: Carlsbad Approved Resource Management Plan Amendment and Record of Decision

Date Approved: October 1997

Decision: [Page 4] "Approximately 3,907,700 acres (95 percent of the oil and gas mineral estate) would be open to leasing and development under the BLM's standard terms and conditions, the Surface Use and Occupancy Requirements (Appendix 1), the Roswell District Conditions of Approval (Appendix 2), and the Practices for Oil and Gas Drilling and Operations in Cave and Karst Areas (Appendix 3)." The Proposed Action lies within the area of 95 percent of oil and gas mineral estate which is open to development and complies with current Surface Use and Occupancy Requirements.

Name of Plan: Special Status Species Approved Resource Management Plan Amendment

Date Approved: April 2008

Decision: [Page 7] "The BLM would continue to require oil and gas lessees to conduct operations in a manner that would minimize adverse impacts to resources, land uses, and other uses. To that end, the BLM would continue to apply reasonable mitigation measures to all oil and gas activities." The proposed action would utilize best management practices when developing leases in Lesser Prairie-Chicken and Sand Dune Lizard Habitat. Special mitigation measures would be included into the Pecos District Conditions of Approval, if applicable.

1.5. Relationship to Statutes, Regulations, or Other Plans

NEPA requires Federal agencies to consider the potential environmental consequences of proposed actions and to enhance the environment through well-informed Federal decisions.

The following list of statues may apply to the proposed action:

- **Archaeological and Historic Preservation Act of 1974 (16 USC 469)** - Provides for the preservation of historical and archeological data (including relics and specimens) which might otherwise be irreparably lost or destroyed as the result of (1) flooding, the building of access roads, the erection of workmen's communities, the relocation of railroads and highways, and other alterations of the terrain caused by the construction of a dam by any agency of the United States, or by any private person or corporation holding a license issued by any such agency or (2) any alteration of the terrain caused as a result of any Federal construction project or federally licensed activity or program
- **Archaeological Resources Protection Act of 1979, as amended (16 USC 470 et seq.)** - Secures, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals
- **Clean Air Act of 1970, as amended (42 USC 7401 et seq.)** - Defines the US Environmental Protection Agency's (USEPA) responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer
- **Clean Water Act of 1977, as amended (30 USC 1251)** - Establishes the basic structure for regulating discharges of pollutants into the waters of the US and regulating quality standards for surface waters
- **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601 et seq.)** - Sections 101(14) and (33), exclude petroleum from the definitions of "hazardous substances" and "pollutant or contaminant;" petroleum derivatives to which this exclusion applies include crude oil or any fraction thereof (if the fraction is not specifically listed or designated a hazardous substance by other listed acts), natural gas, natural gas liquids, liquefied natural gas, and synthetic gas usable for fuel
- **Endangered Species Act of 1973 (16 USC 1531 et seq.)** - Protects critically imperiled species from extinction as a consequence of economic growth and development untempered by adequate concern and conservation
- **Federal Cave Resources Protection Act of 1988 (16 USC 4301 et seq.)** - Protects significant caves on Federal lands by identifying their location, regulating their use, requiring permits for removal of their resources, and prohibiting destructive acts

- **Lechuguilla Cave Protection Act of 1993** - Protects Lechuguilla Cave and other resources and values in and adjacent to Carlsbad Caverns National Park.
- **Migratory Bird Treaty Act of 1918 (16 USC 703-712)** - Implements the convention for the protection of migratory birds
- **Mining and Mineral Policy Act of 1970, as amended (30 USC 21)** - Fosters and encourages private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs
- **National American Graves Protection and Repatriation Act of 1990 (25 USC 301)** - Provides a process for museums and Federal agencies to return certain Native American cultural items such as human remains, funerary objects, sacred objects, or objects of cultural patrimony to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations and includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking
- **National Historic Preservation Act of 1966, as amended (16 USC 470)** - Preserves historical and archaeological sites
- **Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.)** - According to the RCRA, drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy are exempt by regulatory definition. The term “other wastes associated” is specifically included to designate waste materials “intrinsically derived from primary field operations associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy” (Bohannon 2009). This definition includes such situations as hydrocarbon bearing soil in and around related facilities; drill cuttings; and materials (such as hydrocarbons, water, sand, and emulsion) produced from a well in conjunction with crude oil, natural gas, or geothermal energy; and the accumulated material (such as hydrocarbons, water, sand and emulsion) from production separators, fluid treating vessels, storage vessels, and production impoundments.
- **Safe Drinking Water Act of 1974 (42 USC 300f) –** This law is intended to ensure safe drinking water for the public. Pursuant to the Act, the USEPA is required to set standards for drinking water quality and oversee all states, localities, and water suppliers who implement these standards. Fracturing wastes and fluids, such as flowback, are exempt from regulation under the SDWA.
- **Wild and Scenic Rivers Act of 1968, as amended (16 USC 1271 et seq.)** - Preserves certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations
- **Wilderness Act of 1964 (16 USC 1131 et seq.)** - Secures for the American people of present and future generations, the benefits of an enduring resource of wilderness

New Mexico State Regulations

The New Mexico Oil Conservation Division (NMOCD) of the New Mexico Energy, Minerals, and Natural Resources Department (NM EMNRD), regulates oil and gas operations in New Mexico. The NMOCD is responsible for gathering production data, permitting new wells, establishing pool rules, issuing discharge permits, enforcing rules and regulations, monitoring underground injection wells, ensuring that abandoned wells are properly plugged, and ensuring that the land is responsibly restored.

Oil and gas regulations administered by NMOCD are contained in Title 19, Chapter 15, Part 34 of the New Mexico Administrative Code (NMAC 19.15). The Applicant would comply with Title 19, Chapter 15, Part 34 of the NMAC when handling, storing and disposing of produced water and fracturing fluids. Releases or spills by the Applicant would be handled in accordance with Title 19, Chapter, Part 29, of the NMAC. The Applicant would also comply with the following regulations:

- The EMNRD requires operators to follow "pit rule" guidelines (NMAC 19.15.17) to reduce groundwater contamination from industry-related activities.
- NMAC 19.15.15 establishes requirements for well acreage spacing, obtaining approval of unorthodox well locations, and pooling or communitizing small acreage oil lots.
- NMAC 19.15.16.19 requires the disclosure of hydraulic fracture constituents.

Air quality standards in New Mexico are under the jurisdiction of the New Mexico Environment Department, Air Quality Bureau (NMED/NMAQB). The Environmental Improvement Act (1978) and the Air Quality Control Act (1978) dictate state air quality standards. Also, 40 CFR § 60 "Standards of Performance for New Stationary Sources" is administered by the NMED/NMAQB.

Additionally, the Applicant would comply with all applicable federal, state, and local laws and regulations; obtain the necessary permits for drilling, construction, completion, and operation; and would certify that Surface Use Agreements have been reached with private landowners, where required.

1.6. Scoping, Public Involvement, and Issues

The BLM CFO publishes a NEPA log of proposed project actions for public inspection. This log contains a list of proposed and approved actions in the field office. The log is located in the lobby of the CFO as well as on the BLM New Mexico website (http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html).

An on-site inspection of the Proposed Action area was conducted on June 16, 2016. Personnel at the on-site inspection of the proposed Stebbins 19 Federal Com Slot 3 well pad identified a karst feature located near the northeast corner of the pad. The northeast corner of the pad was rounded off by approximately 30 feet to avoid the feature, production facilities were moved south on the pad, and the proposed access road was re-routed to enter the well pad from the southwestern edge of the pad. Construction will also be minimized in the northeast corner of the pad to avoid the feature, and the topsoil stockpile will be stored along the northern and western sides of the well pad. No other specific issues or considerations for the proposed Stebbins 19 Federal Com Slot 3 well pad were discussed.

Personnel at the on-site inspection of the proposed Stebbins 19 Federal Slot 4 well pad also identified a large and significant karst feature approximately 150 feet north of the northwestern corner of the pad. The proposed well pad was re-oriented so that the deep end of the pad is positioned along the south side of the pad to avoid the feature. No other specific issues or considerations for the proposed Stebbins 19 Federal Slot 4 well pad were discussed.

Topsoil would be stored along the west edge of the Stebbins 19 Federal Com Slot 3 well pad, on the north side of the Stebbins 19 Federal Slot 4 well pad and the Stebbins 20 Federal Slot 3 well pad, and on the east side of the Stebbins 20 Federal Slot 4 well pad. No other specific issues or considerations for the proposed Stebbins 20 Federal Slot 3 and Slot 4 well pads were discussed.

A second on-site inspection of the Proposed Action area was conducted on August 19, 2016 and the present locations of the proposed Stebbins 19 Federal Com Slot 3 and Stebbins 19 Federal Slot 4 well pads were confirmed. No additional issues or considerations for the proposed Stebbins 20 Federal Slot 3 or Slot 4 well pads were discussed.

The CFO also uses Geographic Information Systems in order to identify resources that may be affected by the Proposed Action. A map of the project area was prepared to display the resources in the area and to identify potential issues.

The Proposed Action was circulated among CFO resource specialists in order to identify any issues associated with the project. The issues that were raised include:

- How would air quality be impacted by the Proposed Action?
- How would climate change be impacted by the Proposed Action?
- How would range management be impacted by the Proposed Action?
- How would soils be impacted by the Proposed Action?
- How would watershed resources be impacted by the Proposed Action?
- How would vegetation be impacted by the Proposed Action?
- How would noxious weeds be impacted by the Proposed Action?
- How would wildlife/habitat be impacted by the Proposed Action?
- How would special status species be impacted by the Proposed Action?
- How would Lesser Prairie-Chicken habitat be impacted by the Proposed Action?
- How would Dune Sagebrush Lizard habitat be impacted by the Proposed Action?
- How would cultural resources be impacted by the Proposed Action?
- How would paleontological resources be impacted by the Proposed Action?
- How would karst resources be impacted by the Proposed Action?
- How would visual resources be impacted by the Proposed Action?

CHAPTER 2. PROPOSED ACTION AND ALTERNATIVE(S)

2.1. Proposed Action

The Proposed Action is the BLM CFO's approval of the APDs to drill 16 horizontal wells on Federal lands. The Applicant is also applying to construct the associated infrastructure including: four well pads, a 2,804.61-foot long access road connecting the four well pad locations, a 2,804.61-foot long buried gas sales pipeline, and a 3205.86-foot long overhead, raptor-safe electric powerline.

2.1.1. Location of Proposed Action

The Proposed Action is located on Federal lands in Sections 19 and 20, Township 20 South, Range 29 East, Eddy County, New Mexico (Exhibit 1). The location is approximately 11 miles northeast of Carlsbad, New Mexico.

2.1.2. Construction Details

The Proposed Action would disturb approximately 20.454 acres.

Wells

The Applicant would drill 16 horizontal wells on four separate well pads. The surface-hole locations of the wells on the four well pads would be spaced 30 ft. apart.

The Slot 3 well pad in Section 19, Township 20 South, Range 29 East, would contain the Stebbins 19 Federal Com 113H, 123H, 133H, and 203H wells (Exhibits 2 and 3). The Slot 4 well pad in Section 19, Township 20 South, Range 29 East, would contain the Stebbins 19 Federal 114H, 124H, 134H, and 204H wells (Exhibits 4 and 5).

The Slot 3 well pad in Section 20, Township 20 South, Range 29 East, would contain the Stebbins 20 Federal 113H, 123H, 133H, and 203H wells (Exhibits 6 and 7). The APD for the Stebbins Federal 20 123H well was previously approved by the BLM as the Yates Stebbins 20 Federal 1H well (Exhibit 8). A Sundry Notice (Form 3160-5, EC Transaction 357100, Serial Number 852-34257) has been filed with the BLM CFO by the Applicant to rename the well as the Stebbins Federal 20 123H well and to realign the surface hole (Exhibit 9) of the well with the other proposed Stebbins 20 Federal Slot 3 wells.

The Slot 4 well pad in Section 20, Township 20 South, Range 29 East, would contain the Stebbins 20 Federal 114H, 124H, 134H, and 204H wells (Exhibits 10 and 11).

The wells would be drilled utilizing a closed loop system with three to five fresh and brine water storage (frac) tanks per well. The closed loop system would be constructed, maintained, and operated in accordance with rules and regulations of the State of New Mexico, Energy and Natural Resource Department, and the Oil Conservation Division (Pit Rule 19.15.17 NMAC).

Water would be trucked from existing water wells C 0370 and C 03607, located on private land, approximately 10 miles southwest of the proposed wells in the northeast quarter, Section 24, Township 21 South, Range 27 East (Exhibit 1).

During drilling operations, third party service companies will use solids control equipment to remove the cuttings from the drilling fluids and collect the cuttings, mud, and fluids in two-three cuttings collection and haul-off bins with track systems. These tanks would be removed from

the site and hauled to a New Mexico Oil Conservation Division (NMOCD) approved disposal facility.

It is anticipated that it would take three months to drill each well or approximately 48 months to drill and complete all wells on the four proposed Slot 3 and Slot 4 well pads in Sections 19 and 20.

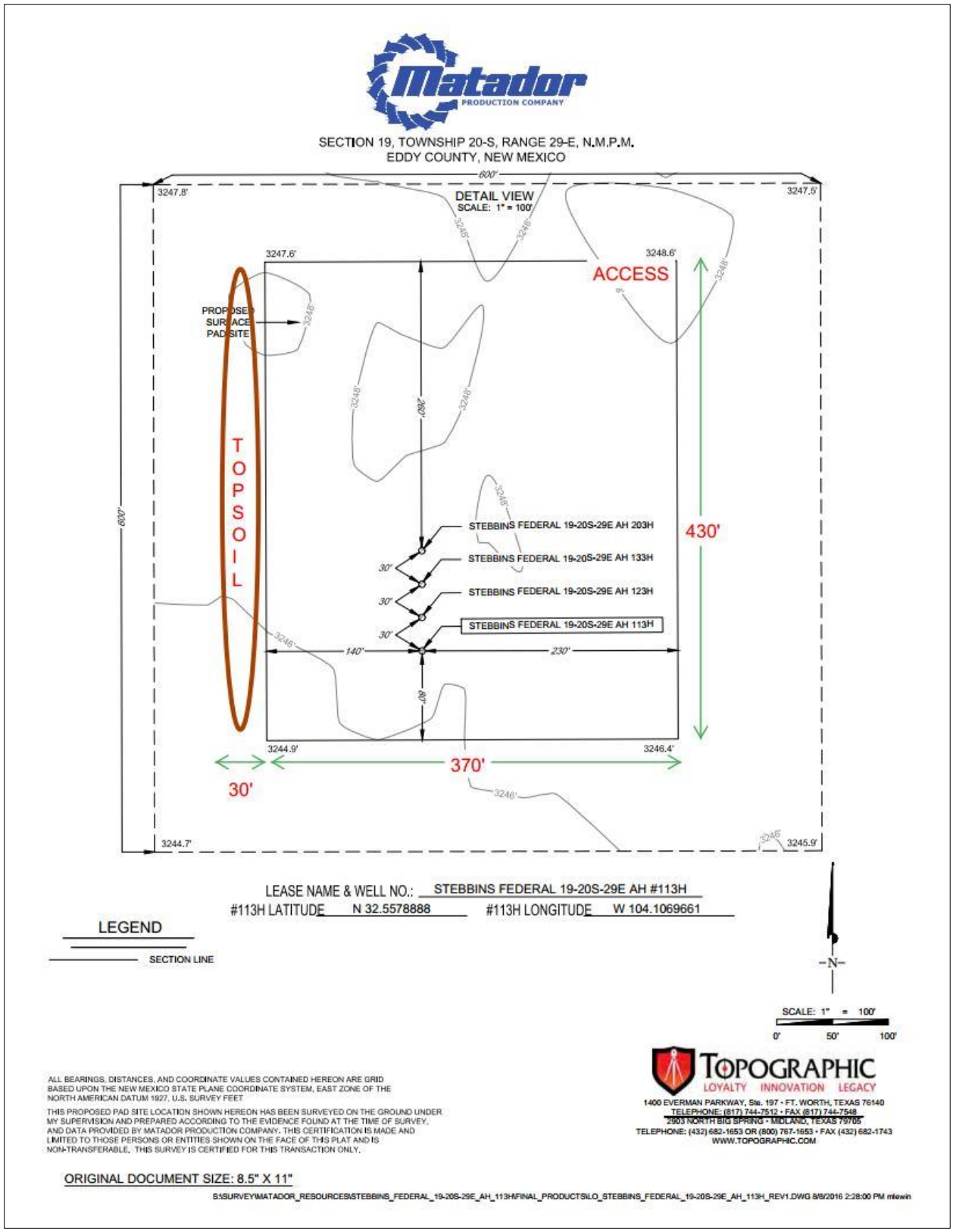
Well Pads

In order to develop and drill the wells, four surfaced well pads would be needed. The well pads would be surfaced with caliche hauled from the existing Constructors, Inc. pit, located on private lands in the northeast quarter, Section 34, Township 21 South, Range 27 East (Exhibit 1).

The Stebbins 19 Federal Com Slot 3 well pad containing the 113H, 123H, 133H, and 203H, wells would consist of a 370-foot E/W by 430 foot N/S pad site for a total disturbance area of 3.652 acres (Exhibits 2 and 3). The Stebbins 19 Federal Slot 4 well pad containing the 114H, 124H, 134H, and 204H wells also would consist of a 370-foot E/W by 430 foot N/S pad site for a total disturbance area of 3.652 acres (Exhibits 4 and 5).

The Stebbins 20 Federal Com Slot 3 well pad containing the 113H, 123H, 133H, and 203H wells would consist of an irregularly shaped 320-foot E/W x 380-foot N/S x 370-foot E/W x 430 foot N/S pad site for a total disturbance area of 3.59 acres (Exhibits 6 and 7). A 50-foot x 50-foot x 70-foot area located in the southwest corner of the proposed well pad would be fenced off by a BLM-approved archaeologist and monitored during the well pad's initial construction. The Stebbins 20 Federal Slot 4 well pad containing the 114H, 124H, 134H, and 204H wells would consist of a 370-foot E/W by 430 foot N/S pad site for a total disturbance area of 3.652 acres (Exhibits 10 and 11).

In addition to the drill rigs, each well pad would house a closed loop system, fresh and brine water storage tanks, steel pits, mud tanks, a pump house and combination buildings, pipe racks, a cuttings bin, a mud gas separator, trailers for the rig crew, company man, tool pusher, or mud logger; and a portable trash cage (Exhibits 12 -15). The four well pads would be fenced during construction.


Matador
PRODUCTION COMPANY
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'
600'
3247.8'
3247.5'
3247.6'
3248.6'
ACCESS
PROPOSED SURFACE PAD SITE
TOPSOIL
260'
STEBBINS FEDERAL 19-20S-29E AH 203H
STEBBINS FEDERAL 19-20S-29E AH 133H
STEBBINS FEDERAL 19-20S-29E AH 123H
STEBBINS FEDERAL 19-20S-29E AH 113H
30'
140'
230'
60'
430'
600'
3244.9'
3246.4'
370'
30'
3244.7'
3245.9'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 19-20S-29E AH #113H
#113H LATITUDE N 32.5578888 #113H LONGITUDE W 104.1069661
LEGEND
SECTION LINE
-N-
SCALE: 1" = 100'
0' 50' 100'
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET
THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
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TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
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ORIGINAL DOCUMENT SIZE: 8.5" X 11"
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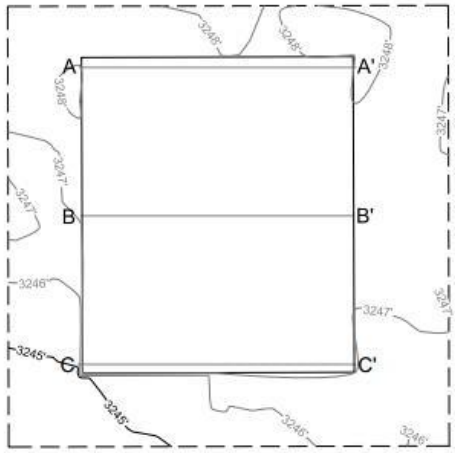
Exhibit 2.

SCALE: 1" = 200'
0' 100' 200'

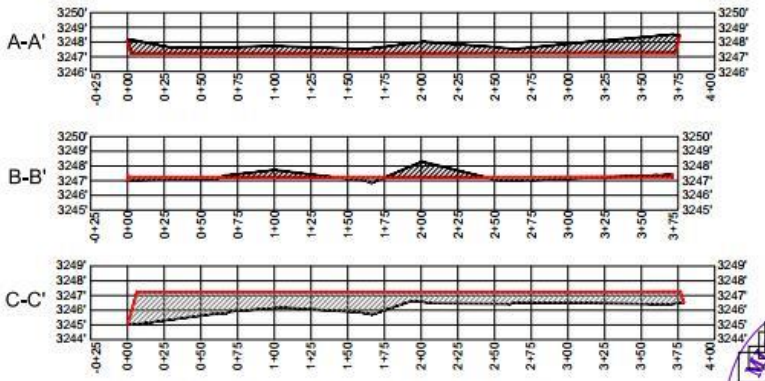
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



TOP OF PAD ELEVATION: 3247.2'

CUT SLOPE: 33.33% 3.000:1 18.43°
FILL SLOPE: 33.33% 3.000:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT : 40,034.5 C.F., 1,482.76 C.Y.
FILL: 40,034.4 C.F., 1,482.75 C.Y.
AREA: 162851.7 SQ.FT., 3.739 ACRES



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Vertical Scale = 1:5

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TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

NEW MEXICO 18329 PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
AUGUST 08, 2016
Field note description of even date accompanies this plat.

STEBBINS FEDERAL 19-20S-29E AH 113H SURFACE PAD SITE PROFILE	REVISION: MML	08/08/16
DATE: 04/15/16		
FILE: [illegible]		
DRAWN BY: SRJ		
SHEET : 1 OF 1		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR RESOURCE COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_19-20S-29E_113H_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_STEBBINS_FEDERAL_19-20S-29E_113H_SURFACE_PAD_SITE_PRO_REV1.DWG 8/9/2016 9:11:42 AM jstovall

Exhibit 3.

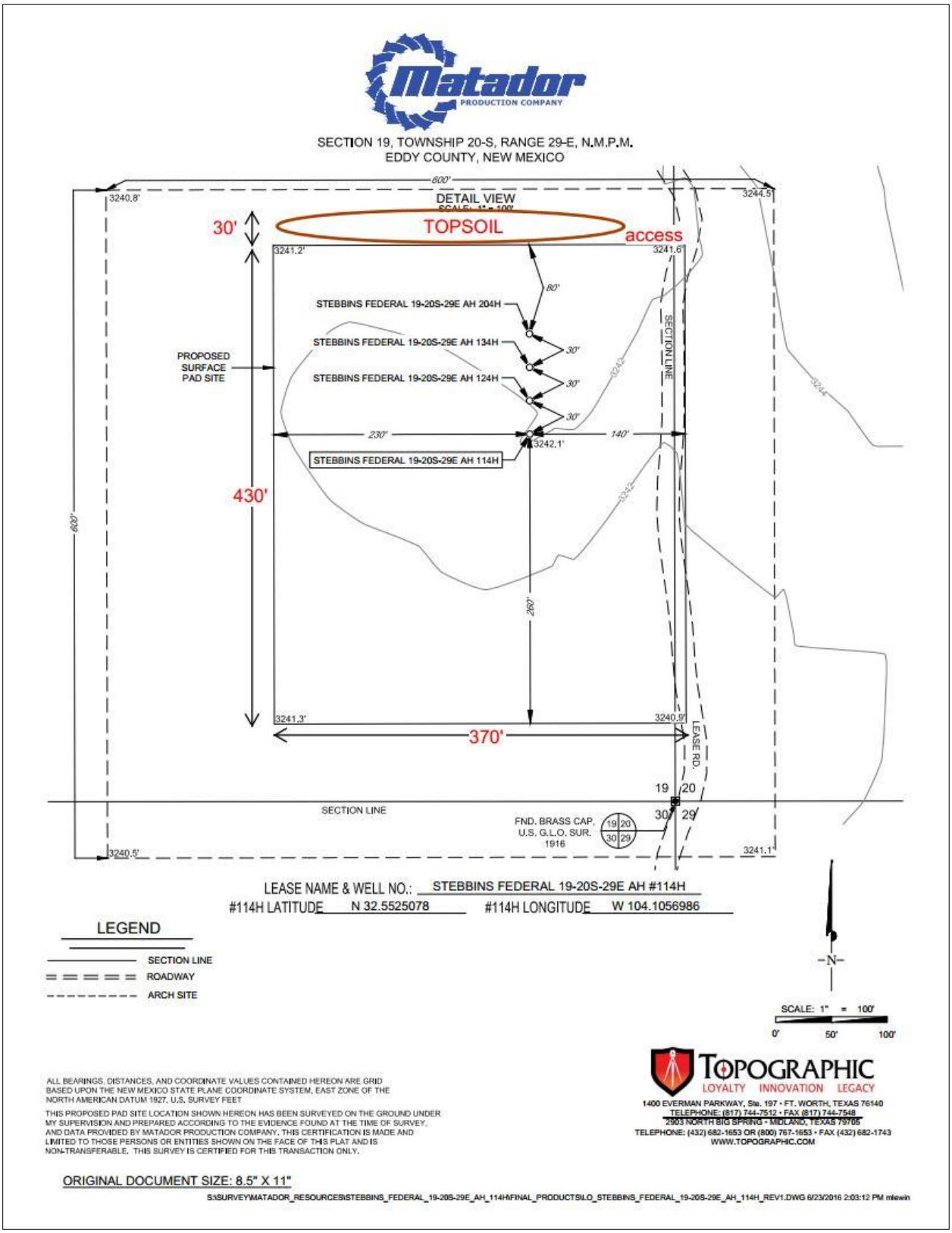
Matador
PRODUCTION COMPANY
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
TOPSOIL
access
30'
430'
370'
600'
3240.8'
3244.5'
3241.2'
3241.6'
80'
STEBBINS FEDERAL 19-20S-29E AH 204H
STEBBINS FEDERAL 19-20S-29E AH 134H
STEBBINS FEDERAL 19-20S-29E AH 124H
STEBBINS FEDERAL 19-20S-29E AH 114H
PROPOSED SURFACE PAD SITE
SECTION LINE
230'
140'
3242.1'
3241.3'
3240.9'
LEASE RD.
SECTION LINE
19
20
30
29
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
3240.5'
3241.1'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 19-20S-29E AH #114H
#114H LATITUDE N 32.5525078
#114H LONGITUDE W 104.1056986
LEGEND
SECTION LINE
ROADWAY
ARCH SITE
N
SCALE: 1" = 100'
0' 50' 100'
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET
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Exhibit 4.

SCALE: 1" = 200'
0' 100' 200'

SECTION 19 & 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

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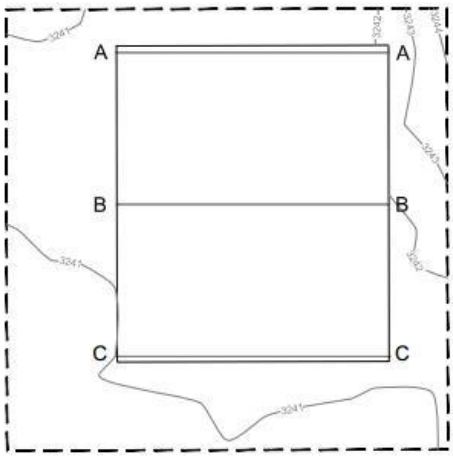
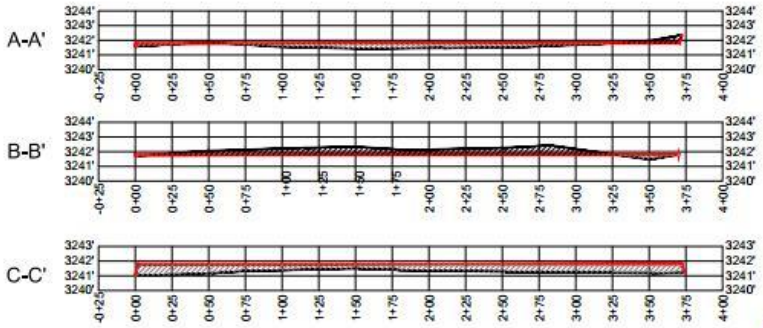


TOP OF PAD ELEVATION:
3241.8'

CUT SLOPE: 33.33% 3.00:1 18.43°
FILL SLOPE: 33.33% 3.00:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT : 27,161.3 C.F., 1,005.97 C.Y.
FILL: 27,161.3 C.F., 1,005.97 C.Y.
BALANCE IMPORT: 0.0 C.F., 0.00 C.Y.
AREA: 161131.1 SQ.FT., 3.699 ACRES



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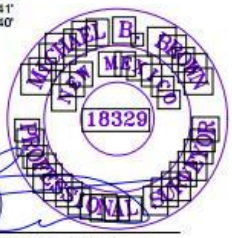

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TEXAS FIRM REGISTRATION NO. 10042504
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Michael Blake Brown, P.S. No. 18329
JUNE 23, 2016
Field note description of even date accompanies this plat.

STEBBINS FEDERAL 19-20S-29E AH 114H SURFACE PAD SITE PROFILE	REVISION:	
	MML	06/23/16
DATE: 04/15/16		
FILE: [illegible]		
DRAWN BY: SRJ		
SHEET : 1 OF 1		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
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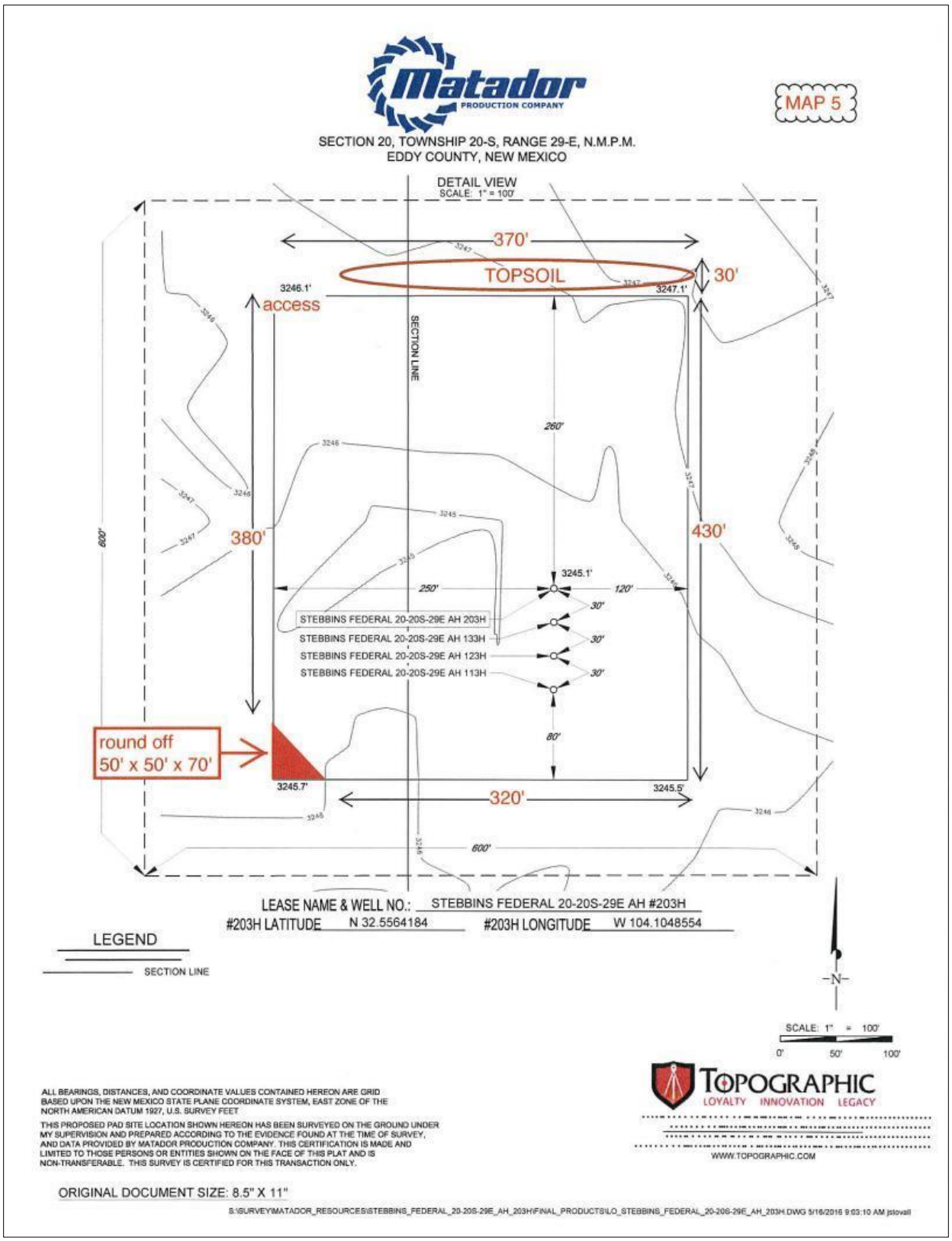
Exhibit 5.


Matador
PRODUCTION COMPANY
MAP 5
SECTION 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'
370'
TOPSOIL
30'
3246.1'
access
3247.1'
SECTION LINE
260'
380'
430'
600'
250'
120'
3245.1'
STEBBINS FEDERAL 20-20S-29E AH 203H
STEBBINS FEDERAL 20-20S-29E AH 133H
STEBBINS FEDERAL 20-20S-29E AH 123H
STEBBINS FEDERAL 20-20S-29E AH 113H
30'
80'
round off
50' x 50' x 70'
3245.7'
3245.5'
320'
600'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 20-20S-29E AH #203H
#203H LATITUDE N 32.5564184
#203H LONGITUDE W 104.1048554
LEGEND
SECTION LINE
N
SCALE: 1" = 100'
0'
50'
100'
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LOYALTY INNOVATION LEGACY
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ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET
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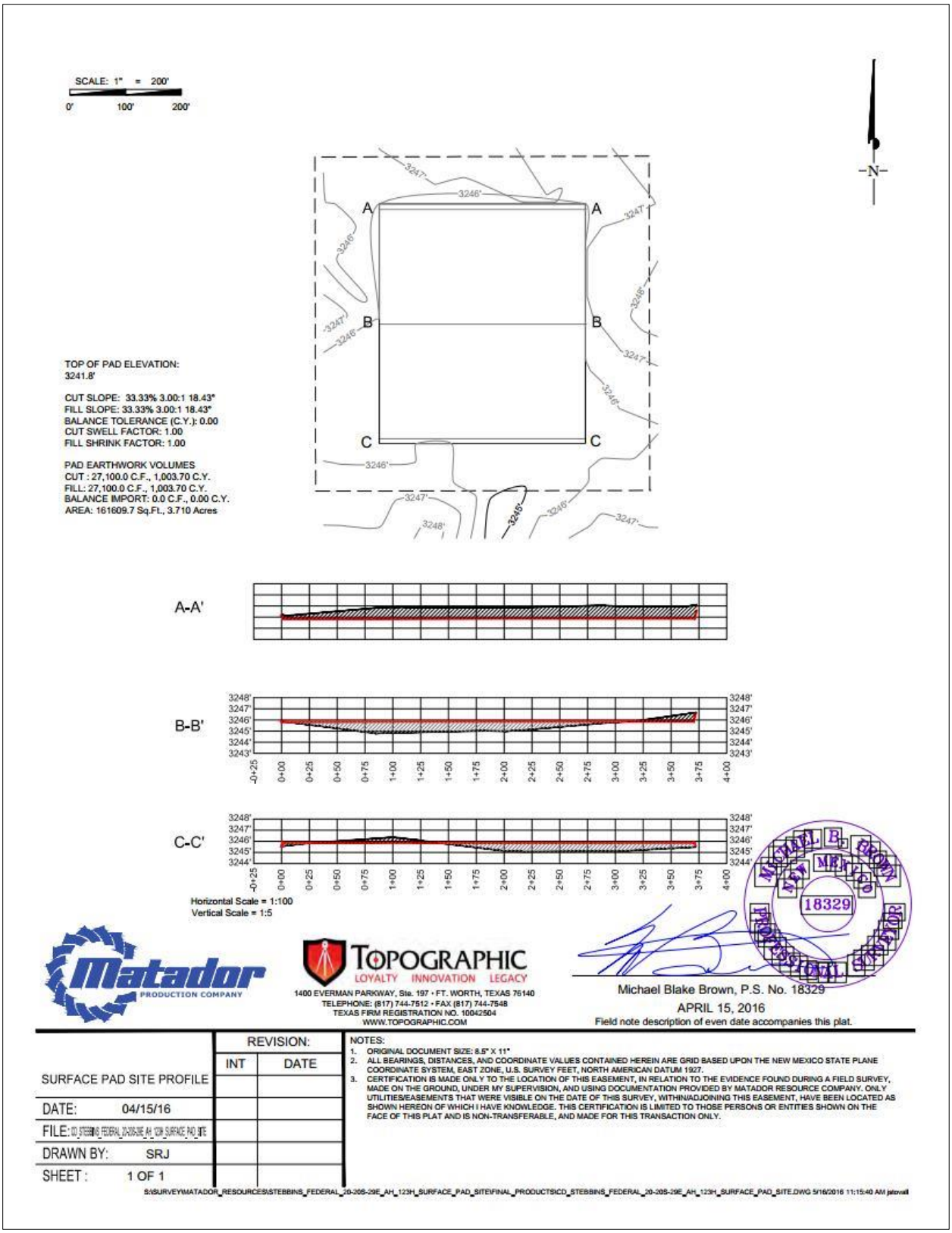
ORIGINAL DOCUMENT SIZE: 8.5" X 11"
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_203H\FINAL_PRODUCTS\LO_STEBBINS_FEDERAL_20-20S-29E_AH_203H.DWG 5/16/2016 9:03:10 AM jstovall

Exhibit 6.


SCALE: 1" = 200'
0' 100' 200'
N
A
A
B
B
C
C
3247'
3246'
3248'
3245'
TOP OF PAD ELEVATION:
3241.8'
CUT SLOPE: 33.33% 3.00:1 18.43°
FILL SLOPE: 33.33% 3.00:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00
PAD EARTHWORK VOLUMES
CUT : 27,100.0 C.F., 1,003.70 C.Y.
FILL: 27,100.0 C.F., 1,003.70 C.Y.
BALANCE IMPORT: 0.0 C.F., 0.00 C.Y.
AREA: 161609.7 Sq.Ft., 3.710 Acres
A-A'
B-B'
C-C'
3248'
3247'
3246'
3245'
3244'
3243'
-0+25
0+00
0+25
0+50
0+75
1+00
1+25
1+50
1+75
2+00
2+25
2+50
2+75
3+00
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3+75
4+00
Horizontal Scale = 1:100
Vertical Scale = 1:5
Matador
PRODUCTION COMPANY
TOPOGRAPHIC
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1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM
MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR
Michael Blake Brown, P.S. No. 18329
APRIL 15, 2016
Field note description of even date accompanies this plat.
SURFACE PAD SITE PROFILE
DATE: 04/15/16
FILE: CD_STEBBINS_FEDERAL_20-20S-29E_AH_123H_SURFACE_PAD_SITE
DRAWN BY: SRJ
SHEET : 1 OF 1
REVISION:
INT
DATE
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR RESOURCE COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_123H_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_STEBBINS_FEDERAL_20-20S-29E_AH_123H_SURFACE_PAD_SITE.DWG 5/16/2016 11:15:40 AM jstovall

Exhibit 7.

ATS-14-567

NM OIL CONSERVATION
OCD Artesia DISTRICT
JUN 22 2015
RECEIVED

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

HIGH CAVEKARST

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM-03677
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator ~~Harvey E. Yates~~ Matador Prod. Co. (228937)	7. If Unit or CA Agreement, Name and No.
3a. Address P.O Box 1936 Roswell N.M 88202	8. Lease Name and Well No. Stebbins 20 Federal 1H (315007)
3b. Phone No. (include area code) 575-623-6601	9. API Well No. 30-015-43201
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface SHL; 1650' FSL & 50' FWL At proposed prod. zone 2250' FSL & 330' FEL	10. Field and Pool, or Exploratory Avalon E. Bone Spring (70870)
14. Distance in miles and direction from nearest town or post office* 15 Miles East of Carlsbad, N.M	11. Sec., T. R. M. or Blk. and Survey or Area UL-L, Sec 20, T20S, R29E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 50'	12. County or Parish Eddy Co. / 13. State NM
16. No. of acres in lease 2150.97	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2370'	19. Proposed Depth MD-12575' Pilot Hole TVD- 8018' 9500' / 20. BLM/BIA Bond No. on file NMB000317
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3247'	22. Approximate date work will start* 01/15/2015 / 23. Estimated duration 45 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Keith Cannon	Name (Printed/Typed) Keith Cannon	Date 03/31/2014
Title Drilling Superintendent		
Approved by (Signature) Steve Caffey	Name (Printed/Typed)	Date JUN 16 2015
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

7/2/15

(Continued on page 2) *(Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Exhibit 8.

Matador Production Company

Stebbins Fed 20 #123H
Old Yates Pad Overlap Map

Sec. 19 & 20, Township 20S, Range 29E
Eddy County, New Mexico

Surface Hole Location

1:1,000

0 50 100 200
Feet

N

NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., December 12, 2016
for Matador Production Company

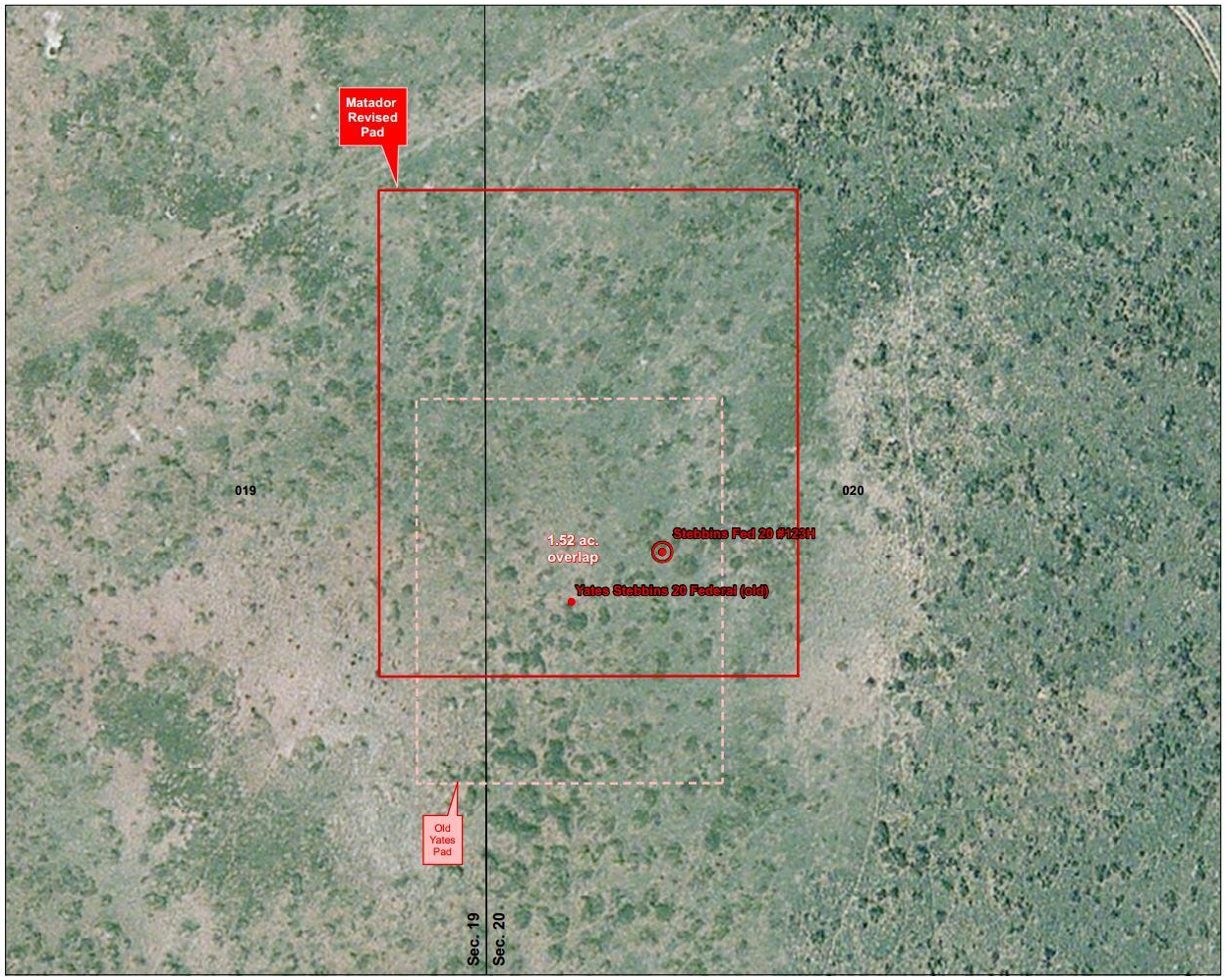
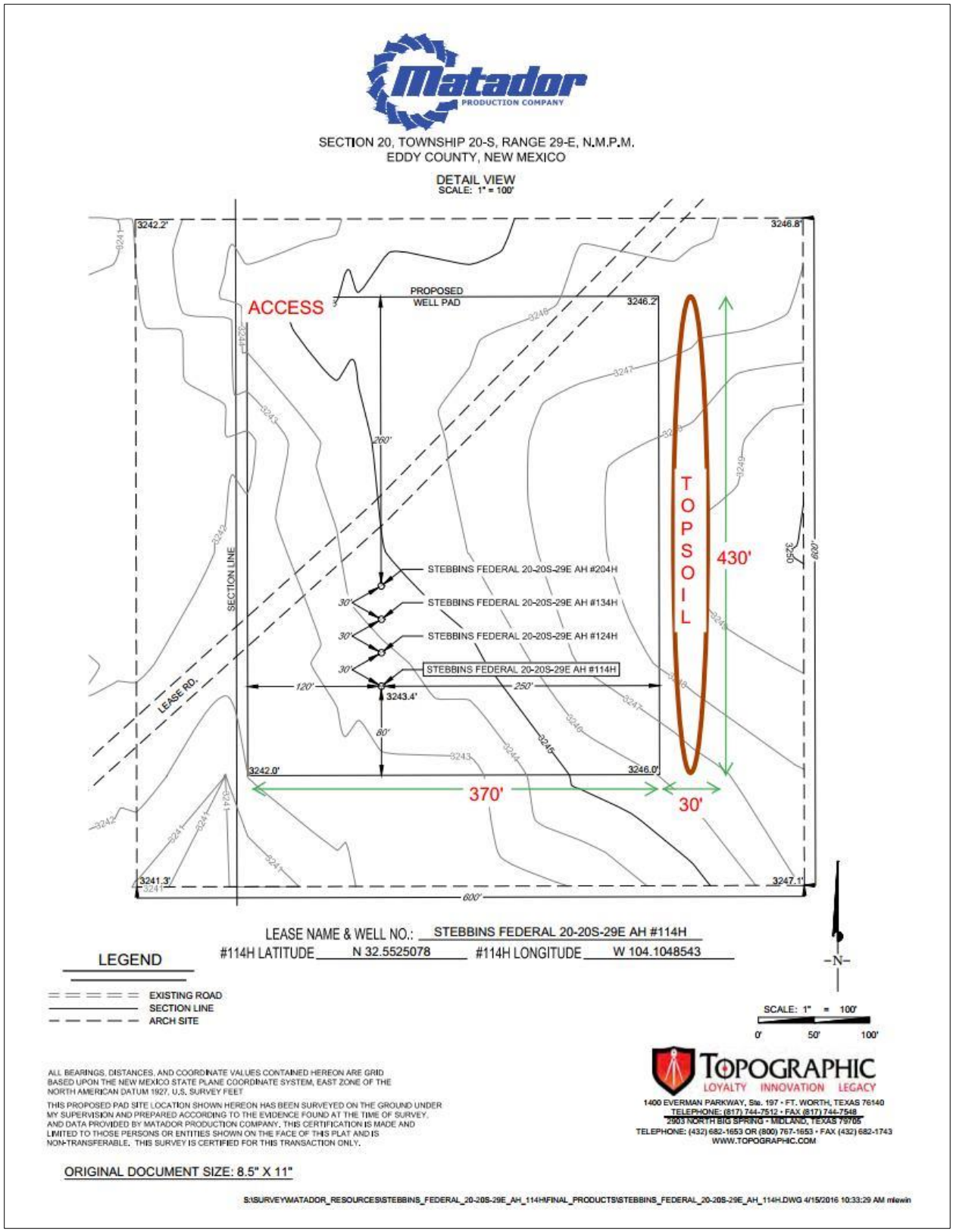


Exhibit 9.


Matador
PRODUCTION COMPANY
SECTION 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'
ACCESS
PROPOSED WELL PAD
3242.2'
3246.8'
3246.2'
260'
SECTION LINE
LEASE RD.
STEBBINS FEDERAL 20-20S-29E AH #204H
STEBBINS FEDERAL 20-20S-29E AH #134H
STEBBINS FEDERAL 20-20S-29E AH #124H
STEBBINS FEDERAL 20-20S-29E AH #114H
30'
120'
250'
3243.4'
80'
3242.0'
3246.0'
370'
30'
TOPSOIL
430'
600'
3241.3'
3247.1'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 20-20S-29E AH #114H
#114H LATITUDE N 32.5525078 #114H LONGITUDE W 104.1048543
LEGEND
EXISTING ROAD
SECTION LINE
ARCH SITE
-N-
SCALE: 1" = 100'
0' 50' 100'
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET
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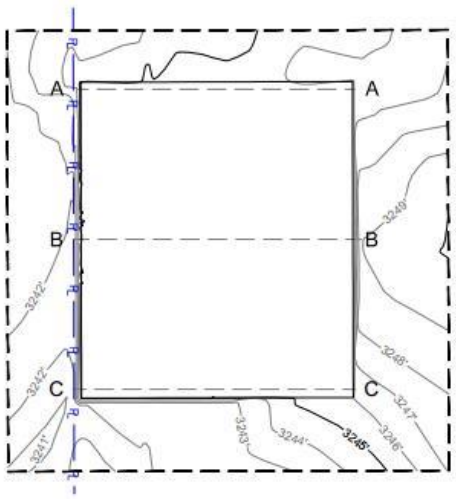
WWW.TOPOGRAPHIC.COM
ORIGINAL DOCUMENT SIZE: 8.5" X 11"
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_114H\FINAL_PRODUCTS\STEBBINS_FEDERAL_20-20S-29E_AH_114H.DWG 4/15/2016 10:33:29 AM mlewin

Exhibit 10.

SCALE: 1" = 200'

0' 100' 200'

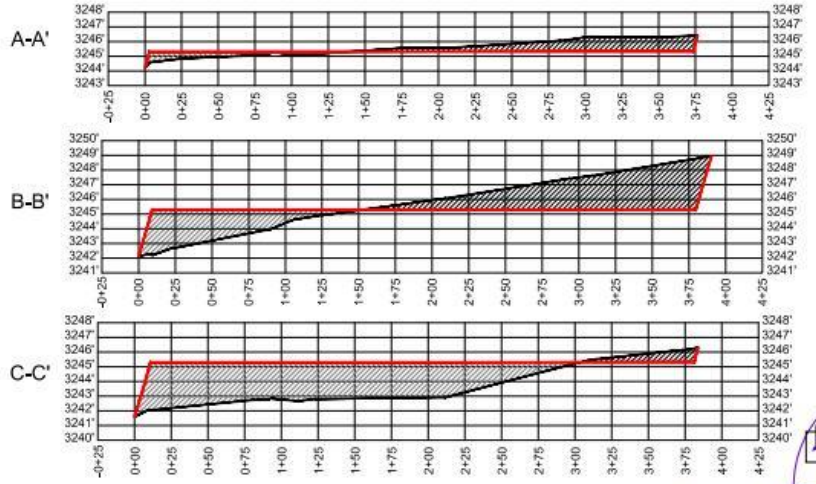
SECTION 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



TOP OF PAD ELEVATION=
3245.3'

CUT SLOPE: 33.33% 3.00:1 18.43°
FILL SLOPE: 33.33% 3.00:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT : 117,816.4 C.F., 4,363.57 C.Y.
FILL: 117,816.4 C.F., 4,363.57 C.Y.
BALANCE IMPORT: 0.0 C.F., 0.00 C.Y.
AREA: 168717.2 SQ.FT., 3.873 Acres



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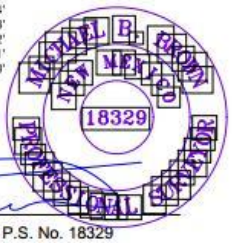
Vertical Scale = 1:5



Michael Blake Brown, P.S. No. 18329
APRIL 15, 2016
Field note description of even date accompanies this plat.

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

STEBBINS FEDERAL 20-20S-29E AH 124H SURFACE PAD SITE PROFILE	REVISION: INT	DATE
DATE: 04/15/16		
FILE: [illegible]		
DRAWN BY: SRJ		
SHEET : 1 OF 1		

NOTES:
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S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_124H_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_STEBBINS_FEDERAL_20-20S-29E_AH_124H_SURFACE_PAD_SITE_PRO.DWG 4/20/2016 2:36:49 PM jstovall

Exhibit 11.

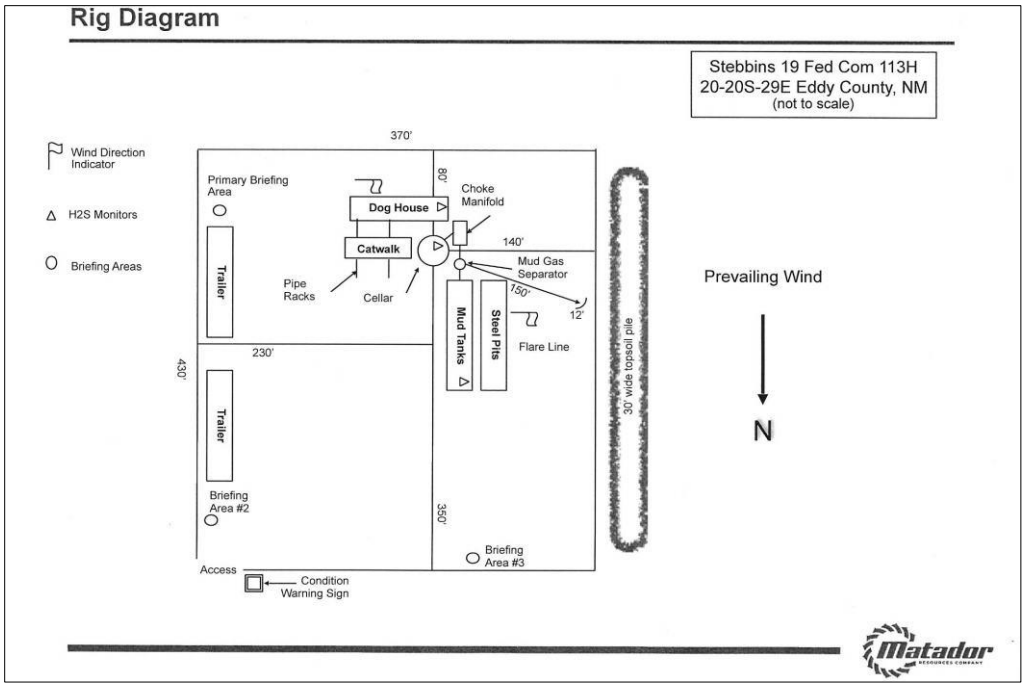
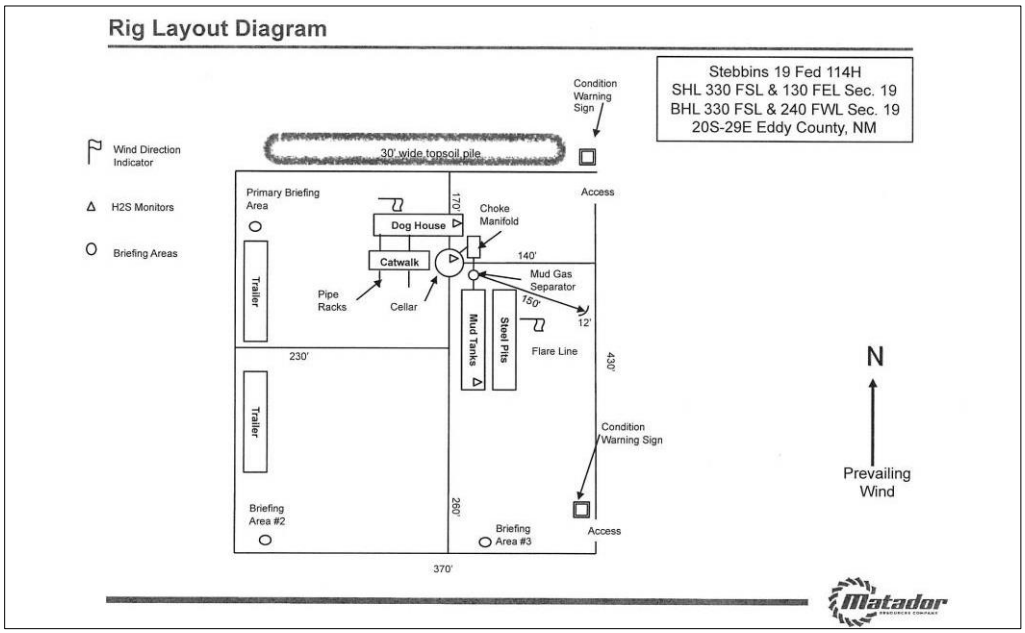


Exhibit 12.



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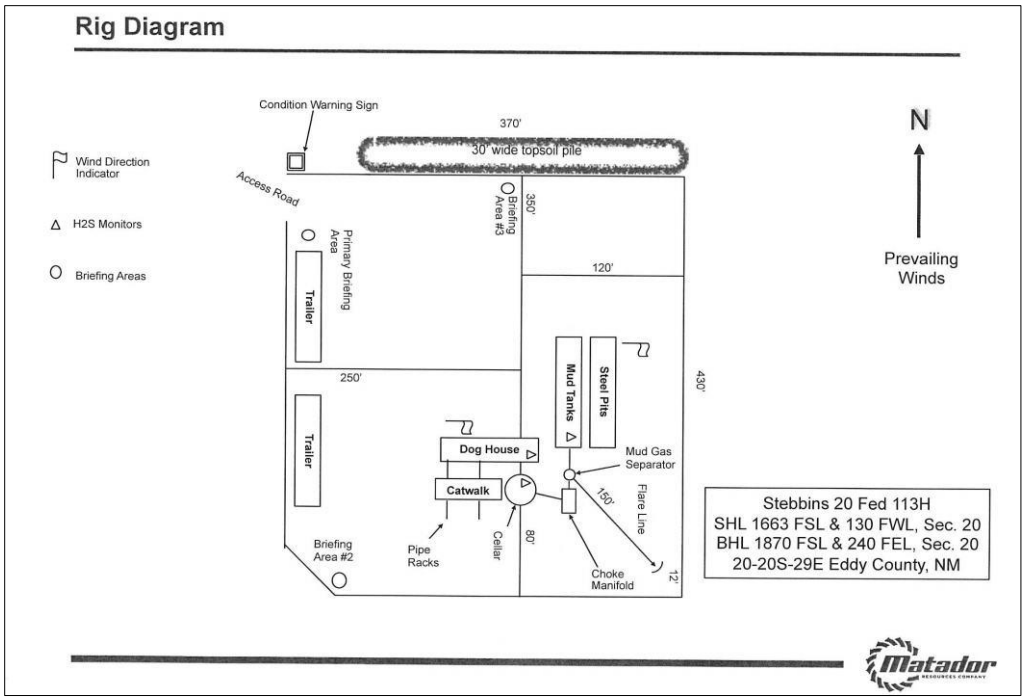

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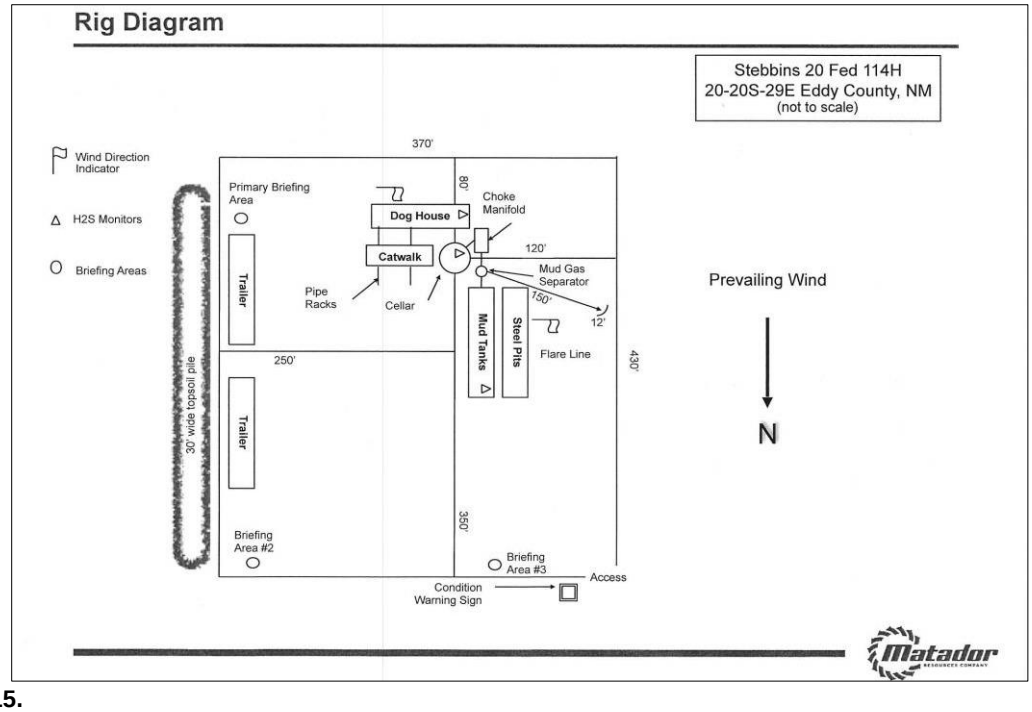

Exhibit 15.

Following interim reclamation, the size of the Stebbins 19 Federal Slot 3 well pad area would be reduced by 0.87 acres in a 100 x 380-foot area on the east side of the pad (Exhibit 16). Interim reclamation would consist of reducing the size of the proposed Slot 3 well pad by approximately 24%, by removing caliche, re-contouring disturbed areas to match pre-construction grades, and reclaiming the east side of the well pad by 0.87 acres to leave 2.78 acres for a combination

separator and heater treater, meter run, flare, a tractor-trailer turn around, an oil and water tank battery inside a firewall, and the four well heads (Exhibit 16).

The size of the Stebbins 19 Federal Slot 4 well pad area would be reduced by 0.91 acres in a 110 x 360-foot area on the south side of the pad while leaving a ten-foot wide access road open into the southeastern corner of the pad (Exhibit 17). Interim reclamation would consist of reducing the size of the proposed Slot 4 well pad by approximately 25%, by removing caliche, re-contouring disturbed areas to match pre-construction grades, and reclaiming the south side of the well pad by 0.91 acres to leave 2.74 acres for a separator, heater treater, meter run, flare, a tractor-trailer turn around, an oil and water tank battery inside a firewall, and the four well heads (Exhibit 17).

Following interim reclamation, the size of the Stebbins 20 Federal Slot 3 well pad area would be reduced by 0.18 acres in a 60 x 130-foot area located in the northeastern corner of the pad to 3.41 acres (Exhibit 18). Interim reclamation would consist of reducing the size of the proposed Slot 3 well pad by approximately 5%, by removing caliche, redistributing stockpiled topsoil, re-contouring disturbed areas to match pre-construction grades, and reclaiming a 60 x 130-foot area in the northeastern corner of the well pad, to leave 3.41 acres for a separator, heater treater, meter run, flare, a tractor-trailer turn around, an oil and water tank battery inside a firewall, and the four well heads (Exhibit 18).

Also following interim reclamation, the size of the Stebbins 20 Federal Slot 4 well pad area would be reduced by 0.28 acres in a 30 x 400-foot area located along the west side of the of the pad and by 0.29 acres in an 80 x 160-foot area in the southeastern corner of the well pad to 3.08 acres (Exhibit 19). Interim reclamation will consist of reducing the size of the proposed Slot 4 well pad by approximately 29%, by removing caliche, redistributing stockpiled topsoil, re-contouring disturbed areas to match pre-construction grades, and reclaiming a 370 x 100 x 372 x 135-foot area or approximately one acre on the south end of the well pad, to leave 2.50 acres for a separator, heater treater, meter run, flare, a tractor-trailer turn around, an oil and water tank battery inside a firewall, and the four well heads (Exhibit 19).

Interim reclamation of the four well pads would occur within six months of completing the last of the 16 wells.

Reclamation would consist of evenly spreading the top six-inches of soil and brush over the disturbed areas and retaining enough stockpiled topsoil to cover the remainder of the pads when the last well is plugged and abandoned. Once the last well is plugged, then the remaining areas of the well pads, access road, gas sales pipeline corridor, and overhead electric powerline corridor would be similarly reclaimed within six months of plugging the well. Disturbed areas will be seeded in accordance with BLM requirements and noxious weeds will be controlled during the life of the wells.

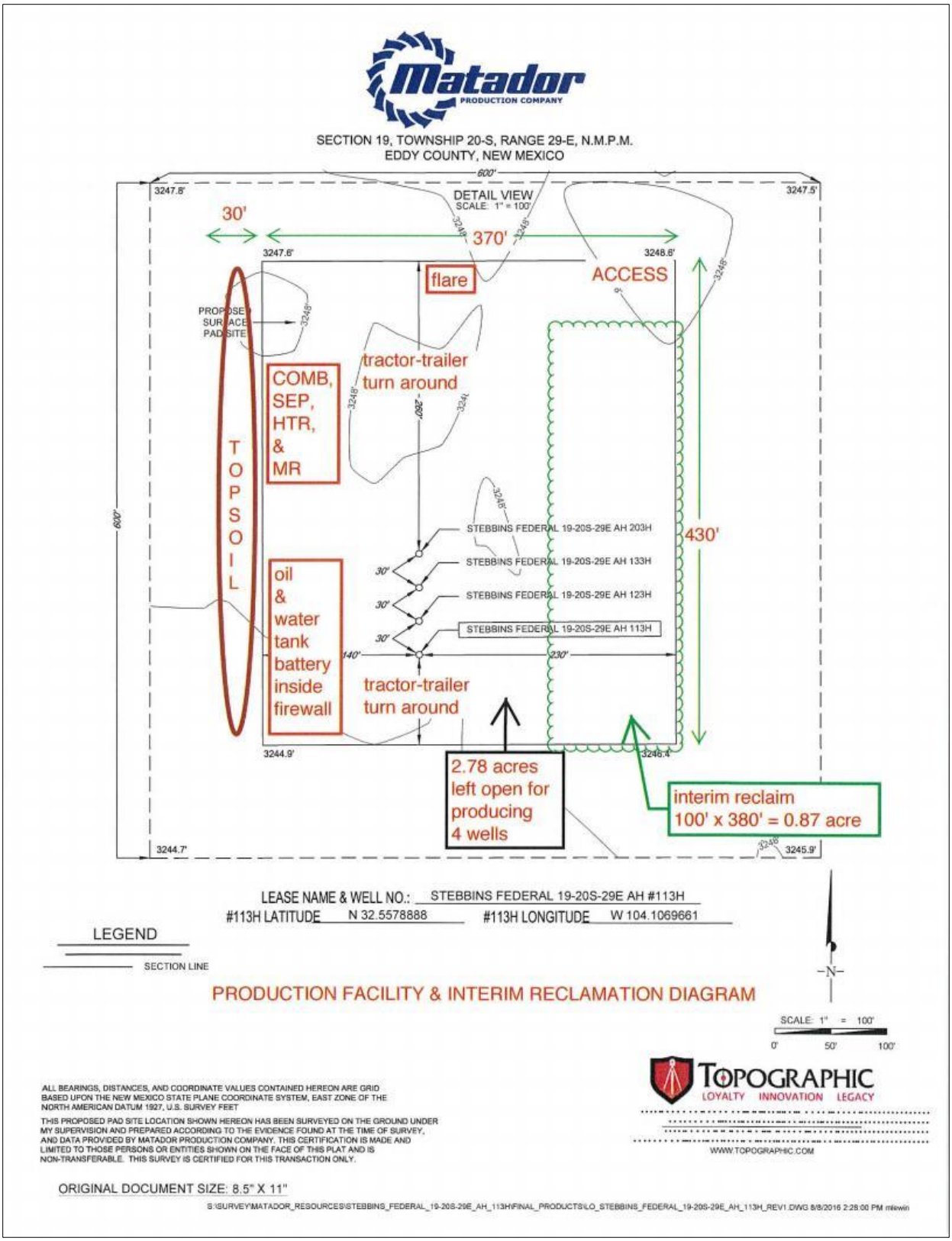
Matador
PRODUCTION COMPANY
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'
600'
3247.8'
3247.5'
30'
370'
3247.6'
3248.6'
flare
ACCESS
PROPOSED SURFACE PAD SITE
COMB, SEP, HTR, & MR
tractor-trailer turn around
260'
TOPSOIL
600'
STEBBINS FEDERAL 19-20S-29E AH 203H
STEBBINS FEDERAL 19-20S-29E AH 133H
STEBBINS FEDERAL 19-20S-29E AH 123H
STEBBINS FEDERAL 19-20S-29E AH 113H
430'
30'
30'
30'
140'
230'
oil & water tank battery inside firewall
tractor-trailer turn around
3244.9'
3246.4'
2.78 acres left open for producing 4 wells
interim reclaim 100' x 380' = 0.87 acre
3244.7'
3245.9'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 19-20S-29E AH #113H
#113H LATITUDE N 32.5578888
#113H LONGITUDE W 104.1069661
LEGEND
SECTION LINE
N
PRODUCTION FACILITY & INTERIM RECLAMATION DIAGRAM
SCALE: 1" = 100'
0'
50'
100'
TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
WWW.TOPOGRAPHIC.COM
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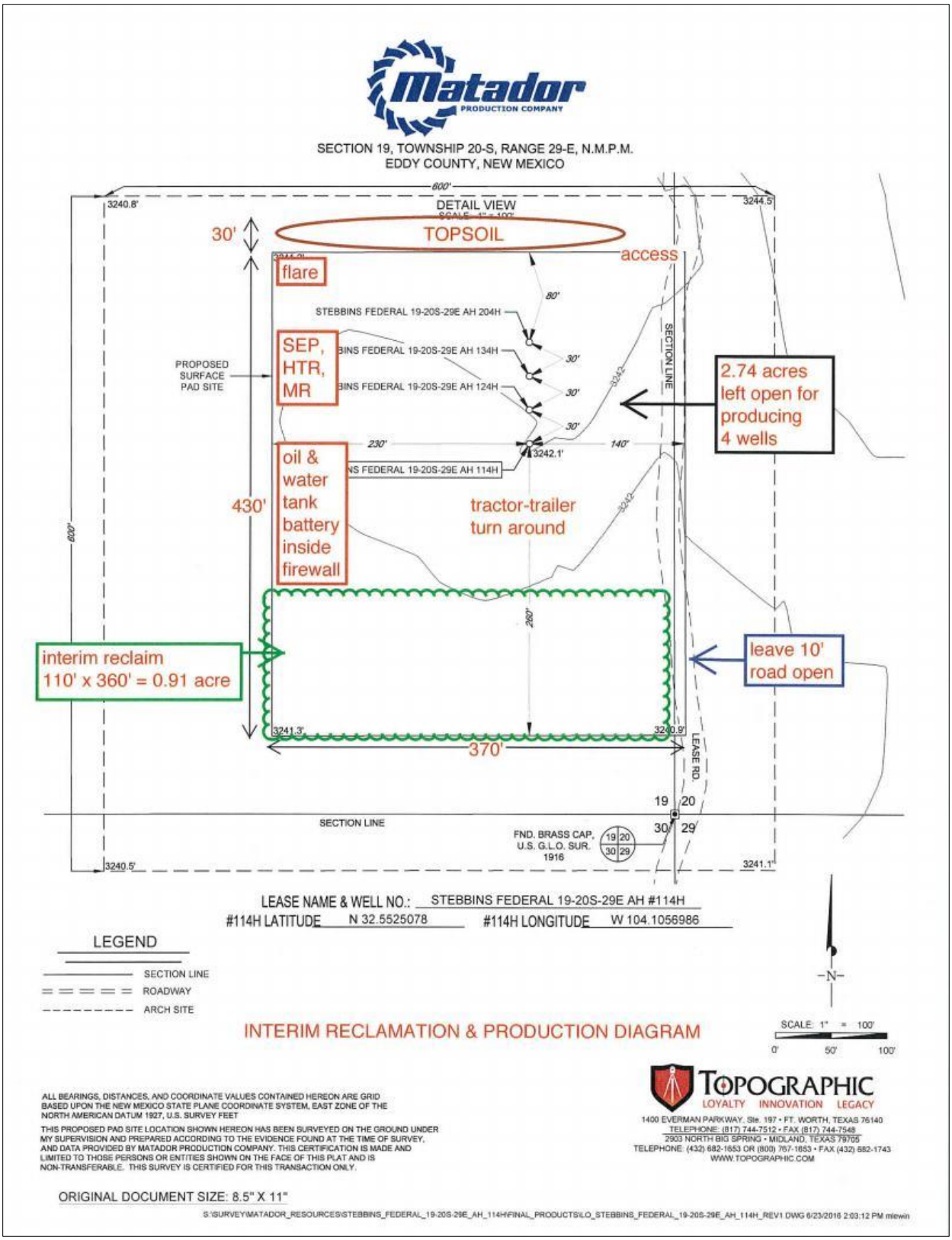
Exhibit 16.


Matador
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SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
TOPSOIL
30'
flare
access
STEBBINS FEDERAL 19-20S-29E AH 204H
STEBBINS FEDERAL 19-20S-29E AH 134H
STEBBINS FEDERAL 19-20S-29E AH 124H
STEBBINS FEDERAL 19-20S-29E AH 114H
SEP, HTR, MR
PROPOSED SURFACE PAD SITE
SECTION LINE
2.74 acres left open for producing 4 wells
oil & water tank battery inside firewall
430'
tractor-trailer turn around
interim reclaim 110' x 360' = 0.91 acre
leave 10' road open
370'
LEASE RD.
SECTION LINE
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
LEASE NAME & WELL NO.: STEBBINS FEDERAL 19-20S-29E AH #114H
#114H LATITUDE N 32.5525078 #114H LONGITUDE W 104.1056986
LEGEND
SECTION LINE
ROADWAY
ARCH SITE
INTERIM RECLAMATION & PRODUCTION DIAGRAM
SCALE: 1" = 100'
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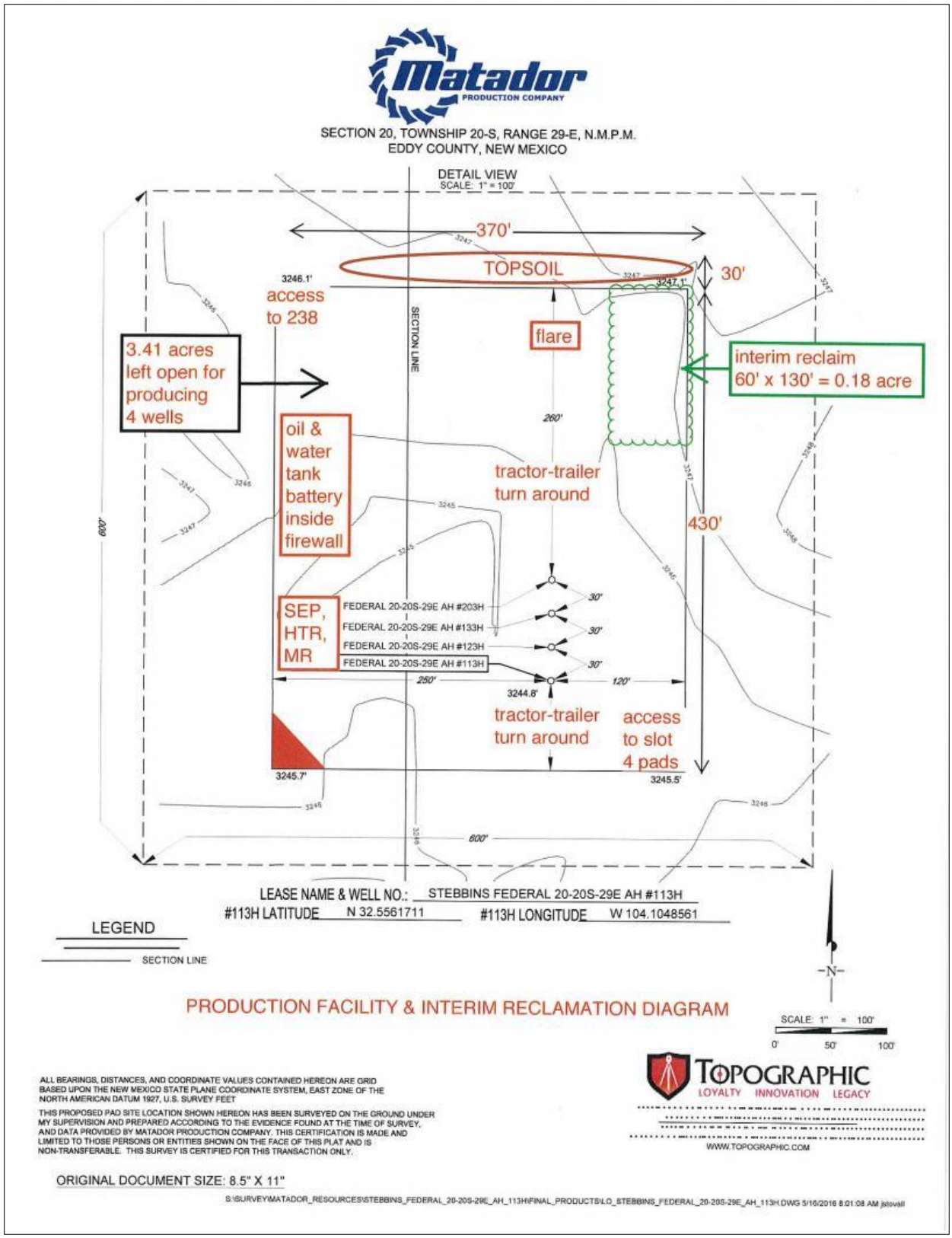
Exhibit 17.


Matador
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SECTION 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
DETAIL VIEW
SCALE: 1" = 100'
370'
TOPSOIL
30'
3246.1'
access to 238
3247.1'
SECTION LINE
flare
3.41 acres left open for producing 4 wells
interim reclaim 60' x 130' = 0.18 acre
260'
oil & water tank battery inside firewall
tractor-trailer turn around
430'
600'
SEP, HTR, MR
FEDERAL 20-20S-29E AH #203H
FEDERAL 20-20S-29E AH #133H
FEDERAL 20-20S-29E AH #123H
FEDERAL 20-20S-29E AH #113H
30'
250'
120'
3244.8'
tractor-trailer turn around
access to slot 4 pads
3245.7'
3245.5'
800'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 20-20S-29E AH #113H
#113H LATITUDE N 32.5561711
#113H LONGITUDE W 104.1048561
LEGEND
SECTION LINE
-N-
SCALE: 1" = 100'
0' 50' 100'
PRODUCTION FACILITY & INTERIM RECLAMATION DIAGRAM
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WWW.TOPOGRAPHIC.COM
ORIGINAL DOCUMENT SIZE: 8.5" X 11"
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_113H\FINAL_PRODUCTS\LO_STEBBINS_FEDERAL_20-20S-29E_AH_113H.DWG 5/16/2016 8:01:08 AM jstovall

Exhibit 18.

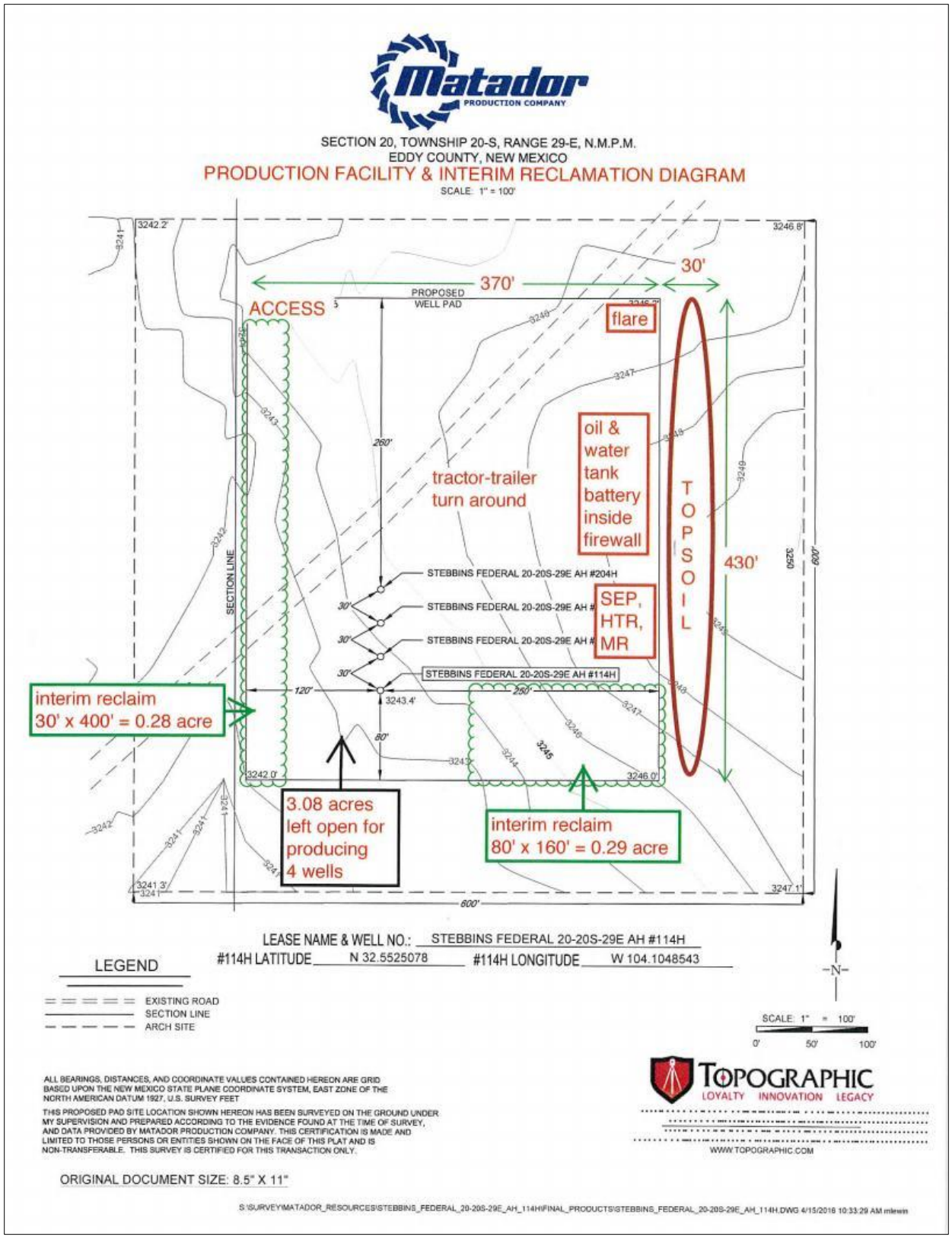

Matador
PRODUCTION COMPANY
SECTION 20, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
PRODUCTION FACILITY & INTERIM RECLAMATION DIAGRAM
SCALE: 1" = 100'
370'
30'
PROPOSED WELL PAD
ACCESS
flare
oil & water tank battery inside firewall
tractor-trailer turn around
TOPSOIL
430'
260'
SECTION LINE
STEBBINS FEDERAL 20-20S-29E AH #204H
STEBBINS FEDERAL 20-20S-29E AH #
STEBBINS FEDERAL 20-20S-29E AH #
STEBBINS FEDERAL 20-20S-29E AH #114H
SEP, HTR, MR
interim reclaim 30' x 400' = 0.28 acre
3.08 acres left open for producing 4 wells
interim reclaim 80' x 160' = 0.29 acre
600'
LEASE NAME & WELL NO.: STEBBINS FEDERAL 20-20S-29E AH #114H
#114H LATITUDE N 32.5525078 #114H LONGITUDE W 104.1048543
LEGEND
EXISTING ROAD
SECTION LINE
ARCH SITE
SCALE: 1" = 100'
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET
THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
WWW.TOPOGRAPHIC.COM
ORIGINAL DOCUMENT SIZE: 8.5" X 11"
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FEDERAL_20-20S-29E_AH_114H\FINAL_PRODUCTS\STEBBINS_FEDERAL_20-20S-29E_AH_114H.DWG 4/15/2018 10:33:29 AM mlewin

Exhibit 19.

Topsoil Stockpiles

A 430-foot long by 30-foot wide topsoil stockpile (0.254 acres) would be constructed on the west side of the Stebbins 19 Federal Slot 3 well pad (Exhibits 2 and 16). A 320-foot long by 30-foot wide (0.220 acres) also would be constructed on the north side of the Stebbins 19 Federal Slot 4 well pad (Exhibits 4 and 17).

A 320-foot long by 30-foot wide topsoil stockpile (0.220 acres) would be constructed on the north side of the Stebbins 20 Federal Slot 3 well pad (Exhibits 6 and 18) and a 430-foot long by 30-foot wide (0.254 acres) would be constructed on the east side of the Stebbins 19 Federal Slot 4 well pad (Exhibits 10 and 19).

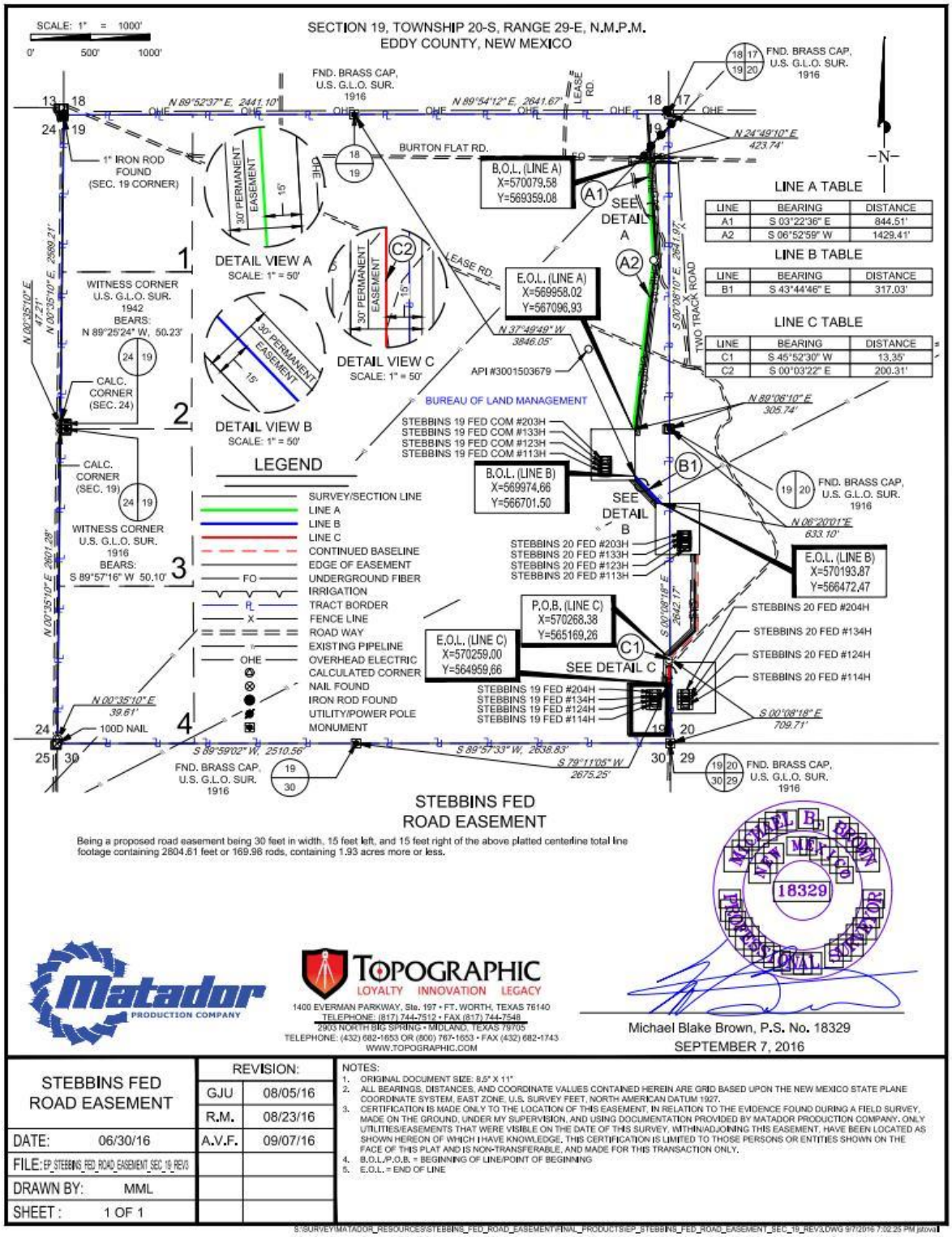
Well Pad Access Road

A 2,273.92-foot long access road (Exhibit 20) would be constructed to extend south from Burton Flat Road (Eddy County Road 238) in a 30-foot wide easement to the northeastern corner of the Stebbins 19 Federal Com Slot 3 well pad. A BLM-approved archaeologist will fence a cultural resource site along the road and will monitor the road's initial construction.

The access road would then extend 317.03-feet southeast (segment B1, Exhibit 20) from the southeastern corner of the Stebbins 19 Federal Com Slot 3 well pad to the northwestern corner of the Stebbins 20 Federal Slot 3 well pad. The proposed access road would extend an additional 213.66-feet south, southwest, and south (segments C1 and C2, Exhibit 20) along the western edge of the Stebbins 20 Federal Slot 4 well pad to its terminus at the northeast corner of the Stebbins 19 Federal Slot 3 well pad. The total length of the proposed access road to the four well pads is 2,804.61 feet for a total area of 1.93 acres.

The proposed access road would be crowned and ditched, have a 14-foot wide driving surface, and would be surfaced with caliche. The maximum disturbed width of the proposed road would be 30 feet, with a maximum grade of one percent, and a maximum cut and fill of two feet. An 18-inch x 50-foot long corrugated steel culvert would be installed in the borrow ditch on the south side of Burton Flat Road. No upgrades, cattle guards, or vehicle turnouts would be needed.

Existing non-county access roads would be maintained as needed to BLM Gold Book standards (USDI BLM 2007). This includes pulling ditches, preserving the road bed crowns, and cleaning borrow-ditches and culverts. These maintenance actions would be conducted at least once a year and more often, as needed. Caliche would be hauled from the existing Constructors Inc. pit located on private land in the NWNE, Section 34, Township 21 South, Range 27 East and used to surface the proposed access road and well pads (Exhibit 1). Upgrading existing roads also would consist of filling potholes with caliche.


SCALE: 1" = 1000'
0' 500' 1000'
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
N 89°52'37" E, 2641.10'
N 89°54'12" E, 2641.67'
LEASE RD.
BURTON FLAT RD.
N 24°49'10" E 423.74'
1" IRON ROD FOUND (SEC. 19 CORNER)
B.O.L. (LINE A) X=570079.58 Y=569359.08
SEE DETAIL A
LINE A TABLE
LINE | BEARING | DISTANCE
A1 | S 03°22'36" E | 844.51'
A2 | S 06°52'59" W | 1429.41'
LINE B TABLE
LINE | BEARING | DISTANCE
B1 | S 43°44'46" E | 317.03'
LINE C TABLE
LINE | BEARING | DISTANCE
C1 | S 45°52'30" W | 13.35'
C2 | S 00°03'22" E | 200.31'
30' PERMANENT EASEMENT
15'
DETAIL VIEW A
SCALE: 1" = 50'
DETAIL VIEW B
SCALE: 1" = 50'
DETAIL VIEW C
SCALE: 1" = 50'
E.O.L. (LINE A) X=569958.02 Y=567096.93
N 37°49'49" W 3846.05'
API #3001503679
TWO TRACK ROAD
BUREAU OF LAND MANAGEMENT
WITNESS CORNER U.S. G.L.O. SUR. 1942 BEARS: N 89°25'24" W, 50.23'
CALC. CORNER (SEC. 24)
CALC. CORNER (SEC. 19)
WITNESS CORNER U.S. G.L.O. SUR. 1916 BEARS: S 89°57'16" W 50.10'
N 00°35'10" E 2689.21'
N 00°35'10" E 2661.28'
N 00°35'10" E 39.61'
100D NAIL
S 89°59'02" W, 2510.56'
S 89°57'33" W, 2638.83'
S 79°11'05" W 2675.25'
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
STEBBINS 19 FED COM #203H
STEBBINS 19 FED COM #133H
STEBBINS 19 FED COM #123H
STEBBINS 19 FED COM #113H
B.O.L. (LINE B) X=569974.66 Y=566701.50
SEE DETAIL B
N 89°06'10" E 305.74'
N 06°20'01" E 633.10'
STEBBINS 20 FED #203H
STEBBINS 20 FED #133H
STEBBINS 20 FED #123H
STEBBINS 20 FED #113H
E.O.L. (LINE B) X=570193.87 Y=566472.47
P.O.B. (LINE C) X=570268.38 Y=565169.26
E.O.L. (LINE C) X=570259.00 Y=564959.66
SEE DETAIL C
STEBBINS 20 FED #204H
STEBBINS 20 FED #134H
STEBBINS 20 FED #124H
STEBBINS 20 FED #114H
STEBBINS 19 FED #204H
STEBBINS 19 FED #134H
STEBBINS 19 FED #124H
STEBBINS 19 FED #114H
S 00°08'18" E 709.71'
S 00°08'10" E 2642.17'
LEGEND
SURVEY/SECTION LINE
LINE A
LINE B
LINE C
CONTINUED BASELINE
EDGE OF EASEMENT
UNDERGROUND FIBER
IRRIGATION
TRACT BORDER
FENCE LINE
ROAD WAY
EXISTING PIPELINE
OVERHEAD ELECTRIC
CALCULATED CORNER
NAIL FOUND
IRON ROD FOUND
UTILITY/POWER POLE
MONUMENT
STEBBINS FED ROAD EASEMENT
Being a proposed road easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 2804.61 feet or 169.98 rods, containing 1.93 acres more or less.
18329
Michael Blake Brown, P.S. No. 18329
SEPTEMBER 7, 2016
Matador PRODUCTION COMPANY
TOPOGRAPHIC LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM
STEBBINS FED ROAD EASEMENT
DATE: 06/30/16
FILE: EP_STEBBINS_FED_ROAD_EASEMENT_SEC_19_REV3
DRAWN BY: MML
SHEET: 1 OF 1
REVISION:
GJU 08/05/16
R.M. 08/23/16
A.V.F. 09/07/16
NOTES:
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3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
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5. E.O.L. = END OF LINE
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FED_ROAD_EASEMENT\FINAL_PRODUCTS\EP_STEBBINS_FED_ROAD_EASEMENT_SEC_19_REV3.DWG 9/7/2016 7:02:25 PM jstowa

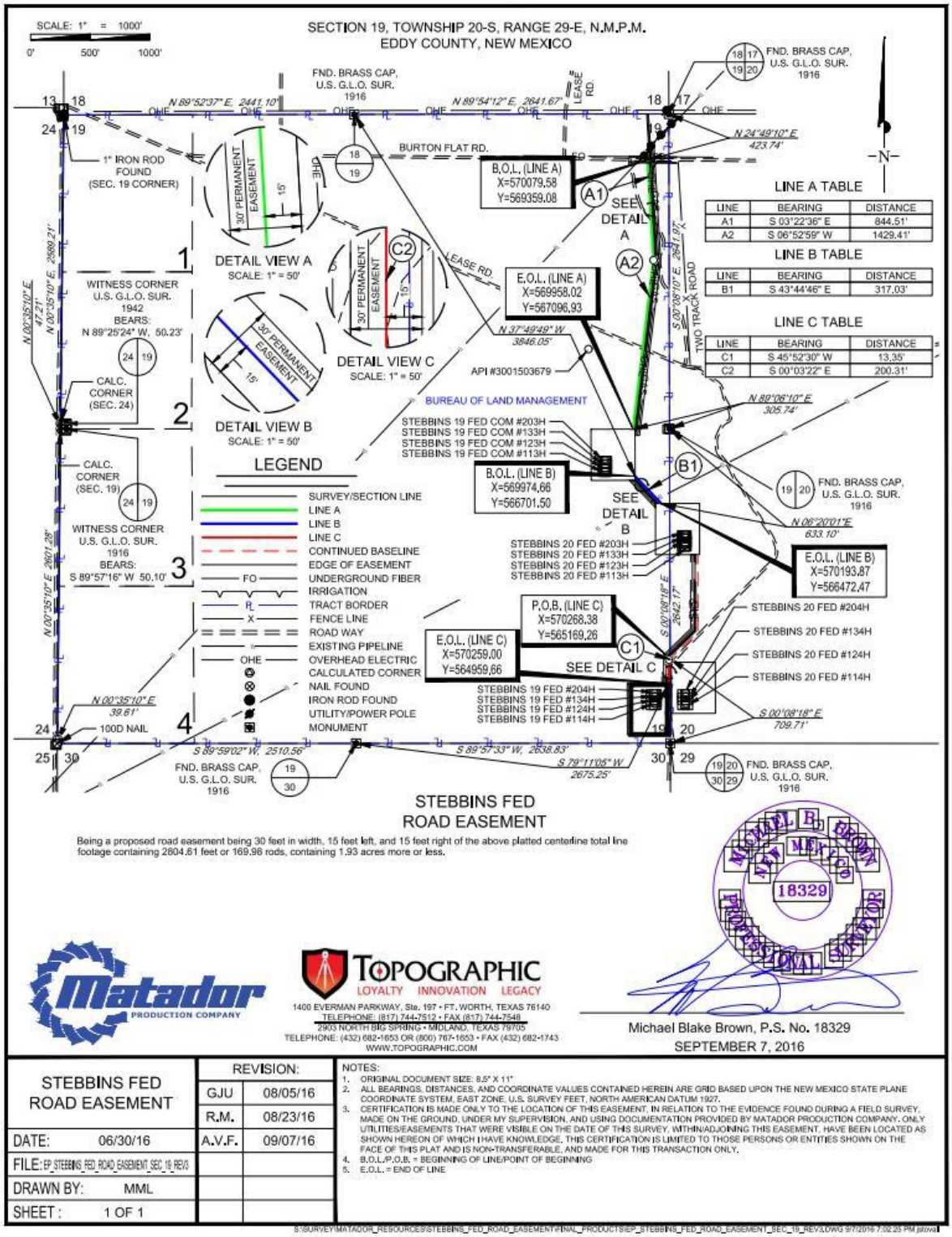
Exhibit 20.

Gas Sales Pipeline

A six-inch O.D. buried steel gas pipeline would extend underneath Burton Flat Road from a tie-in at the New Mexico Gas Company's 10-inch gas line (NMNM-1122801) 1513.92-feet south in a 30-foot wide easement and would parallel the proposed access road and overhead electric powerline corridor to the northeast edge of the Stebbins 19 Federal Com Slot 3 well pad (Exhibit 21). The pipeline would then continue 317.03-feet southeast from the southeast corner of the Stebbins 19 Federal Com Slot 3 well pad (segment B1, Exhibit 21), and then 213.66-feet south, southwest, and south (segments C1 and C2, Exhibit 21) from the southeast corner of the Stebbins 20 Federal Slot 3 well pad, along the northwestern corner of the Stebbins 20 Federal Slot 4 well pad to its terminus at the northeastern corner of the Stebbins 19 Federal Slot 4 well pad. The total length of the gas sales pipeline easement is 2,804.61 feet for a total area of 1.93 acres.

Construction of the pipeline will consist of driving a back hoe and equipment on existing roads to the 30-foot wide pipeline construction corridor, excavating the trench for the pipeline to a depth of no less than 36 inches (three feet), installing the pipeline, and backfilling the trench once the installation is completed. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. When the excavated soil is backfilled into the trench, it will be compacted to prevent subsidence. No berms over the pipeline will be evident. No temporary roadways will be required and no blasting will be performed as part of this project.

Use of Best Management Practices (BMPs) will include performing construction activities only when soils are dry enough to adequately support construction equipment and vehicles. When the soil is too wet (ruts more than six inches deep), construction will be postponed until conditions improve.


SCALE: 1" = 1000'
0' 500' 1000'
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EDDY COUNTY, NEW MEXICO
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
N 89°52'37" E, 2641.10'
N 89°54'12" E, 2641.67'
LEASE RD.
BURTON FLAT RD.
1" IRON ROD FOUND (SEC. 19 CORNER)
30' PERMANENT EASEMENT
15'
DETAIL VIEW A
SCALE: 1" = 50'
DETAIL VIEW B
SCALE: 1" = 50'
DETAIL VIEW C
SCALE: 1" = 50'
WITNESS CORNER U.S. G.L.O. SUR. 1942 BEARS: N 89°25'24" W, 50.23'
CALC. CORNER (SEC. 24)
CALC. CORNER (SEC. 19)
WITNESS CORNER U.S. G.L.O. SUR. 1916 BEARS: S 89°57'16" W 50.10'
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E.O.L. (LINE A) X=569958.02 Y=567096.93
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TWO TRACK ROAD
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E.O.L. (LINE C) X=570259.00 Y=564959.66
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LINE B TABLE
LINE | BEARING | DISTANCE
B1 | S 43°44'46" E | 317.03'
LINE C TABLE
LINE | BEARING | DISTANCE
C1 | S 45°52'30" W | 13.35'
C2 | S 00°03'22" E | 200.31'
LEGEND
SURVEY/SECTION LINE
LINE A
LINE B
LINE C
CONTINUED BASELINE
EDGE OF EASEMENT
UNDERGROUND FIBER
IRRIGATION
TRACT BORDER
FENCE LINE
ROAD WAY
EXISTING PIPELINE
OVERHEAD ELECTRIC
CALCULATED CORNER
NAIL FOUND
IRON ROD FOUND
UTILITY/POWER POLE
MONUMENT
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
S 89°59'02" W, 2510.56'
S 89°57'33" W, 2638.83'
S 79°11'05" W 2675.25'
STEBBINS FED ROAD EASEMENT
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18329
Michael Blake Brown, P.S. No. 18329
SEPTEMBER 7, 2016
STEBBINS FED ROAD EASEMENT
DATE: 06/30/16
FILE: EP_STEBBINS_FED_ROAD_EASEMENT_SEC_19_REV3
DRAWN BY: MML
SHEET: 1 OF 1
REVISION:
GJU 08/05/16
R.M. 08/23/16
A.V.F. 09/07/16
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S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FED_ROAD_EASEMENT\FINAL_PRODUCTS\EP_STEBBINS_FED_ROAD_EASEMENT_SEC_19_REV3.DWG 9/7/2016 7:02:25 PM jstowe

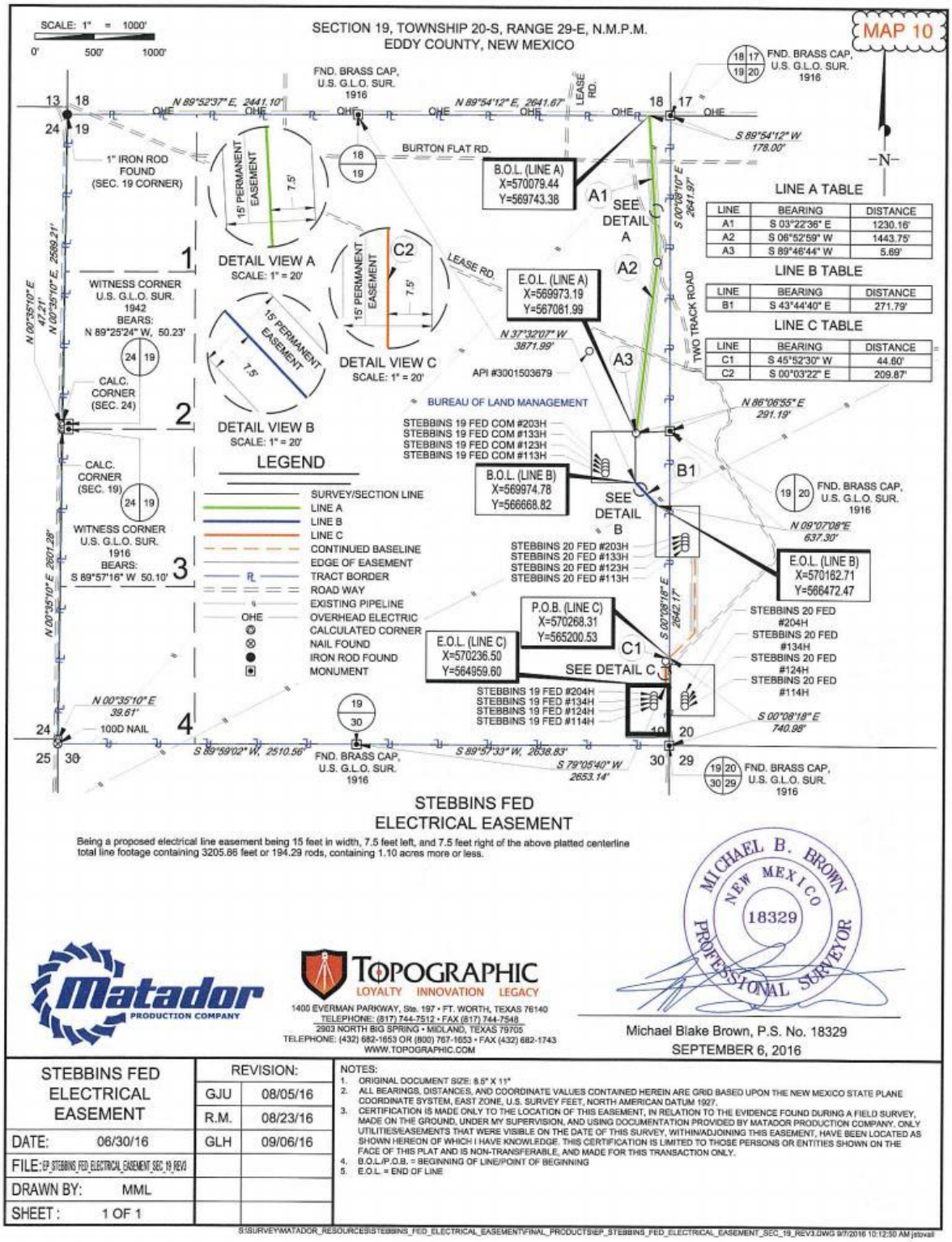
Exhibit 21.

Overhead Electric Powerline

The proposed overhead raptor-safe 3-phase electric power line would power the four proposed well pads. The power line would begin at Southwest Public Service's existing power line (NMNM-120415) located on the north side of Burton Flat Road, then extend 2.679.60-feet south along the proposed access road corridor to the northeast corner of the Stebbins 19 Federal Com Slot 3 well pad (segments A1, A2, and A3, Exhibit 22). The power line would then extend 271.79-feet southeast from the southeast corner of the Stebbins 19 Federal Com Slot 3 well pad to the northwest corner of the Stebbins 20 Federal Slot 3 well (segment B1, Exhibit 22). The proposed electric power line then extends 254.47-feet south, southwest, and south past the northwest corner of the Stebbins 20 Federal Slot 4 well pad to its terminus at the northeast corner of the Stebbins 19 Federal Slot 4 well pad (segments C1 and C2, Exhibit 22). The total length of the proposed power line in a 15-foot wide right-of-way easement is 3,205.86 feet (1.10 acres).

Single-pole wood structures would be used to support the power line. Construction would consist of driving a truck-mounted auger on existing roads and two-tracks to the location of each structure, then boring a hole to an approximate depth of six feet below grade. A truck-mounted crane would raise the pole and place it into the hole. Once the poles are properly seated, the holes would be backfilled and tamped. Conductors and electrical line would be strung on the poles with the assistance of a reel truck and a winch truck. No temporary roadways or use areas would be required and no blading or blasting would be performed as part of this project.

Use of Best Management Practices (BMPs) would include performing construction activities only when soils are dry enough to adequately support construction equipment and vehicles. When the soil is too wet (ruts more than six inches deep), construction would be postponed until conditions improve. All access along the power line route would be from an existing caliche road adjacent to the proposed power line. Soil and vegetation would be minimally disturbed except at the locations of the poles. The estimated duration of construction from start to completion is approximately two to three weeks.


SCALE: 1" = 1000'
0' 500' 1000'
SECTION 19, TOWNSHIP 20-S, RANGE 29-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO
MAP 10
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
1" IRON ROD FOUND (SEC. 19 CORNER)
BURTON FLAT RD.
LEASE RD.
TWO TRACK ROAD
B.O.L. (LINE A) X=570079.44 Y=569743.38
E.O.L. (LINE A) X=569973.19 Y=567081.99
B.O.L. (LINE B) X=569974.78 Y=566668.82
E.O.L. (LINE B) X=570162.71 Y=566472.47
P.O.B. (LINE C) X=570268.31 Y=565200.53
E.O.L. (LINE C) X=570236.50 Y=564959.60
API #3001503679
BUREAU OF LAND MANAGEMENT
STEBBINS 19 FED COM #203H
STEBBINS 19 FED COM #133H
STEBBINS 19 FED COM #123H
STEBBINS 19 FED COM #113H
STEBBINS 20 FED #203H
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STEBBINS 20 FED #124H
STEBBINS 20 FED #114H
STEBBINS 19 FED #204H
STEBBINS 19 FED #134H
STEBBINS 19 FED #124H
STEBBINS 19 FED #114H
SEE DETAIL A
SEE DETAIL B
SEE DETAIL C
DETAIL VIEW A SCALE: 1" = 20'
DETAIL VIEW B SCALE: 1" = 20'
DETAIL VIEW C SCALE: 1" = 20'
15' PERMANENT EASEMENT
7.5'
WITNESS CORNER U.S. G.L.O. SUR. 1942 BEARS: N 89°25'24" W, 50.23'
CALC. CORNER (SEC. 24)
CALC. CORNER (SEC. 19)
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100D NAIL
LINE A TABLE
LINE | BEARING | DISTANCE
A1 | S 03°22'36" E | 1230.16'
A2 | S 06°52'59" W | 1443.75'
A3 | S 89°46'44" W | 5.69'
LINE B TABLE
LINE | BEARING | DISTANCE
B1 | S 43°44'40" E | 271.79'
LINE C TABLE
LINE | BEARING | DISTANCE
C1 | S 45°52'30" W | 44.60'
C2 | S 00°03'22" E | 209.87'
LEGEND
SURVEY/SECTION LINE
LINE A
LINE B
LINE C
CONTINUED BASELINE
EDGE OF EASEMENT
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ROAD WAY
EXISTING PIPELINE
OVERHEAD ELECTRIC
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S 00°08'10" E 2641.97'
N 37°32'07" W 3871.99'
N 86°06'55" E 291.19'
N 09°07'08" E 637.30'
S 00°08'18" E 2642.17'
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S 89°57'33" W, 2638.83'
S 79°05'40" W 2653.14'
FND. BRASS CAP, U.S. G.L.O. SUR. 1916
STEBBINS FED ELECTRICAL EASEMENT
Being a proposed electrical line easement being 15 feet in width, 7.5 feet left, and 7.5 feet right of the above platted centerline total line footage containing 3205.86 feet or 194.29 rods, containing 1.10 acres more or less.
MICHAEL B. BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR
Michael Blake Brown, P.S. No. 18329
SEPTEMBER 6, 2016
Matador PRODUCTION COMPANY
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STEBBINS FED ELECTRICAL EASEMENT
DATE: 06/30/16
FILE: EP STEBBINS FED ELECTRICAL EASEMENT SEC 19 REV3
DRAWN BY: MML
SHEET: 1 OF 1
REVISION:
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GLH 09/06/16
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING
5. E.O.L. = END OF LINE
S:\SURVEY\MATADOR_RESOURCES\STEBBINS_FED_ELECTRICAL_EASEMENT\FINAL_PRODUCTS\EP_STEBBINS_FED_ELECTRICAL_EASEMENT_SEC_19_REV3.DWG 9/7/2016 10:12:50 AM jstovall

Exhibit 22.

Table 1. Proposed Action Total Surface Disturbance

Feature on BLM Land	Length (ft.)	Width (ft.)	Total (acres)
Slot 3 Well Pad (Stebbins 19 Federal 113H, 123H, 133H, and 203H wells)	430	370	3.652
Stebbins 19 Federal Slot 3 Topsoil Stockpile	430	30	0.254
Slot 4 Well Pad (Stebbins 19 Federal 114H, 124H, 134H, and 204H wells)	430	370	3.652
Stebbins 19 Federal Slot 4 Topsoil Stockpile	320	30	0.220
Slot 3 Well Pad (Stebbins 20 Federal 113H, 123H, 133H, and 203H)	380, 430	320, 370	3.59
Stebbins 20 Federal Slot 3 Topsoil Stockpile	320	30	0.220
Slot 4 Well Pad (Stebbins 20 Federal 112H, 122H, 132H, 202H)	430	370	3.652
Stebbins 20 Federal Slot 4 Topsoil Stockpile	430	30	0.254
Access Road	2804.61	30	1.93
Gas Sales Pipeline	2804.61	30	1.93
Overhead Electric Powerline	3205.86	15	1.10
Total Land Use			**20.454**

General

All above ground structures lasting more than six months would be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

The Applicant would prevent and abate fugitive dust as needed. BLM written approval would be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

No hazardous substances as defined by the CERCLA (1980) would be used in the construction or operation of the Proposed Action. No RCRA (1976) hazardous wastes would be generated in the construction or operation of the Proposed Action. No toxic substances would be used, stored, generated, or released during construction or operation of the project. If hazardous wastes were inadvertently generated, the proper authorities, including the BLM CFO, would be consulted regarding the disposal of such wastes. Any spilled contaminants would be immediately cleaned up by the Applicant and reported to the appropriate regulatory agencies, as required. No burial or burning of waste materials would occur in the construction or operation of the Proposed Action.

Garbage and trash produced during operations would be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the construction site would be collected for disposal.

Human waste and grey water would be properly contained and disposed of properly at a state approved disposal facility.

Drilling fluids and produced oil and water from the wells during drilling and completion operations would be stored safely and disposed of properly in an NMOCD approved disposal facility.

The wells would be drilled utilizing a closed loop system. Drill cutting would be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

After drilling and completion operations, trash, chemicals, salts, frac sand, and other waste material would be removed and disposed of properly at a state approved disposal facility.

Construction would only be performed when the soil is dry enough to adequately support construction equipment and vehicles. When the soil is too wet (ruts more than six inches deep), construction would be postponed until conditions improve. Ruts deeper than four inches would be raked flat. Maintenance and repair would be conducted as required using existing roads or approved project surfaces.

All work would be performed during daylight hours.

Surface disturbance and vehicular traffic would be limited to the approved access road, well pads, topsoil piles, and gas sales pipeline corridor.

All open cavities would be fenced and covered to keep out migratory and cavity-nesting birds and other wildlife.

If the Applicant discovers any Threatened and Endangered (T&E) wildlife species, work in the vicinity of the discovery would cease and the discovery would be promptly reported to the BLM wildlife biologist and to the US Fish and Wildlife Service (USFWS). The BLM and the USFWS would then specify what action(s) would be taken.

If fill dirt or gravel is required, the source shall be noxious-weed-free. An on-site noxious weed form would be submitted to the CFO weed coordinator and an approved Pesticide Use Proposal (PUP) written by a certified applicator would be implemented for all planned herbicide applications.

Best Management Practices (BMPs) and appropriate Occupational Safety and Health Administration (OSHA) standards and guidelines would be implemented to limit impacts to resources, workers, and the public.

The Applicant would comply with the USEPA's CAA and all applicable state and local regulations (1970). No long-term emissions requiring a New Mexico Environment Department (NMED) Air Quality Bureau permit would occur.

All BLM CFO cultural resources stipulations would be followed. All employees, contractors, and sub-contractors of the project would be informed by the Applicant that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment, and that it is illegal to

collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and/or administrative penalties under the provisions of the ARPA (1979).

In the event of a discovery during construction, the Applicant would promptly suspend all construction activities in the immediate vicinity of the discovery and notify the archaeological monitor, if present, or the BLM. The BLM would then evaluate or cause the site to be evaluated. Were a discovery to be evaluated as significant (e.g., NHPA 1966, NAGPRA 1990, or ARPA 1979), it would be protected in place until mitigating measures could be developed and implemented according to guidelines set by the BLM.

Any paleontological and other heritage resources discovered by the Applicant, or any agent working on their behalf, during construction of the Proposed Action, would be immediately reported to the BLM paleontologist. All operations in the area of the discovery would be immediately suspended until approval to proceed is issued by the BLM. An evaluation of the discovery would be made by the BLM paleontologist to determine appropriate action to prevent the loss of significant paleontological resources.

Reclamation

Interim reclamation of the four well pads would occur within six months of completing the last of the sixteen wells.

Final reclamation actions would be completed within six months of when the final well has been completed or plugged.

When reclamation begins, areas to be reclaimed would be cleared of materials, trash and equipment not required for production. Surfacing material would be removed and returned to the original mineral pit or recycled.

Reclaimed areas would be re-contoured to the original contour if feasible, or if not feasible, to an intermediate contour that blends with the surrounding topography. Where applicable, fill material from the well pad and access road would be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding would not be steeper than 3:1, unless the adjacent native topography is steeper.

After all disturbed areas have been satisfactorily contoured and prepared for seeding; the location would be revegetated with a standardized seed mixture approved by the BLM. Seeding may need to be repeated until revegetation is successful.

There shall be no primary or secondary noxious weeds in the seed mixture. Seed would be tested and the viability testing of seed would be done in accordance with state law(s) and within nine (9) months prior to purchase. Commercial seed would be either certified or registered seed. The seed container would be tagged in accordance with state law(s) and be available for inspection by the authorized officer.

Final seedbed preparation would consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites. A depth regulator would ensure proper depth of planting where drilling is possible. The seed mixture would be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The Applicant shall take appropriate measures to ensure this does not occur.

Where drill seeding is not possible, seed would be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre seeding rate are

to be doubled. The seeding would be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth would not be made before completion of at least one full growing season after seeding.

2.2. Alternatives Considered but Eliminated from Detailed Analysis

An on-site inspection of the Proposed Action area was conducted on June 16, 2016. Personnel at the on-site inspection of the proposed Stebbins 19 Federal Com Slot 3 well pad identified a karst feature located near the northeast corner of the pad. The northeast corner of the pad was rounded off by approximately 30 feet to avoid the feature, production facilities were moved south on the pad, and the proposed access road was re-routed to enter the well pad from the southwestern edge of the pad. Construction will also be minimized in the northeast corner of the pad to avoid the feature, and the topsoil stockpile will be stored along the northern and western sides of the well pad. No other specific issues or considerations for the proposed Stebbins 19 Federal Com Slot 3 well pad were discussed.

Personnel at the on-site inspection of the proposed Stebbins 19 Federal Slot 4 well pad also identified a large and significant karst feature approximately 150 feet north of the northwestern corner of the pad. The proposed well pad was re-oriented so that the deep end of the pad is positioned along the south side of the pad to avoid the feature. No other specific issues or considerations for the proposed Stebbins 19 Federal Slot 4 well pad were discussed.

Topsoil would be stored along the west edge of the Stebbins 19 Federal Com Slot 3 well pad, on the north side of the Stebbins 19 Federal Slot 4 well pad and the Stebbins 20 Federal Slot 3 well pad, and on the east side of the Stebbins 20 Federal Slot 4 well pad. No other specific issues or considerations for the proposed Stebbins 20 Federal Slot 3 and Slot 4 well pads were discussed.

A second on-site inspection of the Proposed Action area was conducted on August 19, 2016 and the present locations of the proposed Stebbins 19 Federal Com Slot 3 and Stebbins 19 Federal Slot 4 well pads were confirmed. No additional issues or considerations for the proposed Stebbins 20 Federal Slot 3 or Slot 4 well pads were discussed.

Field investigations of all areas of proposed surface disturbance for the Proposed Action were conducted to ensure that potential impacts to natural and cultural resources would be minimized through the implementation of mitigation measures. These measures are described in Chapter 3 of this EA for all potentially impacted resources. Therefore, no additional alternatives other than those listed above have been considered for this project.

2.3. No Action

The BLM NEPA Handbook H-1790-1 states that for EAs on externally initiated proposed actions, the No Action Alternative generally means that the proposed activity would not take place (USDI BLM Jan. 2008). This option is provided for in 43 CFR 3162.3-1 (h) (2). Selection of this alternative would deny the approval of the Application for Permit to Drill, and the current land and resource uses would continue to occur in the proposed project area. No mitigation measures would be required.

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Projects requiring approval from the BLM such as Applications for Permit to Drill can be denied when the BLM determines that adverse effects to resources (direct or indirect) cannot be mitigated to reach a Finding of No Significant Impact (FONSI). Under the No Action Alternative, the proposed project would not be drilled, built, or constructed and there would be no new impacts to natural or cultural resources from oil and gas production. The No Action Alternative would result in the continuation of the current land and resource uses in the project area and is used as the baseline for comparison of environmental effects of the analyzed alternatives.

During the analysis process, the interdisciplinary team considered several resources and supplemental authorities. The interdisciplinary team determined that the resources discussed below would be affected by the Proposed Action.

3.1 Air Resources

The two components of air resources are air quality and climate. Much of the information referenced in this section is incorporated from the USDI BLM's *Air Resources Technical Report for Oil and Gas Development in New Mexico, Kansas, Oklahoma, and Texas* (herein referred to as Air Resources Technical Report). This document summarizes the technical information related to air resources and climate change associated with oil and gas development and the methodology and assumptions used for analysis.

Air Quality

The Air Resources Technical Report lists the National Ambient Air Quality Standards, describes the types of data used for description of the existing conditions, and describes how the pollutants are related to oil and gas development activities. Monitored values of criteria pollutants in the CFO are described below (USDI BLM 2016)

Criteria Pollutants

USEPA's Green Book web page (USEPA 2016) indicates that the Permian Basin is in attainment for all National Ambient Air Quality Standards (NAAQS) as defined by the Clean Air Act (CAA). The CFO recently contracted with Applied Enviro Solutions (AES) to provide an emissions inventory for the field office area, including Chaves, Eddy, and Lea Counties (AES 2011). This information is more recent than that available from USEPA's most recent emissions inventory and is specific to the field office area.

Table 2 shows monitored design values for ozone for the recent past in the CFO. Design values are the concentrations of air pollution at a specific monitoring site that can be compared to the NAAQS as defined by the CAA. Monitored design values for the other criteria pollutants are shown in Table 2. There is no monitoring conducted for lead (Pb) and carbon monoxide (CO) in southeastern New Mexico; however, concentrations of these pollutants are expected to be low in rural areas and are therefore not monitored. The NMED discontinued monitoring for SO_2 in Eddy County due to very low monitored concentrations. Monitoring data for PM_{10} and $PM_{2.5}$ in southeastern New Mexico are not available due to incomplete data collection.

Table 2. Ozone Monitored Design Values for the Carlsbad Field Office Area (ppm)

Site	2006-2008	2007-2009	2008-2010	2009-2011	NAAQS
Hobbs (Lea County)	0.068	0.063	0.059	0.061	0.075
Carlsbad-Artesia (Eddy County)	0.069	0.066	0.067	0.069	0.075
Sources: AES 2011 and USEPA 2016					

Hazardous Air Pollutants

The Air Resources Technical Report discusses the relevance of hazardous air pollutants (HAPs) to oil and gas development and the particular HAPs that are regulated in relation to these activities (USDI BLM 2016). The USEPA similarly conducts a periodic National Air Toxics Assessment (NATA) that quantifies HAP impacts by county in the U.S. (Table 3). The purpose of this assessment is to identify areas where HAP emissions may result in higher health risks and where further emissions reduction strategies are needed. A review of the results of the 2005 NATA for Eddy and Lea Counties shows that cancer, neurological, and respiratory risks in these counties are generally lower than statewide and national levels (USEPA 2013).

Table 3. Design Concentrations of Criteria Pollutants in Eddy and Lea Counties

Site	Design Value	Averaging Period	NAAQS	NMAAQS
O_3	0.069 ppm (Lea County)	8-hour	0.075 ppm[1]	
	0.062 ppm (Eddy County)			
NO_2	6 ppb (Lea County)	Annual	53 ppb	50 ppb
	3 ppb (Eddy County			
NO_2	42 ppb	1-hour	100 ppb[2]	
[1] Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years [2] 98th percentile, averaged over 3 years Source: USEPA 2012				

Climate

The planning area is located in a semi-arid climate regime typified by dry windy conditions, limited rainfall, hot summers, and mild winters. Summertime maximum temperatures are generally in the 90s (all temperatures are in Fahrenheit degrees) with occasional temperatures over 110. Winter minimum temperatures are generally in between 20s and 30s, with extremes remaining above zero degrees. Precipitation is mainly in the form of summer thunderstorms associated with the Southwest's monsoonal season, though occasional Pacific storms drop south into New Mexico during the winter. Table 4 shows climate normals for Carlsbad from 1981-2010.

Table 4. Climate Normals for Carlsbad, 1981-2010

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ave. Temp. (°F)	42.6	47.2	54.0	62.4	71.5	79.3	81.2	79.9	73.2	62.9	51.5	42.8
Ave. Max. Temp. (°F)	57.5	62.7	70.2	78.5	86.9	94.4	94.6	93.1	87.0	78.1	67.1	57.5
Average Min. Temp. (°F)	27.6	31.7	37.9	46.2	56.0	64.3	67.7	66.6	59.4	47.7	35.8	28.0
Ave.	0.47	0.54	0.51	0.64	1.17	1.53	2.01	1.83	2.11	1.16	0.81	0.63

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Precipitation (in.)												
Source: NOAA 2011												

The Air Resources Technical Report summarizes information about greenhouse gas (GHG) emissions from oil and gas development and their effects on national and global climate conditions. While it is difficult to determine the spatial and temporal variability and change of climatic conditions, it is known that increasing concentrations of GHGs are likely to accelerate the rate of climate change.

3.1.1 Impacts from the Proposed Action

Direct and Indirect Impacts

Methodology and assumptions for calculating air pollutant and GHG emissions are described in the Air Resources Technical Report (USDI BLM 2016). This document incorporates the sections discussing the modification of calculators developed by the BLM to address emissions for one well. If more than one well is being proposed, the emissions and percentage of area emissions listed below need to be multiplied by the number of wells. The calculators give an approximation of criteria pollutant, HAP, and, GHG emissions to be compared to regional and national levels (USDI BLM 2016). Also incorporated into this document are the sections describing the assumptions that the CFO used in developing the inputs for the calculator (USDI BLM 2016).

Air Quality

Criteria Pollutants

Table 5 shows estimated emissions for criteria pollutants for a variety of activities including construction, maintenance and operations. Because the calculators are not able to estimate ozone emissions, volatile organic compounds (VOCs), a precursor to ozone, are estimated instead. Based on past development, emissions have been calculated for a maximum, minimum, and average development scenario. With the exception of operations, these emissions would be temporary and short lived.

Table 5. Criteria Pollutant Emissions Estimated for the Proposed Action Activities (tons)

		Construction	Well (Re)Completion	Well Workover	Annual Operations	Annual Road Maintenance	Reclamation
PM_{10}	Max	2.64	0.27	0.03	1.45	0.00	0.02
	Min	0.10	0.00	0.00	0.02	0.00	0.01
	Avg	0.49	0.04	0.01	0.03	0.00	0.01
$PM_{2.5}$	Max	0.74	0.00	0.01	0.21	0.00	0.00
	Min	0.14	0.00	0.00	0.02	0.00	0.00
	Avg	0.30	0.00	0.01	0.02	0.00	0.00
NO_X[a]	Max	9.46	11.67	0.22	1.14	0.00	0.00
	Min	1.96	0.00	0.04	0.46	0.00	0.00
	Avg	3.77	0.16	0.13	0.47	0.00	0.00
SO_2	Max	0.20	3.05	0.00	0.00	0.00	0.00
	Min	0.04	0.00	0.00	0.00	0.00	0.00
	Avg	0.08	0.04	0.00	0.00	0.00	0.00

		Construction	Well (Re)Completion	Well Workover	Annual Operations	Annual Road Maintenance	Reclamation
CO	Max	2.61	0.08	0.08	1.35	0.00	0.00
	Min	0.50	0.00	0.01	0.92	0.00	0.00
	Avg	1.05	0.04	0.05	0.92	0.00	0.00
VOC	Max	0.74	0.04	0.02	50.02	0.00	0.00
	Min	0.14	0.00	0.00	3.50	0.00	0.00
	Avg	0.30	0.01	0.01	4.13	0.00	0.00
[a] Nitrogen oxides							

Table 6 compares emissions from annual operations of a single well with total human-caused emissions for Chaves, Eddy, and Lea Counties in 2007.

Table 6. Emissions from Annual Operations Compared to Area Emissions for 2007 (tons)

		Annual Operations	Area Emissions[a]	Project Emissions as a % of Area Emissions
PM_{10}	Max	1.45	78,855	0.00184
	Min	0.02	78,855	0.00003
	Avg	0.03	78,855	0.00004
$PM_{2.5}$	Max	0.21	10,673	0.00197
	Min	0.02	10,673	0.00019
	Avg	0.02	10,673	0.00019
NO_X	Max	1.14	44,749	0.00255
	Min	0.46	44,749	0.00103
	Avg	0.47	44,749	0.00105
SO_2	Max	0.00	61,956	0.00000
	Min	0.00	61,956	0.00000
	Avg	0.00	61,956	0.00000
CO	Max	1.35	60,898	0.00222
	Min	0.92	60,898	0.00151
	Avg	0.92	60,898	0.00151
VOC	Max	50.02	15,898	0.31463
	Min	3.50	15,898	0.02202
	Avg	4.13	15,898	0.02598
[a] AES 2011				

Hazardous Air Pollutants (HAPs)

The formulas used in the calculators for calculating HAPs are very imprecise. For many processes it is assumed that emission of HAPs from a single well would be equivalent to 10% of VOC emissions. Therefore, the HAP emissions reported here should be considered a very gross estimate and likely an overestimate. The calculator estimates that a minimum of 0.22 tons/year, an average of 0.31 tons/year, and a maximum of 5.63 tons/year of HAPs would be emitted during the construction and first year of operation of a typical gas well in the Permian Basin. The emissions are a combination of HAP constituents existing in natural gas and released during the well completion and operation process. Most gas vented during the completion process is flared, which substantially reduces the quantity of HAPs released.

Climate

Greenhouse Gases (GHGs)

Information about GHGs and their effects on national and global climate is presented in the Air Resources Technical Report (USDI BLM 2016). Analyses of the impacts of the Proposed Action on GHG emissions are reported below. Only the GHG emissions associated with exploration and production of oil and gas would be evaluated because the environmental impacts of GHG emissions from oil and gas consumption, such as refining and emissions from consumer-vehicles, are not effects of the proposed action as defined by the Council on Environmental Quality because they do not occur at the same time and place as the action (USDI BLM 2016). Thus, GHG emissions from consumption of oil and gas do not constitute a direct effect that is analyzed under NEPA. Nor is consumption an indirect effect of oil and gas production because production is not a proximate cause of GHG emissions resulting from consumption. However, emissions from consumption and other activities are accounted for in the cumulative effects analysis.

The two primary GHGs associated with the oil and gas industry are carbon dioxide (CO_2) and methane (CH_4). Because CH_4 has a global warming potential 25 times greater than the warming potential of CO_2, the USEPA's Office of Transportation and Air Quality (OTAQ) uses the CO_2 equivalent (CO_{2e}) which takes the difference in warming potential into account for reporting the national inventory for GHG emissions (IPCC 2007). The USEPA is also moving towards using the CO_{2e} metric to characterize the benefits of its voluntary programs in order to be consistent with international practice and to allow for ease in comparison of emissions of different GHGs. Emissions would generally be expressed in metric tons of CO_{2e} in this document.

Estimated emissions from the calculator based on a maximum, minimum, and average development scenario for a single well are presented in Table 7, below.

Table 7. Estimated GHG Emissions

		Construction	Well (Re)Completion	Well Workover	Annual Operations	Annual Road Maintenance	Reclamation
CO_2	Max	1052.1	411	17.8	278.2	0.09	0.54
	Min	213.2	0.2	3.5	62.1	0.09	0.4
	Avg	421.3	10.1	10.6	65	0.09	0.42
CH_4	Max	0.01	0	0	37.6	0	0
	Min	0	0	0	0.4	0	0
	Avg	0	0	0	1	0	0
N_2O[a]	Max	0.01	0	0	0	0	0
	Min	0	0	0	0	0	0
	Avg	0	0	0	0	0	0
CO_{2e}	Max	1055.9	411.1	17.9	1068.7	0.09	0.55
	Min	214	0.2	3.5	70.6	0.09	0.4
	Avg	422.8	10.1	10.7	86	0.09	0.43
CO_{2e} metric tons	Max	958.1	373	16.2	969.8	0.08	0.5
	Min	194.2	0.2	3.2	64.1	0.08	0.36
	Avg	383.7	9.2	9.7	78	0.08	0.39

[a] Nitrous oxide

Cumulative Impacts

The BLM-CFO manages Federal hydrocarbon resources in Eddy, Lea, and part of Chavez County. There are approximately 23,500 wells in these counties. Approximately 16,060 of the wells in these counties are Federal wells. Data from 2000 to 2010 indicate an average of 418 wells are drilled on Federal mineral lands in these counties each year.

The following analysis of cumulative impacts of the proposed action on air quality is limited to the Permian Basin area of New Mexico. The cumulative impacts of GHG emissions and their relationship to climate change are evaluated at the national and global levels in the Air Resource Technical Report (USDI BLM 2016).

Activities that contribute to levels of air pollutant and GHG emissions in the Permian Basin include fossil fuel industries, vehicle travel, industrial construction, potash mining, and others. A complete inventory of criteria pollutant emissions can be found in a report titled "*Southeast New Mexico Inventory of Air Pollutant Emissions and Cumulative Air Impact Analysis 2007*" (AES 2011). The Air Resources Technical Report includes a description of the varied sources of national and regional emissions that are incorporated here to represent the past, present and reasonably foreseeable impacts to air resources (USDI BLM 2016). It includes a summary of emissions on the national and regional scale by industry source. Sources that are considered to have notable contributions to air quality impacts and GHG emissions include electrical generating units, fossil fuel production (nationally and regionally), and transportation.

The emissions calculator estimated that there could be very small direct increases in several criteria pollutants, HAPs, and GHGs as a result of the proposed action. Altogether, the emissions resulting from the Proposed Action could result in a 0.048% increase of criteria and HAP emissions in Lea, Eddy, and Chavez Counties and a 0.016% increase in GHG emissions in New Mexico (Eddy, Lea, and Chavez County GHG emissions are not currently available).

Air Quality

The very small increase in emissions that could result from approval of the Proposed Action would not result in Lea, Eddy, or Chavez County exceeding the NAAQS for any criteria pollutants. The applicable regulatory thresholds for HAPs are the oil and gas industry's National Emissions Standards for Hazardous Air Pollutants, which are currently under review by the USEPA. The emissions from the construction and operation of the proposed wells and associated infrastructure are not expected to impact the 8-hour average ozone concentrations, or any other criteria pollutants in the Permian Basin.

Climate Change

The Air Resources Technical Report discusses the relationship of past, present, and future predicted emissions to climate change and the limitations in predicting local and regional impacts related to emissions. It is currently not feasible to know with certainty the net impacts from particular emissions associated with activities on public lands. However, the small incremental increase in GHGs from this project would not have a measurable impact on climate.

Mitigation Measures and Residual Impacts

Air Quality

Impacts to air quality on lands managed by the BLM CFO in southeastern New Mexico are reduced by the following standard practices: utilizing existing disturbance, minimizing surface disturbance, reclaiming and quickly establishing vegetation on areas not necessary for

production, periodic watering of access roads during dry periods, and removal and reuse of caliche for building other projects.

Climate

The USEPA data show that adoption of BMPs such as the Natural Gas Star program encourages oil and natural gas companies to use proven, cost-effective technologies and practices that improve operational efficiency and reduce CH_4 emissions (USEPA June 2016). The on-going process of restoration of abandonments and disturbances associated with development of new wells and associated facilities would also reduce potential impacts to climate.

3.2 Range

3.2.1. Affected Environment

The Proposed Action is located on Federal surface land in the BLM's Fenton Draw (#77048) grazing allotment (USDI BLM 2011). Grazing on the allotment is year-round, running from the beginning of March through the end of February (USDI BLM 2011).

In general, an average rating of the rangeland within the Fenton Draw allotment is 8.60 acres per Animal Unit Month (AUM). In order to support one cow for one year, approximately 103 acres are needed. This equals about 6.21 cows per section (USDI BLM 2011).

A livestock water line is located near the Stebbins 20 Federal Slot 3 well pad and would be re-routed by the Applicant prior to construction of the pad. Additional range improvement projects such as water delivery systems (water wells, other pipelines, storage tanks, and water troughs), earthen reservoirs, and fences are also located within the allotment.

3.2.2. Impacts from the Proposed Action

Direct and Indirect Effects

The loss of 20.454 acres (Proposed Action) of vegetation would not greatly affect the carrying capacity or the number of Animal Unit Months (AUMs) authorized for livestock use in this area. Occasional livestock injuries or deaths due to accidents such as collisions with vehicles, falling into excavations, and ingestion of plastic or other materials may occur at the work site. If further development occurs, the resulting loss of vegetation could reduce the carrying capacity authorized for livestock use in this area.

A livestock water line is located near the Stebbins 20 Federal Slot 3 well pad and would be re-routed by the Applicant prior to construction of the pad.

Impacts to the surrounding allotments and ranching operations are reduced by standard practices such as utilizing existing surface disturbance, minimizing the total surface disturbance, minimizing vehicular use, and placing parking and staging areas on caliche-surfaced areas. Following proper procedures for crossing a fence line would mitigate impacts to allotment fences.

Avoiding existing range improvement projects on the BLM grazing allotment would prevent these features from being damaged by the Proposed Action.

Mitigation Measures

A livestock water line is located near the Stebbins 20 Federal Slot 3 well pad and would be re-routed by the Applicant prior to construction of the pad. Following proper procedures for crossing fence lines including bracing and tying off on both sides of the passageway with H-braces prior to cutting the fence, would mitigate the impacts to the fence. The operator would notify the grazing allotment holders prior to crossing any fences.

Any damage to fences, cattle guards, and pipelines or structures that provide water to livestock during construction, throughout the life of the project, and caused by its operation, must be immediately corrected by the Applicant. The Applicant must notify the grazing allottee or the private surface landowner and the BLM-CFO (575-234-5972) if any damage occurs to pipelines or structures that provide water to livestock.

3.3 Soil Resources

3.3.1. Affected Environment

The project area is located in an area known as Burton Flats in the Mescalero Plain physiographic region of southeastern New Mexico. The Mescalero Plain is a broad area of low relief with a surface geology characterized by an eolian sand sheet known as the Mescalero Sands (Hogan 2006). The elevation of the project area is 3,264 feet. The Burton Flats area contains caves, swallets, and other karst features and the project area is located in a flattened plain with numerous small depressions.

No perennial streams, alkali seeps, or wetlands, were observed within the immediate vicinity of the project area. Palmilla and Scanlon Draws are located approximately 2.5 miles southwest of the project area.

Soils throughout the project area are composed of the Reeves-Gypsum land complex, 0 to 3 percent slopes. The Reeves soil map unit is found on the backslopes, footslopes, shoulders, and toeslopes of hills, plains, and ridges. These soils are formed from residuum weathered from gypsum (USDA NRCS 2016). The soil is comprised of loam in the H1 horizon (0 to 8 inches), clay loam in the H2 horizon (8 to 32 inches), and gypsiferous material in the H3 horizon (32 to 60 inches). The soil also is well drained, very slightly saline to moderately saline, with a low water storage capacity. These soils are susceptible to wind erosion and careful management is needed to control erosion and maintain a cover of desirable forage plants. Reestablishing native plant cover could take 3-5 years due to unpredictable rainfall and high temperatures.

The Gypsum land map unit is typically found on side slope, crests, nose slopes, and head slopes of ridges and hills. These soils have a loamy surface layer, with gypsiferous materials starting at a depth of 1 to 10 inches. Permeability varies from very low to moderate. Water-holding capacity is very low to low, and runoff is rapid to very rapid. Soil fertility and the rooting zone are usually limited by the underlying gypsiferous material. These soils are subject to severe erosion once the vegetative cover is lost. Reestablishing native plant cover could take 3-5 years due to unpredictable rainfall and high temperatures.

These areas have good populations of squamulose lichens, a few crustose and gelatinous lichens, and cyanobacteria, which in aggregate form a soil crust and are present throughout the top two millimeters of the soil profile. These soil crusts are important in binding loose soil

particles together to stabilize the soil surface and reduce erosion. They also function in the nutrient cycle by fixing atmospheric nitrogen, contributing to soil organic matter, and maintaining soil moisture. In addition, they can act as living mulch which discourages the establishment of annuals and invasive weeds. Structurally, they form an uneven, rough carpet that reduces the impacts of rain drops and slows surface runoff. Lichen and moss rhizines, fungal hyphae, and cyanobacterial filaments bind the soil surface particles below and at the soil surface. Horizontally, they occur in nutrient-poor areas between clumps of plants. Because they lack a waxy epidermis, they tend to leak nutrients into the surrounding soil where grasses and forbs can then utilize them.

Disturbances in and around the project area include: an overhead electric powerline and Burton Flats Road to the north of the project area, a two-track road that runs parallel with a portion of the proposed access road corridor, an existing northwest-southeast trending lease road that intercepts the proposed access road at segment A2 (Exhibit 20), and an existing water line near the Stebbins 20 Federal Slot 3 well pad, two existing gas pipelines that extend northeast-southwest past the project area. The project area also has been grazed.

3.3.2. Impacts from the Proposed Action

Direct and Indirect Effects

The Proposed Action would disturb and/or clear approximately 20.454 acres. There is a potential for wind and water erosion due to the erosive nature of these soils once the vegetative cover is lost. There is always the potential for soil contamination caused by spills or leaks which can reduce soil fertility, lessen vegetative cover, and increase soil erosion. Impacts on soils from blading, excavation, and leveling during construction activities would include physical and compressional damage to the biological soil crusts, mixing of soils and reduction of soil structure, exposure of soils to the erosive forces of wind and water, and an undetermined amount of wind erosion until vegetation is re-established (USDA NRCS 2016). Disruption of the biological soil crusts also can decrease soil stability and the diversity of soil organisms; leading to changes in soil nutrient cycling and decomposition rates of organic matter.

Mitigation Measures

The Applicant would apply water to disturbed areas to reduce soil blowing. Impacts to soil resources would be reduced by standard practices such as utilizing existing surface disturbances, minimizing the size of the well pads and access road, utilizing steel tanks instead of excavated reserve pits, minimizing vehicular use, placing parking and staging areas on caliche-surfaced areas, reclaiming the areas not necessary for production, and quickly establishing vegetation on the reclaimed areas.

Interim reclamation would be conducted on all disturbed areas not needed for active support of production operations, and if caliche is used as a surfacing material it would be removed at the time of final reclamation to mitigate impacts to soil resources.

3.4 Vegetation

3.4.1. Affected Environment

Vegetation in the project area is classified as the Chihuahuan desert scrub community (Dick-Peddie 1993; Brown et al. 1998, 2007). The growth of grasses and forbs is sparse throughout the project area. Dominant species observed throughout the project area included coldenia (*Tiquilia canescens*), tarbush (*Florensia cernua*), snakeweed (*Gutierrezia sarothrae*), mesquite

(*Prosopsis glandulosa*), with a sparse cover of sand muhly (*Muhlenbergia arenicola*), burrograss (*Schleropogon brevifolia*), and beavertail yucca (*Opuntia basilaris*).

The U.S. Fish and Wildlife Service's Information, Planning, and Conservation System (IPaC 2016), the State of New Mexico (EMNRD 2016), and the New Mexico Rare Plant Technical Committee (NMRPTC 1999, revised 2016) list three federally listed and two candidate plant species for Eddy County, New Mexico. In addition, the USFWS monitors certain species that are not federally listed in order to prevent or reduce the need to list them as threatened or endangered in the future. These species receive no special protections under the Endangered Species Act and none were identified on the USFWS website (IPaC 2016). The State of New Mexico also lists species of special interest. No state-listed plant species were identified during the survey (EMNRD 2016).

No Federal threatened or endangered plant species were observed within or adjacent to the proposed project area during the August 19, 2016 plant survey (Appendix A).

3.4.2. Impacts from the Proposed Action

Direct and Indirect Effects

The proposed action would disturb approximately 20.454 acres of the Chihuahuan desert scrub community (Dick-Peddie 1993; Brown et al. 1998, 2007) with sparse vegetation cover. This impact would last as long as the well field is productive; however, the project is unlikely to have a significant, long-term impact on surrounding vegetation. Soil erosion and blowing soils may occur following construction and prior to plugging and abandonment of the wells. These short-term, direct and indirect impacts to vegetation from the Proposed Action cannot be avoided.

Depending on timely rainfall, the area is expected to re-vegetate in three to five years after well plugging and abandonment.

Mitigation Measures

Impacts to vegetation would be reduced by standard practices such as utilizing existing surface disturbances, minimizing the size of the well pads and access road, utilizing steel tanks instead of excavated reserve pits, minimizing vehicular use, placing parking and staging areas on caliche-surfaced areas, reclaiming areas not necessary for production, and quickly establishing vegetation on reclaimed areas.

Interim reclamation would be conducted on all disturbed areas not needed for active support of production operations, and if caliche is used as a surfacing material it would be removed at the time of final reclamation to mitigate impacts to vegetation resources.

3.5 Noxious Weeds and Invasive Plants

3.5.1. Affected Environment

There are four plant species within the CFO that are identified in the New Mexico Noxious Weed List (NMDA 2009). These include two Class B noxious weed species, African rue *(Peganum harmala)* and Malta starthistle (*Centaurea melitensis*), and two Class C noxious weed species, Russian olive *(Eleagnus angustifolia)*, and saltcedar (*Tamarix* spp.). African rue and Malta starthistle populations have been identified throughout the CFO area and mainly occur along the shoulders of highway, state and county roads, lease roads and well pads (especially abandoned well pads). The CFO has an active noxious weed monitoring and treatment program, and

partners with county, state, and Federal agencies, and industry to treat infested areas and monitor the counties for new infestations.

No noxious weeds were observed in the proposed project area during the plant survey of the project area (Appendix A). However, African rue was observed growing along the existing pipeline corridors within the Applicant's nearby Pennzoil project area in Sections 32 and 33, Township 20 South, Range 29 East, Eddy County, New Mexico.

3.5.2. Impacts from the Proposed Action

Direct and Indirect Effects

Any surface disturbance can increase the possibility of the establishment of new populations of African rue and other invasive, non-native species. The construction of the Proposed Action could contribute to the establishment and spread of noxious weed species. The main mechanism for seed dispersion would be by equipment and vehicles that was previously used and/or driven across noxious-weed-infested areas. Noxious weed seed could be carried to and from the project area by construction equipment and transport vehicles.

Mitigation Measures

To limit the establishment of noxious weeds, construction equipment would be inspected and cleaned prior to initially starting work on the work site. It would be the Applicant's responsibility to monitor, control, and eradicate all invasive, non-native plant species within the proposed project area, throughout the life of the project. The Applicant would contact the BLM CFO for guidance regarding treatment and eradication. Only pesticides authorized for use on BLM lands would be used. The use of pesticides would comply with Federal and state laws. Pesticides would be used only in accordance with their registered use and limitations. The Applicant would contact the BLM CFO prior to using these chemicals.

3.6 Watershed Resources

3.6.1. Affected Environment

The proposed action is located within the Upper Pecos-Black watershed unit (USGS 2016). The project area is located on in the vicinity of Burton Flats, a level plain that does not contain any arroyos, ephemeral or intermittent waterways, or floodplains. Average annual precipitation is approximately 12.88 inches (WRCC 2016).

Burton Flats is comprised of a gypsum karst plain that recharges shallow karst in the area (Goodbar 2013). The Burton Flats area contains a high concentration of known significant caves which are often evidenced by sinkholes, swallets, and other forms of surface collapse. All of these caves reach a local water table that has been tested and shown to be relatively fresh, though water quality and quantity are influenced by physical and biological reactions that occur as water moves over and through the land into the aquifer. Palmilla and Scanlon Draws are located approximately 2.5 miles southwest of the project area.

Within a one-mile radius of the proposed well pads, there are salt water disposal wells, active oil and gas wells, and plugged and abandoned wells.

3.6.2. Impacts from the Proposed Action

Direct and Indirect Effects

Potential impacts from the proposed action would include increased sediment loading to surface drainages and karst features such as swallets and depressions through runoff of disturbed soils. Surface water from localized rain events would wash through the area of the proposed action. Localized decreases in vegetative surface cover combined with the soils from the well pads and access road could produce decreased infiltration and increased volumes of runoff, resulting in increased erosion, top soil loss, and sedimentation of nearby sinkholes and shallow depressions.

Water quality can be adversely affected following the occurrence of a leak or spill.

Standard practices or design features of the proposed project that minimize impacts to the watershed and water quality includes: utilizing a closed loop system with no reserve pits, berming of the production facilities, utilizing existing surface disturbances, minimizing the size of the well pad and access road, minimizing vehicular use, surfacing parking and staging areas with caliche and reclaiming the areas not necessary for production, and quickly re-establishing vegetation on the reclaimed areas.

Mitigation Measures

None

3.7. Wildlife and Special Status Species

3.7.1. Affected Environment

Vegetation in the project area is classified as the Chihuahuan desert scrub community (Dick-Peddie 1993; Brown et al. 1998, 2007). Wildlife occurring in the project area (Appendix B) is typical of degraded, brush-encroached scrublands and grasslands of the Chihuahuan Desert and includes passerines such as black-throated sparrows (*Amphispiza bileanata*) and Brewer's sparrow (*Spizella breweri*), as well as jackrabbits (*Lepus* spp.) and whiptail lizards (*Cnemidophorus* spp.).

Although very few in-cave biological surveys have been conducted in the Burton Flats area, most of the larger cave entrances in the area's Burton Flats Cave Complex are used as nesting sites by Barn owls (*Tyto alba*) and Great horned owls (*Bubo virginianus*). In addition, obligate cave-adapted invertebrate species have been found in portions of the cave complex containing fresh water (Goodbar 2013).

Numerous wildlife water sources have been installed within the boundaries of the CFO and this project is located within a quarter mile of an artificial source of water for livestock and wildlife in Section 20, Township 20 South, Range 29 East. These wildlife waters are important to all wildlife in the desert ecosystem. These water sources provide free water and areas of sanctuary for wildlife species in the area.

Various bird, mammal, reptile and invertebrate species inhabit this ecosystem in southeast New Mexico. Herbivorous mammals include mule deer, pronghorn, and numerous rodent species. Carnivores include coyote, bobcat, badger, striped skunk, and swift fox. Two upland game bird species, scaled quail and mourning dove, are prevalent throughout southeast New Mexico. Many species of songbirds nest commonly, with a much larger number that use the habitat during migration or for non-nesting activities. Common avian predators of the area include

northern harrier, Swainson's hawk, red-tailed hawk, kestrel, burrowing owl, and Chihuahuan raven. Numerous snake and lizard species also inhabit this ecosystem.

Table 8, below, contains federally listed and candidate wildlife species that are known to or have the potential to occur in Eddy County, NM with the potential to occur in the project area.

Table 8. Federal Endangered, Threatened, and Special Status Species, Eddy County, NM

Species	Status	Habitat	Potential to Occur in Project Area*
Lesser Prairie Chicken (*Thympanuchus pallidicinctus*)	Formerly listed by the USFWS as Threatened. Removed from listing on July 20, 2016 by the U.S. Fish and Wildlife Service	This species is obligate to shinnery oak stands in sand dunes	NP
Northern Aplomado Falcon (*Falco femoralis septentrionalis*)	Federal -Endangered/ Experimental Population	Formerly resident in Chihuahuan Desert grassland; now rare; an experimental reintroduction program is being conducted in Sierra County, NM	NP

Potential to Occur in Project Area*
- K - Known, documented observation within project area
- S - Habitat suitable and species suspected to occur within the project area
- NS - Habitat suitable but species is not suspected to occur within the project area
- NP - Habitat is not present and species is unlikely to occur within the project area

Lesser Prairie-Chicken (Tympanuchus pallidicinctus)

In New Mexico, the lesser prairie-chicken (LPC) formerly occupied a range that encompassed the eastern-most third of the state, extending to the Pecos River, and 48 km west of the Pecos River near Fort Sumner. This range covered about 38,000 km². By the beginning of the 20th century, populations still existed in nine eastern counties (Union, Harding, Chaves, De Baca, Quay, Curry, Roosevelt, Lea, and Eddy). The last reliable records from Union County are from 1993. Currently, populations exist only in parts of Lea, Eddy, Curry, Chaves, and Roosevelt counties, comprising about 23% of the historical range.

LPC are found throughout dry grasslands that contained shinnery oak or sand sage (Artemisia filifolia). Currently, they most commonly are found in sandy-soiled, mixed-grass vegetation, sometimes with short-grass habitats with clayey or loamy soils interspersed. They occasionally are found in farmland and smaller fields, especially in winter. Shinnery oak shoots are used as cover and produce acorns, which are an important food for LPC and many other species of birds, such as the scaled quail, northern bobwhite (*Colinus virginianus*), and mourning dove. Current geographic range of shinnery oak is nearly congruent with that of the LPC, and these species sometimes are considered ecological partners. Population densities of LPC are greater in shinnery oak habitat than in sand sage habitat.

LPC use a breeding system in which males form display groups. These groups perform mating displays on arenas called leks. During mating displays male vocalizations called booming, attract females to the lek. Leks are often found on knolls, ridges, or other raised areas, but in New Mexico leks are just as likely to be on flat areas such as roads, abandoned oil drill pads,

dry playa lakes or at the center of wide, shallow depressions. Leks may be completely bare, covered with short grass, or have scattered clumps of grass or short tufts of plants. An important physical requirement for the location of leks is visibility of surroundings, but the most important consideration is proximity of suitable nesting habitat, breeding females, and the ability to hear male vocalizations.

In the late 1980s, there were 35 documented active booming grounds known to exist within the CFO. Due to population decreases and unpredictable weather cycles, the LPC is currently proposed for federal listing and potentially may become extirpated from Eddy and southern Lea counties. The last documented sighting of LPC within the CFO was on March 15, 2011.

In June 1998, the USFWS issued a statement regarding their status review of the LPC which stated, “Protection of the lesser prairie-chicken under the federal Endangered Species Act (ESA) is warranted but precluded, which means that other species in greater need of protection must take priority in the listing process.” Given the current federal candidate status of this species, the BLM is mandated to carry out management consistent with the principles of multiple use, for the conservation of candidate species and their habitats, and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered (Bureau Manual 6840.06).

On December 11, 2012 the USFWS proposed to list the LPC as a threatened species under the ESA of 1973, as amended. On March 27, 2014 the USFWS in response to the rapid and severe decline of the LPC announced the final listing of the species as threatened under the ESA, as well as a final special rule under section 4(d) of the ESA that will limit regulatory impacts on landowners and business from the listing. Currently, the USFWS has not determined or designated critical habitat regarding the LPC. The final rule to list the LPC as threatened was published in the Federal Register on April 10, 2014, and was to be effective on May 12, 2014.

On July 20, 2016 the U.S. Fish and Wildlife Service formally removed the lesser prairie chicken from protection under the Endangered Species Act. However, prescribed management for the species still follows the BLM Resource Management Plan’s guidelines.

Northern Aplomado Falcon (Falco femoralis septentrionalis)

This raptor was formerly a resident in Chihuahuan Desert grasslands of southern New Mexico. It is currently very rare in terms of its natural occurrence. A reintroduction of this species at the Armendariz Ranch in Sierra County, New Mexico, occurred in 2005. This location is approximately 150 miles to the west of the proposed well site. Historic populations of this species required large expanses of continuous desert grasslands with intermittent stands of large, fire-resistant yucca for nest sites.

The sparse growth of grasses and forbs within the proposed project area is not suitable as falcon foraging habitat and sufficiently sized stands of yucca for nesting habitat are not present within or near the proposed site. Given the unsuitable habitat and the small size of the proposed disturbance, this species would not be adversely impacted by the proposed project.

The USFWS also monitors certain species that are not federally listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. These species receive no special protections under the ESA, but may receive some protection under other acts such as the Migratory Bird Treaty Act (ESA 1973, MBTA 1918). Special status wildlife species with the potential to occur in the proposed project area are listed

in the Wildlife Survey Report in Appendix D. Three state-listed threatened or special status species have the potential to occur within the project area: Baird's sparrow, loggerhead shrike, and swift fox.

Table 9, below discusses state threatened and special status species of Eddy County, NM with the potential to occur at or near the project area.

Table 9. State of NM Threatened and Special Status Species, Eddy County, NM

Species	Status	Habitat	Potential to Occur in Project Area*
Baird's Sparrow (*Ammodrammus bairdi*)	NM State - Threatened	Migrates and occasionally overwinters in grassland areas of southeastern NM	S
Dune Sagebrush Lizard (*Sceloporus arenicolus*)	NM State - Threatened	Occurs only in shinnery /sand dune habitats; generally requires deep dune fields	NP
Loggerhead Shrike (*Lanius ludoviciannus*)	NM State - Sensitive taxa	Widespread; occurs within Chihuahuan Desert shrublands	S
Swift Fox (*Vulpes velox*)	NM State - Sensitive taxa	Occurs in mesa country and grasslands of northeastern NM	S

Potential to Occur in Project Area*
- K - Known, documented observation within project area
- S - Habitat suitable and species suspected to occur within the project area
- NS - Habitat suitable but species is not suspected to occur within the project area
- NP - Habitat is not present and species is unlikely to occur within the project area

The USFWS also monitors certain species that are not federally listed as threatened or endangered in order to prevent or reduce the need to list them as threatened or endangered in the future. These species receive no special protections under the Endangered Species Act, but may receive some protection under other acts such as the Migratory Bird Treaty Act (ESA 1973, MBTA 1918).

Two state-listed threatened or special status species are known to occur or have the potential to occur within the project area: Baird's sparrow and Dune sagebrush lizard (Appendix B).

Dune Sagebrush Lizard (Sceloporus arenicolus)

The Dunes Sagebrush Lizard (DSL) is a species with a limited geographic range including parts of Chaves, Eddy, Lea, and Roosevelt Counties of southeastern New Mexico and four counties in Texas. The DSL is a habitat specialist, found exclusively in association with shinnery oak dune complexes. These complexes are patchworks of shinnery oak and scattered sand sage interspersed with areas of open sand and wind-created sandy blowouts. These complexes create ideal habitat for the DSL.

The DSL may also require specific sand particle size. Research has shown that there are significant differences in the composition of sand between sites that are occupied and unoccupied by DSL. Occupied sites have slightly coarser sand than unoccupied sites. This

suggests that DSL may not occur in areas with high percentages of sand particles smaller than 250 micrometers (Fitzgerald et al. 1997).

The USFWS was petitioned on May 28, 2002 by The Center for Biological Diversity and Chihuahuan Desert Conservation Alliance to list the DSL as an endangered species under the ESA. In May 2005 the USFWS issued a statement regarding their status review of the DSL. It stated, "Protection of the Dunes Sagebrush Lizard under the ESA is warranted but precluded, which means that other species in greater need of protection must take priority in the listing process." Given the current federal candidate status of this species, the BLM is mandated to carry out management, consistent with the principles of multiple use, for the conservation of candidate species and their habitats and shall ensure that actions authorized, funded, or carried out do not contribute to the need to list any of these species as threatened or endangered (Bureau Manual 6840.06).

On December 14, 2010 the USFWS proposed to list the DSL as endangered under the ESA of 1973, as amended. But, on June 19, 2012, it withdrew the proposed rule. The lizard was not listed based on several conservation agreements in place and plans like the current BLM land use plan. However, the DSL is still considered to be a BLM special status species.

No threatened, endangered, or special status wildlife species were observed within or adjacent to the project area during the August 19, 2016 wildlife survey (Appendix B).

3.7.2. Impacts from the Proposed Action

Direct and Indirect Effects

The Proposed Action may have direct and indirect impacts including possible mortality, habitat degradation and fragmentation, avoidance of habitat during construction and drilling activities, and the potential loss of burrows and nests from the removal of habitat, but would not impact wildlife populations as a whole.

Mitigation Measures

None

3.8 Cultural and Historical Resources

3.8.1. Affected Environment

The project falls within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 11,500 – 7,000 B.C.), Archaic (ca. 6,000 B.C. – A.D. 500), Ceramic (ca. A.D. 500 – 1400), Post Formative Native American (ca. A.D. 1400 – present), and Historic Euro-American (ca. A.D. 1865 to present). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *The Human Landscape in Southeastern New Mexico: A Class I Overview of Cultural Resources within the Bureau of Land Management's Carlsbad Field Office Region*, published in 2012 by SWCA Environmental Consultants.

Native American Religious Concerns

The BLM conducts Native American consultation regarding Traditional Cultural Places (TCP) and Sacred Sites during land-use planning and its associated environmental impact review. In addition, during the oil and gas lease sale process, Native American consultation is conducted to identify TCPs and sacred sites whose management, preservation, or use would be

incompatible with oil and gas or other land-use authorizations. With regard to Traditional Cultural Properties, the BLM has very little knowledge of tribal sacred or traditional use sites, and these sites may not be apparent to archaeologists performing surveys in advance of project approval.

3.8.2. Impacts from the Proposed Action

Direct and Indirect Effects

The project falls within the area covered by the Permian Basin Programmatic Agreement (PA). The Permian Basin PA is an optional method of compliance with Section 106 of the National Historic Preservation Act (NRHP) for energy related projects in a 28-quadrangle area of the Carlsbad Field Office. The PA is a form of off-site mitigation which allows industry to design projects to avoid known NRHP eligible cultural resources and to contribute to a mitigation fund in lieu of paying for additional archaeological inventory in this area that has received adequate previous survey. Funds received from the Permian Basin PA will be utilized to conduct archaeological research and outreach in southeastern New Mexico. Research will include archaeological excavation of significant sites, predictive modeling, targeted research activities, as well as professional and public presentations on the results of the investigations.

The proponent chose to participate in the Permian Basin PA by planning to avoid all known NRHP eligible and potentially eligible cultural resources. The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any skeletal remains that might be human or funerary objects are discovered by any activities, the project proponent will cease activities in the area of discovery and notify the BLM within 24 hours as required by the Permian Basin PA.

Cultural resources on public lands, including archaeological sites and historic properties, are protected by federal law and regulations (Section 106 of the National Historic Preservation Act and the National Environmental Policy Act). Class III cultural surveys will be conducted of the area of effect for realty or oil and gas projects proposed on these lands prior to the approval of any ground disturbing activities to identify any resources eligible for listing on the National Register of Historic Places. Cultural resource inventories minimize impacts to cultural sites and artifacts by avoiding these resources prior to construction of the proposed project. If unanticipated or previously unknown cultural resources are discovered at any time during construction, all construction activities shall halt and the BLM authorized officer will be immediately notified. Work shall not resume until a Notice to Proceed is issued by the BLM.

Class III cultural resource inventories were conducted (NM-523-17-0052 and NM-523-17-0053) and one historic property was identified within the area of potential effect. Site previously determined not eligible, but during the current update buried cultural deposits and projectile point make the site eligible to the NRHP. Site LA 164803 was previously determined not eligible, but during the current update buried cultural deposits and a projectile point make the site eligible to the NRHP. Mitigation is required. An archaeological monitor be present during all construction or ground disturbing activities.

Mitigation Measures

Power line Avian Protection

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume

the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

3.9. Paleontological Resources

3.9.1. Affected Environment

Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth. Fossil remains may include bones, teeth, tracks, shells, leaves, imprints, and wood. Paleontological resources include not only the actual fossils but also the geological deposits that contain them and are recognized as nonrenewable scientific resources protected by federal statutes and policies.

The primary federal legislation for the protection and conservation of paleontological resources occurring on federally administered lands are the Paleontological Resources Preservation Act of 2009 (PRPA), the Federal Land Policy and Management Act of 1976 (FLPMA), and the National Environmental Policy Act of 1970 (NEPA). BLM has also developed policy guidelines for addressing potential impacts to paleontological resources (BLM, 1998a, 1998b; 2008, 2009). In addition, paleontological resources on state trust lands are protected by state policy from unauthorized appropriation, damage, removal, or use.

The Potential Fossil Yield Classification (PFYC) is a tool that allows the BLM to predict the likelihood of a geologic unit to contain paleontological resources. The PFYC is based on a numeric system of 1-5, with PFYC 1 having little likelihood of containing paleontological resources, whereas a PFYC 5 value is a geologic unit that is known to contain abundant scientifically significant paleontological resources. The fossil resources of concern in this area are the remains of vertebrates, which include species of fish, amphibians, and mammals.

3.9.2. Impacts from the Proposed Action

Direct and Indirect Effects

Direct impacts would result in the immediate physical loss of scientifically significant fossils and their contextual data. Impacts indirectly associated with ground disturbance could subject fossils to damage or destruction from erosion, as well as creating improved access to the public and increased visibility, potentially resulting in unauthorized collection or vandalism. However, not all impacts of construction are detrimental to paleontology. Ground disturbance can reveal significant fossils that would otherwise remain buried and unavailable for scientific study. In this manner, ground disturbance can result in beneficial impacts. Such fossils can be collected properly and curated into the museum collection of a qualified repository making them available for scientific study and education.

The proposed project is located within an PFYC 2 area where management concern in negligible. A pedestrian survey for paleontological resources was not necessary and there should be no impacts to paleontological resources.

Mitigation Measures

There are no mitigation measures for this project, as currently proposed.

3.10. Karst Resources

3.10.1. Affected Environment

The project is located in gypsum karst terrain, a landform that is characterized by underground drainage through solutionally enlarged conduits. Gypsum karst terrain may contain sinkholes, sinking streams, caves, and springs. Sinkholes leading to underground drainages and voids are common. These karst features, as well as occasional fissures and discontinuities in the bedrock, provide the primary sources for rapid recharge of the groundwater aquifers of the region.

The BLM categorizes all areas within the Carlsbad Field Office as having either low, medium, high or critical cave potential based on geology, occurrence of known caves, density of karst features, and potential impacts to fresh water aquifers. This project occurs within a high karst zone. A high karst zone is defined as an area occurring in known soluble rock types and containing a high frequency of significant caves and karst features such as sinkholes, bedrock fractures that provide rapid recharge of karst aquifers, and springs that provide riparian habitat.

Sinkholes and cave entrances collect water and can accumulate rich organic materials and soils. This, in conjunction with the stable microclimate near cave entrances, support a greater diversity and density of plant life which provides habitat for a greater diversity and density of wildlife such as raptors, rodents, mammals, and reptiles.

The interior of the caves support a large variety of troglobitic, or cave environment-dependent species. The troglobitic species have adapted specifically to the cave environment due to constant temperatures, constant high humidity, and total darkness.

3.10.2. Impacts from the Proposed Action

Direct and Indirect Effects

Cave and karst features provide direct conduits leading to groundwater. These conduits can quickly transport surface and subsurface contaminants directly into underground water systems and freshwater aquifers without filtration or biodegradation. In addition, contaminates spilled or leaked into or onto cave/karst zone surfaces and sub surfaces may lead directly to the disruption, displacement, or extermination of cave species and critical biological processes. In extreme or rare cases, a buildup of hydrocarbons in cave systems due to surface leaks or spills could potentially cause underground ignitions or asphyxiation of wildlife or humans within the cave.

In cave and karst terrains, rainfall and surface runoff is directly channeled into natural underground water systems and aquifers. Changes in geologic formation integrity, runoff quantity/quality, drainage course, rainfall percolation factors, vegetation, surface contour, and other surface factors can negatively impact cave ecosystems and aquifer recharge processes. Blasting, heavy vibrations, and focusing of surface drainages can lead to slow subsidence, sudden collapse of subsurface voids, and/or cave ecosystem damage.

A more complete discussion of the impacts of oil and gas drilling can be found in the *Dark Canyon Environmental Impact Statement of 1993*, published by the U.S. Department of the Interior, Bureau of Land Management.

CONSTRUCTION IMPACT ANALYSIS

The construction of roads, pipelines, well pads and utilities can impact bedrock integrity and reroute, impede, focus, or erode natural surface drainage systems. Increased silting and sedimentation from construction can plug downstream sinkholes, caves, springs, and other components of aquifer recharge systems and result in adverse impacts to aquifer quality and cave environments. Any contaminants released into the environment during or after construction can impact aquifers and cave systems. A possibility exists for slow subsidence or sudden surface collapse during construction operations due to collapse of underlying cave passages and voids. This would cause associated safety hazards to the operator and the potential for increased environmental impact. Subsidence processes can be triggered by blasting, intense vibrations, rerouting of surface drainages, focusing of surface drainage, and general surface disturbance.

Blasting fractures in bedrock can serve as direct conduits for transfer of contaminants into cave and groundwater systems. Blasting also creates an expanded volume of rock rubble that cannot be reclaimed to natural contours, soil condition, or native vegetative condition. As such, surface and subsurface disruptions from blasting procedures can lead to permanent changes in vegetation, rainfall percolation, silting/erosion factors, aquifer recharge, and freshwater quality and can increase the risk of contaminant migration from drilling/production facilities built atop the blast area.

DRILLING IMPACT ANALYSIS

During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and groundwater quality. Drilling operations can also lead to sudden collapse of underground voids. Cementing operations may plug or alter groundwater flow, potentially reducing the water quantity at springs and water wells. Inadequate subsurface cementing, casing, and cave/aquifer protection measures can lead to the migration of oil, gas, drilling fluids, and produced saltwater into cave systems and freshwater aquifers.

PRODUCTION IMPACT ANALYSIS

Production facilities such as tank batteries, pump-jacks, compressors, transfer stations, and piping may fail and allow contaminants to enter caves and freshwater systems. Downhole casing and cementing failures can allow migration of fluids and/or gas between formations and aquifers. Facilities may also be subject to slow subsidence or sudden collapse of the underlying bedrock.

RESIDUAL AND CUMULATIVE IMPACT ANALYSIS

Any industrial activities that take place upon or within karst terrains or freshwater aquifer zones have the potential to create both short-term and long-term negative impacts to freshwater aquifers and cave systems. While a number of mitigation measures can be implemented to mitigate many impacts, it is still possible for impacts to occur from containment failures, well blowouts, accidents, spills, and structural collapses. It is therefore necessary to implement

long-term monitoring studies to determine if current mitigations measures are sufficient enough to prevent long-term or cumulative impacts.

PLUGGING AND ABANDONMENT IMPACT ANALYSIS

Failure of a plugged and abandoned well can lead to migration of contaminants to karst resources and fresh water aquifers. While this action does not specifically approve plugging and abandonment procedures, the operator should be made aware that additional or special Conditions of Approval may apply at that time.

Mitigation Measures

GENERAL MITIGATION

To mitigate or lessen the probability of impacts associated with the drilling and production of oil and gas wells in karst areas, the guidelines listed in Appendix 3, Practices for Oil and Gas Drilling and Production in Cave and Karst Areas, as approved in the Carlsbad Resource Management Plan Amendment of 1997, page AP3-4 through AP 3-7 will be followed.

BLM maintains up to date locations and surveys of known cave and karst features. Projects will be located away from these features whenever possible. Drilling pads, roads, utilities, pipelines and flowlines will be routed around cave and karst features at an adequate distance to mitigate adverse impacts. Wellbore engineering plans will incorporate required cave and aquifer protection protocols.

Highly sensitive cave and karst areas with critical freshwater aquifer recharge concerns may have a number of special surface and subsurface planning and construction requirements based upon the risk of adverse impacts created by a specific location or process.

CONSTRUCTION MITIGATION
In order to mitigate the impacts from construction activities on cave and karst resources, the following Conditions of Approval will apply to this APD:

- In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
- No Blasting to prevent geologic structure instabilities.
- Pad Berming to minimize effects of any spilled contaminates.

DRILLING MITIGATION

Federal regulations and standard Conditions of Approval applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources in this project area, the following additional Conditions of Approval will be added to this APD.

To prevent cave and karst resource contamination the following will be required.

Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.

- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.

- Directional Drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost Circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

PRODUCTION MITIGATION
In order to mitigate the impacts from production activities and due to the nature of karst terrain, the following Conditions of Approval will apply to this APD:

- Tank battery liners and berms to minimize the impact resulting from leaks.
- Leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of line failures used in production or drilling.

RESIDUAL AND CUMULATIVE MITIGATION

Annual pressure monitoring will be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval

PLUGGING AND ABANDONMENT MITIGATION
Abandonment Cementing: Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

3.11. Visual Resource Management

3.11.1. Affected Environment

The BLM's Visual Resource Management (VRM) program identifies visual values, establishes objectives in the RMP for managing those values, and provides a means to evaluate proposed projects to ensure that visual management objectives are met.

The Proposed Action occurs within the BLM VRM Class IV zone. The objective of VRM Class IV is to provide for management activities that would modify the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and may be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic landscape elements of color, form, line and texture.

3.11.2. Impacts from the Proposed Action

Direct and Indirect Effects

This project will cause both short-term and long-term visual impacts to the natural landscape. Short-term impacts, including the presence of construction equipment, vehicle traffic, will occur during construction operations (approximately two months).

Long-term impacts are visible to the casual observer through the life of the project. These include the visual evidence of wells, well pads, roads, tank batteries, power lines and piping which cause visible contrast to form, line, color, and texture. Removal of vegetation due to construction exposes bare soil lighter in color and smoother in texture than the surrounding vegetation. The compaction of these areas causes further contrast, which may be visible to visitors in the area.

Short- and long-term impacts are minimized by BMPs such as reducing cut and fill and contouring roads along natural changes in elevation.

After final abandonment and reclamation, the wells will be plugged and the well pad, access road, pipeline corridor, and overhead power line corridor will be removed. These areas will then be re-contoured and reseeded, thereby eliminating visual impacts.

Mitigation Measures

There are no mitigation measures for this project as currently proposed.

3.12. Cumulative Impacts

Cumulative impacts are the combined effect of past projects, specific planned projects, and other reasonably foreseeable future actions within the project study area to which oil and gas exploration and development may add incremental impacts. This includes all actions, not just oil and gas actions that may occur in the area including foreseeable non-federal actions.

The combination of all land use practices across a landscape has the potential to change the visual character, disrupt natural water flow and infiltration, disturb cultural sites, cause minor increases in greenhouse gas emissions, fragment wildlife habitat, and contaminate groundwater. However, the likelihood of these impacts occurring is minimized through standard mitigation measures, special Conditions of Approval, and ongoing monitoring studies.

All resources are expected to sustain some level of cumulative impacts over time. However, these impacts would fluctuate with the gradual abandonment and reclamation of wells, tank batteries, and their associated infrastructure. As new wells are being drilled, others are being abandoned and reclaimed. As the oil field plays out, the cumulative impacts will lessen as more areas are reclaimed and fewer are developed.

CHAPTER 4. SUPPORTING INFORMATION

4.1. List of Preparers

Permits West, Inc. prepared this document with assistance from the following individuals:

Contact	Title	Organization
Sam Pryor	Senior Staff Landman/On-site	Matador Production Company
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Stephanie Bergman	Archaeologist	Bureau of Land Management, Carlsbad Field Office
Chelsie Dugan	Hydrologist	Bureau of Land Management, Carlsbad Field Office
Brian Wood	Owner	Permits West, Inc.
Robyn Tierney	Author/Natural Resource Specialist	Permits West, Inc.
Charles Black	Wildlife Biologist/On-site/Wildlife Survey	Permits West, Inc.
Geoff Carpenter	Biologist/On-site/Biological Survey	Permits West, Inc.

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Pecos District
Carlsbad Field Office
620 E Greene Street
Carlsbad, NM 88220

DECISION RECORD

for the

Stebbins 19 Federal Com
Well Nos. 203H, 133H, 123H, 113H (Slot 3 Pad),
Stebbins 19 Federal
Well Nos. 204H, 134H, 124H, 114H (Slot 4 Pad),
Stebbins Federal 20
Well Nos. 203H, 133H, 123H, 113H, (Slot 3 Pad),
Stebbins Federal 20
Well Nos. 204H, 134H, 124H, 114H, (Slot 4 Pad),
Access Road, Gas Pipeline, and Power Line
NEPA No. DOI-BLM-NM-P020-2017-0111-EA

I. Decision

I have decided to select the proposed action for implementation as described in the 8/09/2016,

Stebbins 19 Federal Com

Well Nos. 203H, 133H, 123H, 113H (Slot 3 Pad),

Stebbins 19 Federal

Well Nos. 204H, 134H, 124H, 114H (Slot 4 Pad),

Stebbins Federal 20

Well Nos. 203H, 133H, 123H, 113H, (Slot 3 Pad),

Stebbins Federal 20

Well Nos. 204H, 134H, 124H, 114H, (Slot 4 Pad),

Access Road, Gas Pipeline, and Power Line.

Based on my review of the Environmental Assessment (EA) and project record, I have concluded that the proposed action was analyzed in sufficient detail to allow me to make an informed decision. I have selected this alternative because the proposed treatments will provide reasonable access to oil and gas development.

II. Finding of No Significant Impact

I have reviewed the direct, indirect and cumulative effects of the proposed activities documented in the EA for the DOI-BLM-NM-P020-2017-0111-EA. I have also reviewed the project record for this analysis.

The effects of the proposed action are disclosed in the Environmental Consequences sections of the EA. I have determined that the proposed action as described in the EA will not significantly affect the quality of the human environment. Accordingly, I have determined that the preparation of an Environmental Impact Statement is not necessary.

III. Other Alternatives Considered

No reasonable action alternative was substantially different in design or effects from the proposed action for this project. Therefore no other alternative was considered or analyzed.

Other action alternatives were substantially similar in design and had sustainably similar effects to the proposed action alternative analyzed in the EA. Therefore no other alternative was considered or analyzed.

IV. Public Involvement

The Carlsbad Field Office (CFO) publishes a NEPA log for public inspection. This log contains a list of proposed and approved actions in the field office. The log is located in the lobby of the CFO as well as on the BLM New Mexico website (http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html).

V. Appeals

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4. Any appeal must be filed within 30 days of this decision. Any notice of appeal must be filed with the Carlsbad Field Manager, at 620 E.Greene St., Carlsbad, NM 88220. The appellant shall serve a copy of the notice of appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision, not later than 15 days after filing such document (see 43 CFR 4.413(a)). Failure to serve within the time required will subject the appeal to summary dismissal (see 43 CFR 4.413(b)). If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, Office of Hearings and Appeals, U. S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with the IBLA, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300 Arlington, VA 22203 within 30 days after the notice of appeal is filed with the, Carlsbad Field Manger.

Notwithstanding the provisions of 43 CFR 4.21(a)(1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal.

A petition for a stay is required to show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied;
(2) The likelihood of the appellant's success on the merits;
(3) The likelihood of immediate and irreparable harm if the stay is not granted; and
(4) Whether the public interest favors granting the stay.

In the event a request for stay or an appeal is filed, the person/party requesting the stay or filing the appeal must serve a copy of the appeal on the Office of the Field Solicitor, 1100 Old Santa Fe Trail, Santa Fe, NM 87505.

for Cody R. Layton
Field Manager

05/10/17
Date

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Pecos District
Carlsbad Field Office
620 E Greene Street
Carlsbad, NM 88220

Finding of No Significant Impact

Stebbins 19 Federal Com
Well Nos. 203H, 133H, 123H, 113H (Slot 3 Pad),
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Access Road, Gas Pipeline, and Power Line
NEPA No. DOI-BLM-NM-P020-2017-0111-EA

FINDING OF NO SIGNIFICANT IMPACT:

I have determined that the proposed action, as described in the EA will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an environmental impact statement is not required.

In making this determination, I considered the following factors:

1. The activities described in the proposed action do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). The EA includes a description of the expected environmental consequences of well pad, access road, surface flow line, and overhead powerline.
2. The activities included in the proposed action would not significantly affect public health or safety (40 CFR 1508.27(b)(2)).

3. The proposed activities would not significantly affect any unique characteristics (40 CFR 1508.27(b)(3)) of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, designated wilderness areas, wilderness study areas, or areas of critical concern.

4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)).

5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).

6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).

7. The effects of well pad, access road, surface flow line, and overhead powerline would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR

1508.27(b)(7)). The EA discloses that there are no other connected or cumulative actions that would cause significant cumulative impacts.

8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). Cultural resource surveys were completed.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)).

10. The proposed activities will not knowingly threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). *Section 1.4 and 1.5 of the EA.*

APPROVED:

for Field Manager
Carlsbad Field Office

05/10/17
Date

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 87384

COMMENTS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 87384
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
jagarcia	Accepted, John Garcia, Petroleum Engineer	6/9/2022

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CONDITIONS

Action 87384

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
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CONDITIONS

Created By	Condition	Condition Date
jagarcia	None	6/9/2022