Carlsbad Field Office
OCD Artesia

Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM117116

6. If Indian, Allotee or Tribe Name:

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

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: FOXX 31 FEDERAL COM 1H 40412

2. Name of Operator: CIMAREX ENERGY COMPANY 215099

9. API Well No.: 30-015-45039

3a. Address: 202 S. Cheyenne Ave., Ste 1000 Tulsa OK 74

3b. Phone No. *(include area code)*: (432)620-1936

10. Field and Pool, or Exploratory: BONE SPRING / WC-015 G-04 S262625

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface: NENE / 525 FNL / 270 FEL / LAT 32.004367 / LONG -104.221233

At proposed prod. zone: SWSW / 400 FSL / 330 FWL / LAT 32.001147 / LONG -104.236331

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 31 / T26S / R27E / NMP

14. Distance in miles and direction from nearest town or post office*: 18.2 miles

12. County or Parish: EDDY

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any): 270 feet

16. No. of acres in lease: 1364.69

17. Spacing Unit dedicated to this well: 96.47

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 160 feet

19. Proposed Depth: 7250 feet / 11959 feet

20. BLM/BIA Bond No. on file: FED: NMB001188

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3209 feet

22. Approximate date work will start*: 06/01/2018

23. Estimated duration: 30 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	Aricka Easterling / Ph: (918)560-7060	10/19/2017

Title: Regulatory Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	06/13/2018

Title	Office
Supervisor Multiple Resources	CARLSBAD

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.

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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

Approval Date: 06/13/2018

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 27 2018

RECEIVED

RWP 6-28-18 NSP

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and 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., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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Additional Operator Remarks

Location of Well

1. SHL: NENE / 525 FNL / 270 FEL / TWSP: 26S / RANGE: 27E / SECTION: 31 / LAT: 32.004367 / LONG: -104.221233 (TVD: 0 feet, MD: 0 feet)
   PPP: SESW / 400 FSL / 2316 FWL / TWSP: 26S / RANGE: 27E / SECTION: 31 / LAT: 32.001142 / LONG: -104.228719 (TVD: 7247 feet, MD: 9600 feet)
   BHL: SWSW / 400 FSL / 330 FWL / TWSP: 26S / RANGE: 27E / SECTION: 31 / LAT: 32.001147 / LONG: -104.236331 (TVD: 7250 feet, MD: 11959 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Cimarex Energy Co**
LEASE NO.:	**NM117116**
WELL NAME & NO.:	**1H – Foxx 31 Federal Com**
SURFACE HOLE FOOTAGE:	**525'/N & 270'/E**
BOTTOM HOLE FOOTAGE	**400'/S & 330'/W**
LOCATION:	**Sec. 31, T. 26 S, R. 27 E**
COUNTY:	**Eddy County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	○ Medium	◉ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

A. Hydrogen Sulfide

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.**Additional cement maybe required. Excess calculates to 10%.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

Approval Date: 06/13/2018

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

❖ In High Cave/Karst Areas if cement does not circulate to surface on the first two casing strings , the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement maybe required. Excess calculates to 16%.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **3000 (3M)** psi.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or

if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be

initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes. This test shall be performed prior to the test at full stack pressure.

g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

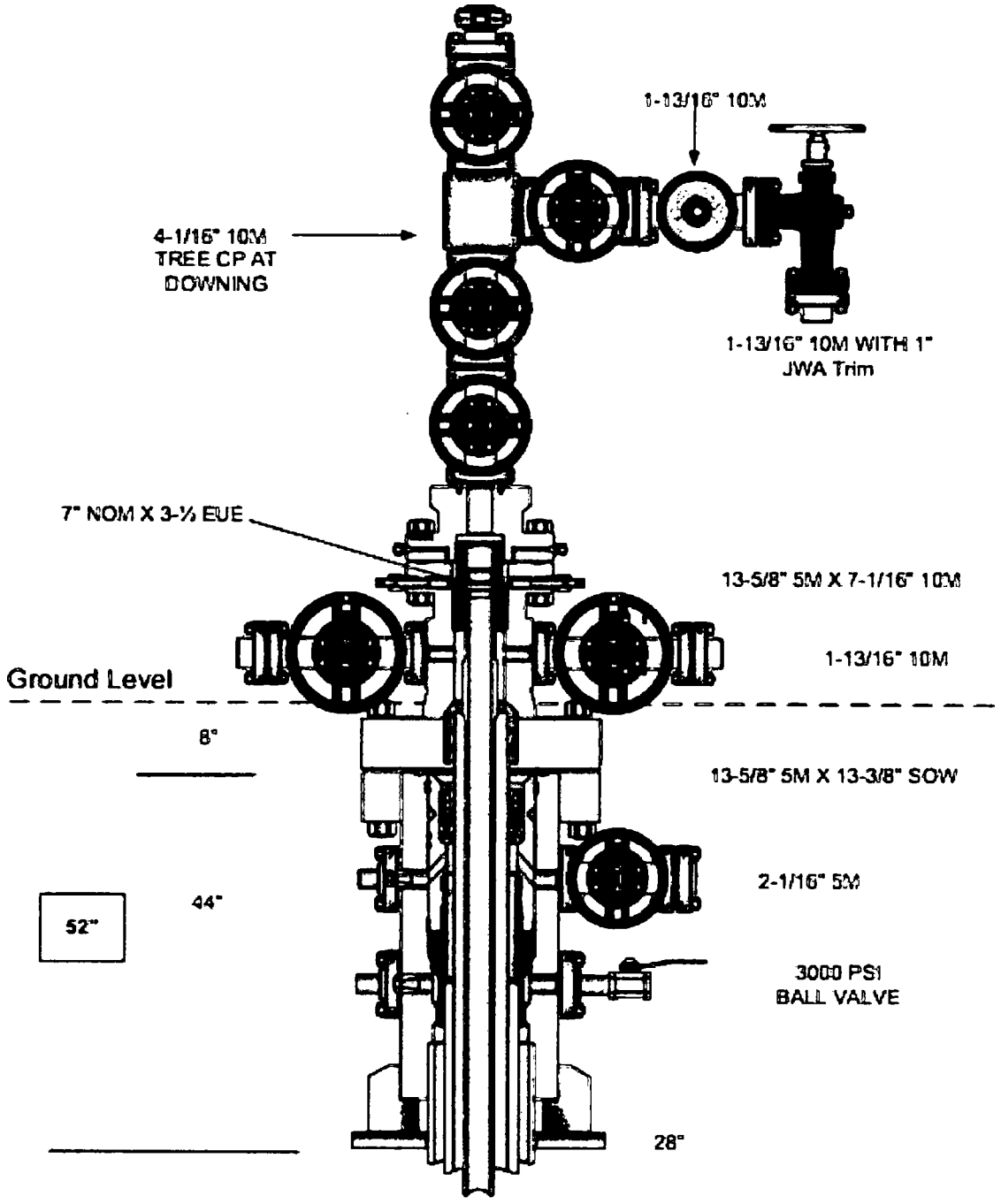
Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 060518

Multi-bowl Wellhead Diagram



Multi-bowl Wellhead Diagram
Foxx 31 Federal Com 1H
Cimarex Energy Co.
31-26S-27E
Eddy Co., NM

Approval Date: 06/13/2018

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Cimarex**
LEASE NO.:	**NMNM26079**
WELL NAME & NO.:	**Foxx 31 Federal Com 1H**
SURFACE HOLE FOOTAGE:	**525' FNL & 270' FEL**
BOTTOM HOLE FOOTAGE	**400' FSL & 330' FWL Sec. 31, T. 26 S., R 27 E.**
LOCATION:	**Section 31, T. 26 S., R 27 E., NMPM**
COUNTY:	**Eddy County, New Mexico**

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Watershed/Water Quality:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production:

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

- The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g., caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)
- Following a rain event, all fluids will vacuumed off of the pad and hauled off-site and disposed at a proper disposal facility.

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing, or equivalent, to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:
A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation
The following stipulations will be applied to protect cave/karst and ground water concerns:
Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.
Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in 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.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

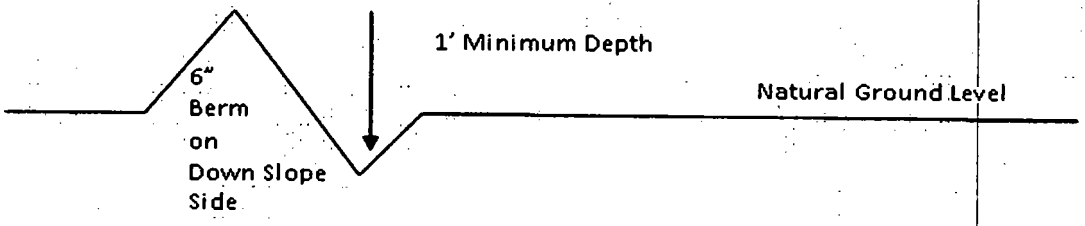
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

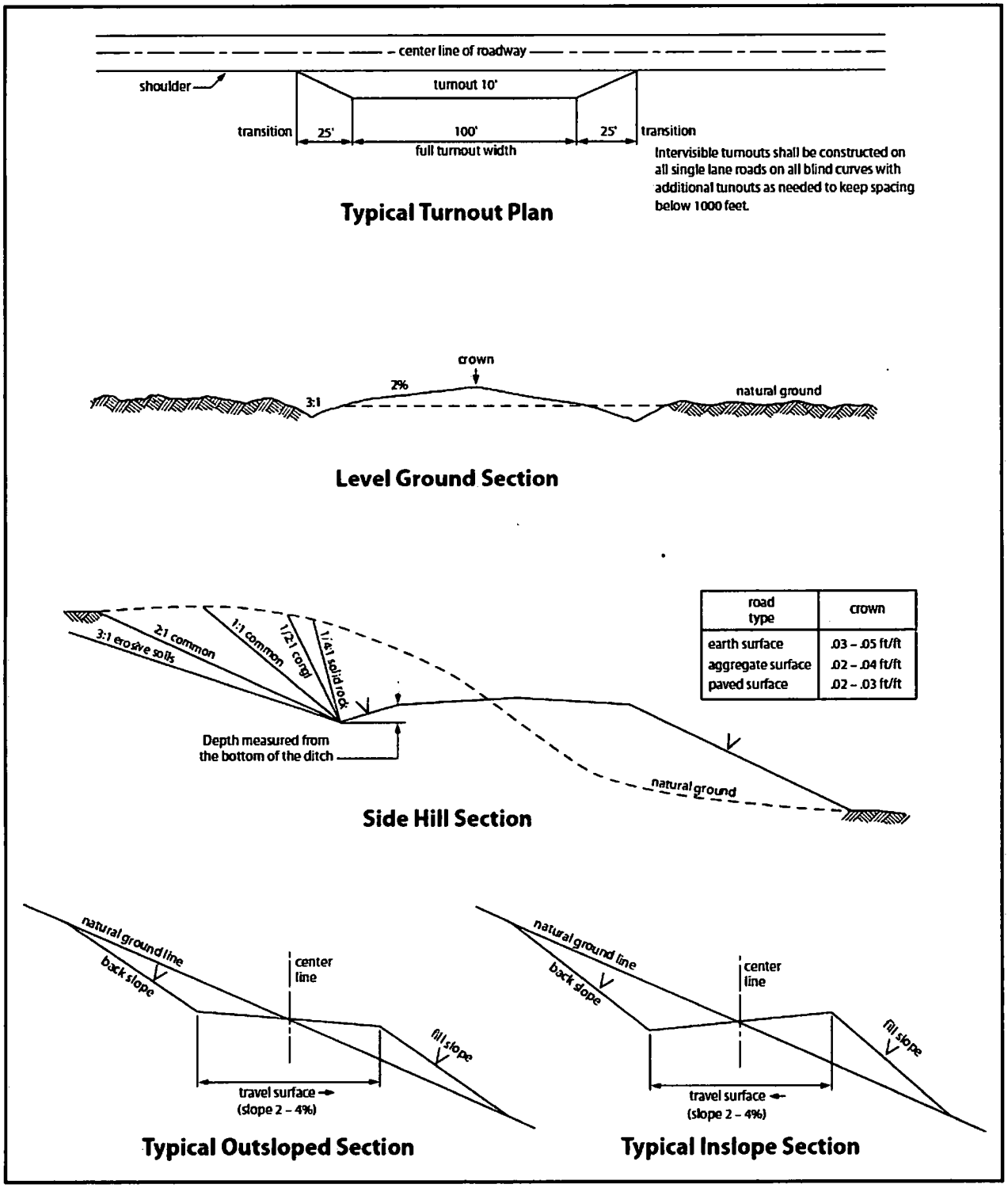


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VRM Facility Requirement
Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Shale Green, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

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

Operator Certification Data Report

06/14/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Aricka Easterling **Signed on:** 10/18/2017

Title: Regulatory Analyst

Street Address: 202 S. Cheyenne Ave, Ste 1000

City: Tulsa **State:** OK **Zip:** 74103

Phone: (918)560-7060

Email address: aeasterling@cimarex.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

AFMSS

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

Application Data Report
06/14/2018

APD ID: 10400023465 **Submission Date:** 10/19/2017

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Show Final Text

Well Type: OIL WELL **Well Work Type:** Drill

Section 1 - General

APD ID: 10400023465 **Tie to previous NOS?** **Submission Date:** 10/19/2017

BLM Office: CARLSBAD **User:** Aricka Easterling **Title:** Regulatory Analyst

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM117116 **Lease Acres:** 1364.69

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** CIMAREX ENERGY COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: CIMAREX ENERGY COMPANY

Operator Address: 202 S. Cheyenne Ave., Ste 1000

Zip: 74103

Operator PO Box:

Operator City: Tulsa **State:** OK

Operator Phone: (432)620-1936

Operator Internet Address: tstathem@cimarex.com

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** BONE SPRING **Pool Name:** WC-015 G-04 S262625B;BONE SPRING

Is the proposed well in an area containing other mineral resources? USEABLE WATER,NATURAL GAS,OIL

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** YES **New surface disturbance?** N

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** FOXX 31 FEDERAL COM **Number:** 1H-4H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 18.2 Miles **Distance to nearest well:** 160 FT **Distance to lease line:** 270 FT

Reservoir well spacing assigned acres Measurement: 96.47 Acres

Well plat: Foxx_31_Federal_Com_1H_C102_20171017092337.pdf

Well work start Date: 06/01/2018 **Duration:** 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	525	FNL	270	FEL	26S	27E	31	Aliquot NENE	32.004367	-104.221233	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117116	3209	0	0
KOP Leg #1	1338	FNL	270	FWL	26S	27E	31	Aliquot SESE	32.002131	-104.221236	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117116	-3698	6990	6907
PPP Leg #1	400	FSL	2316	FWL	26S	27E	31	Aliquot SESW	32.001142	-104.228719	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117549	-4038	9600	7247

APD ID: 10400023465 **Submission Date:** 10/19/2017

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3209	0	0		USEABLE WATER	No
2	SALADO	1964	1245	1245		NONE	No
3	CASTILE	1505	1704	1706		NONE	No
4	BELL CANYON	1284	1925	1930		NATURAL GAS,OIL	No
5	CHERRY CANYON	287	2922	2936		NATURAL GAS,OIL	No
6	BRUSHY CANYON	-842	4051	4076		NATURAL GAS,OIL	No
7	BRUSHY CANYON LOWER	-2063	5272	5312		NATURAL GAS,OIL	No
8	BONE SPRING	-2286	5495	5535		NATURAL GAS,OIL	No
9	BONE SPRING A ZONE	-2408	5617	5658		NATURAL GAS,OIL	No
10	BONE SPRING C ZONE	-2917	6126	6171		NATURAL GAS,OIL	No
11	BONE SPRING 1ST	-3236	6445	6491		NATURAL GAS,OIL	No
12	BONE SPRING 2ND	-3698	6907	6990		NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 400

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Foxx_31_Federal_Com_1H_2M_3M_Choke_20171017124553.pdf

BOP Diagram Attachment:

Foxx_31_Federal_Com_1H_BOP_2M_20171017124546.pdf

Pressure Rating (PSI): 3M **Rating Depth:** 1905

Equipment: A BOP consisting of three rams, including one blind ram and two pipe rams and one annular preventer. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A rotating head may be installed as needed. A Kelly clock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.
Requesting Variance? YES

Variance request: Co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Variance to include Hammer Union connections on lines downstream of the buffer tank only.
Testing Procedure: A multi-bowl wellhead system will be utilized. After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2. The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office. The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative. All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type. A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi. The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater. The casing string utilizing steel body pack-off will be tested to 70% of casing burst. If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

Choke Diagram Attachment:

Foxx_31_Federal_Com_1H_2M_3M_Choke_20171017124802.pdf

BOP Diagram Attachment:

Foxx_31_Federal_Com_1H_BOP_3M_20171017124810.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	400	0	400			400	OTHER	48	STC	4.04	9.45	BUOY	16.77	BUOY	16.77
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	1905	0	1905			1905	J-55	36	LTC	2	3.48	BUOY	6.61	BUOY	6.61
3	PRODUCTION	8.75	5.5	NEW	API	N	0	6616	0	6616			6616	L-80	17	LTC	1.99	2.45	BUOY	2.74	BUOY	2.74
4	PRODUCTION	8.75	5.5	NEW	API	N	6616	11960	6616	11960			5344	L-80	17	BUTT	1.81	2.23	BUOY	36.83	BUOY	36.83

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Foxx_31_Federal_Com_1H_Casing_Assumptions_20171017125802.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Foxx_31_Federal_Com_1H_Casing_Assumptions_20171017125752.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Foxx_31_Federal_Com_1H_Casing_Assumptions_20171017125738.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Foxx_31_Federal_Com_1H_Casing_Assumptions_20171017125725.pdf

Section 4 - Cement

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	400		1.72		104	50		
SURFACE	Tail		0	400	195	1.34	14.8	260	25	Class C	LCM
INTERMEDIATE	Lead		0	1905		1.88		679	50		
INTERMEDIATE	Tail		0	1905	112	1.34	14.8	149	25	Class C	LCM
PRODUCTION	Lead		0	6616		3.45		1542	25		
PRODUCTION	Tail		0	6616	1143	1.3	14.2	1485	10	50:50 (POZ H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS
PRODUCTION	Lead		6616	11960		3.45		1542	25		
PRODUCTION	Tail		6616	11960	1143	1.3	14.2	1485	10	50:50 (POZ H)	Salt, Bentonite, Fluid Loss, Dispersant, SMS

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.
Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	400	SPUD MUD	8.3	8.8							

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1905	11960	OTHER : FW/Cut Brine	8.7	9.2							
400	1905	SALT SATURATED	9.7	10.2							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

No DST Planned

List of open and cased hole logs run in the well:

CNL,DS,GR

Coring operation description for the well:

N/A

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3468 **Anticipated Surface Pressure:** 1873

Anticipated Bottom Hole Temperature(F): 145

Anticipated abnormal pressures, temperatures, or potential geologic hazards? YES

Describe:

Lost circulation may be encountered in the Delaware mountain group. Abnormal pressure as well as hole stability issues may be encountered in the Wolfcamp.

Contingency Plans geoharzards description:

Lost circulation material will be available, as well as additional drilling fluid along with the fluid volume in the drilling rig pit system. Drilling fluid can be mixed on location or mixed in vendor mud plant and trucked to location if needed. Sufficient barite will be available to maintain appropriate mud weight for the Wolfcamp interval.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Foxx_31_Federal_Com_1H_H2S_Plan_20171017133803.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Foxx_31_Federal_Com_1H_Directional_Survey_20171017134109.pdf

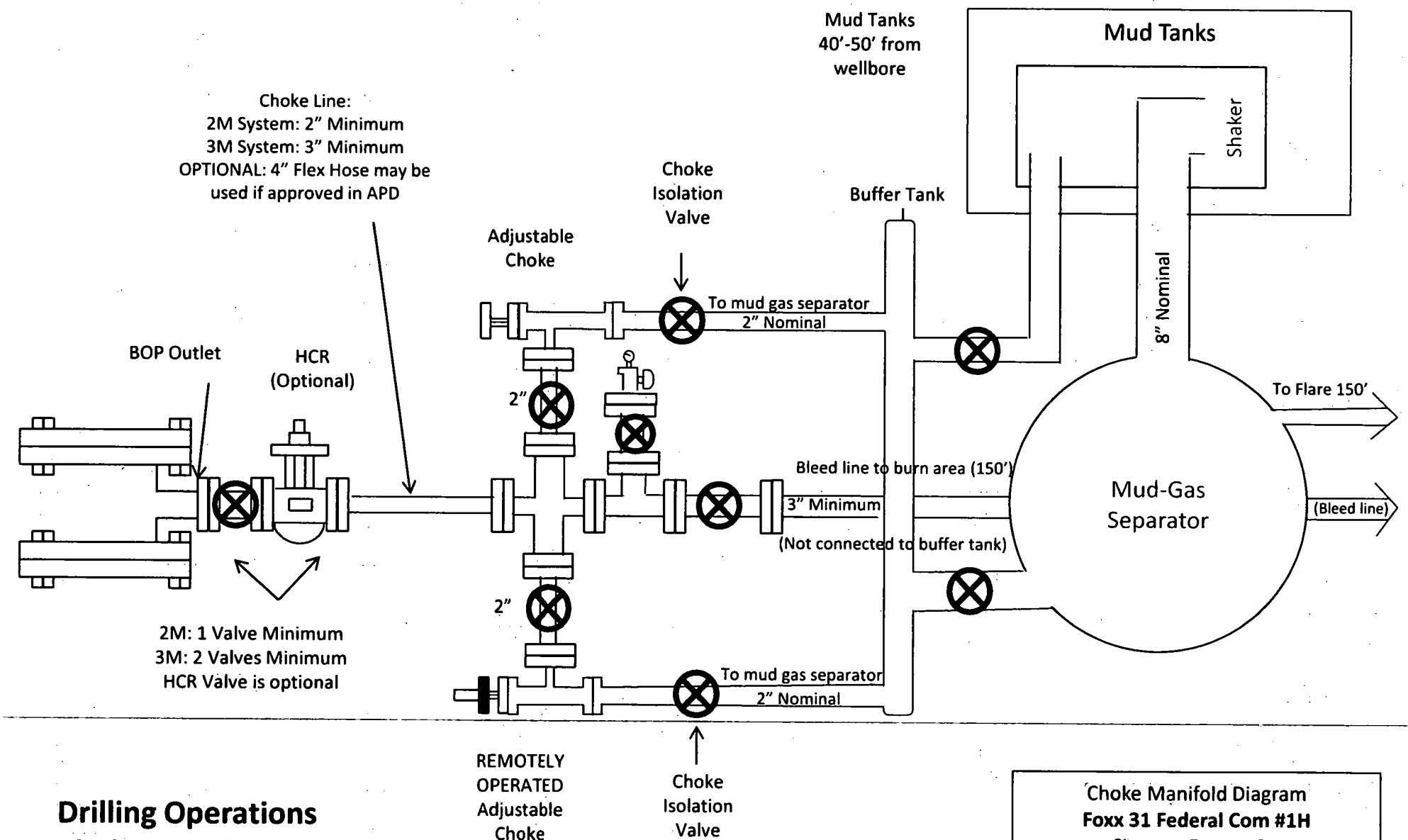
Other proposed operations facets description:

Other proposed operations facets attachment:

Foxx_31_Federal_Com_1H_Gas_Capture_Plan_20171018071622.pdf

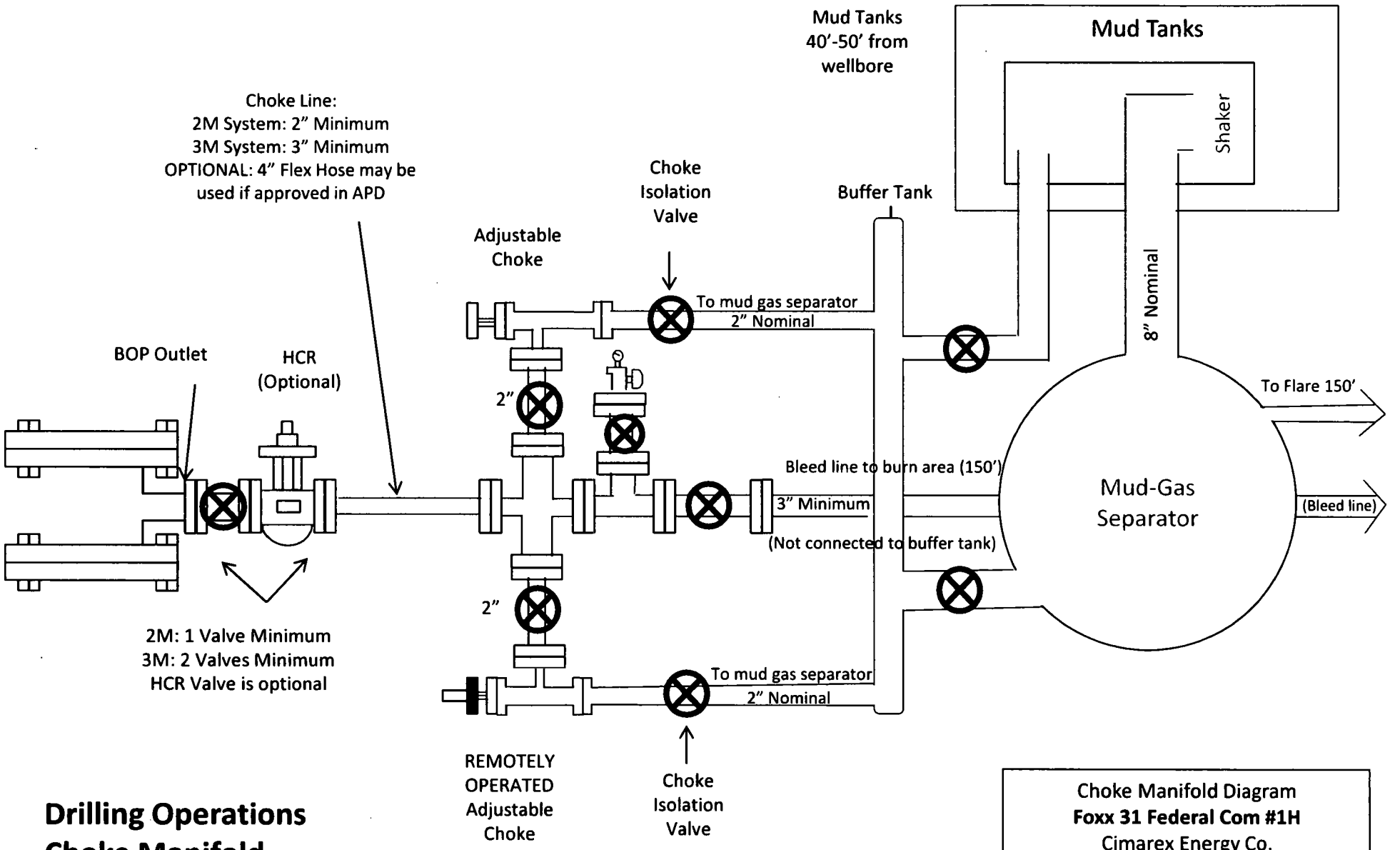
Other Variance attachment:

Foxx_31_Federal_Com_1H_Flex_Hose_20171017134142.pdf
Foxx_31_Federal_Com_1H_Drilling_Plan_20180524134803.pdf



Drilling Operations
Choke Manifold
2M/3M Service

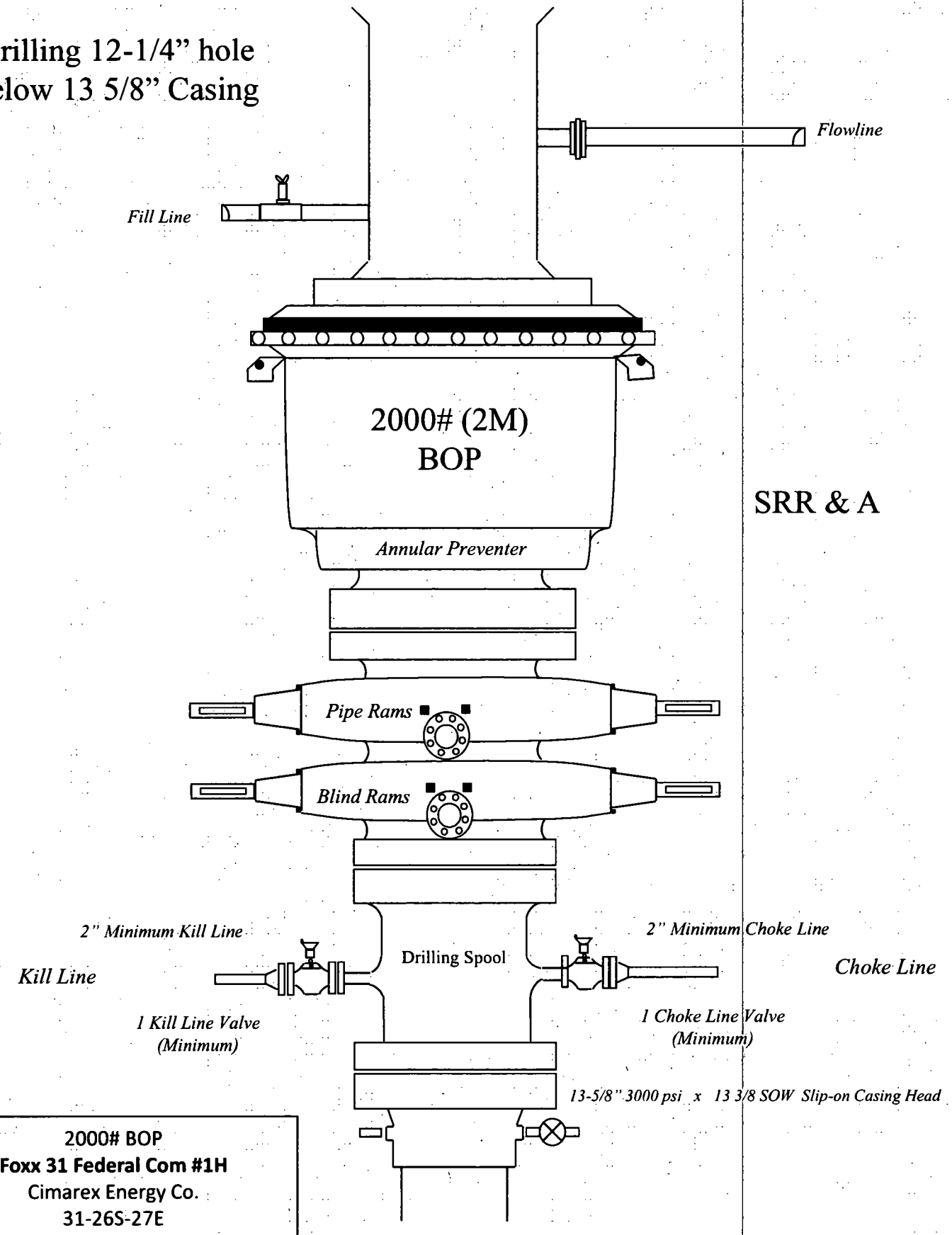
Choke Manifold Diagram
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM



Drilling Operations
Choke Manifold
2M/3M Service

Choke Manifold Diagram
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

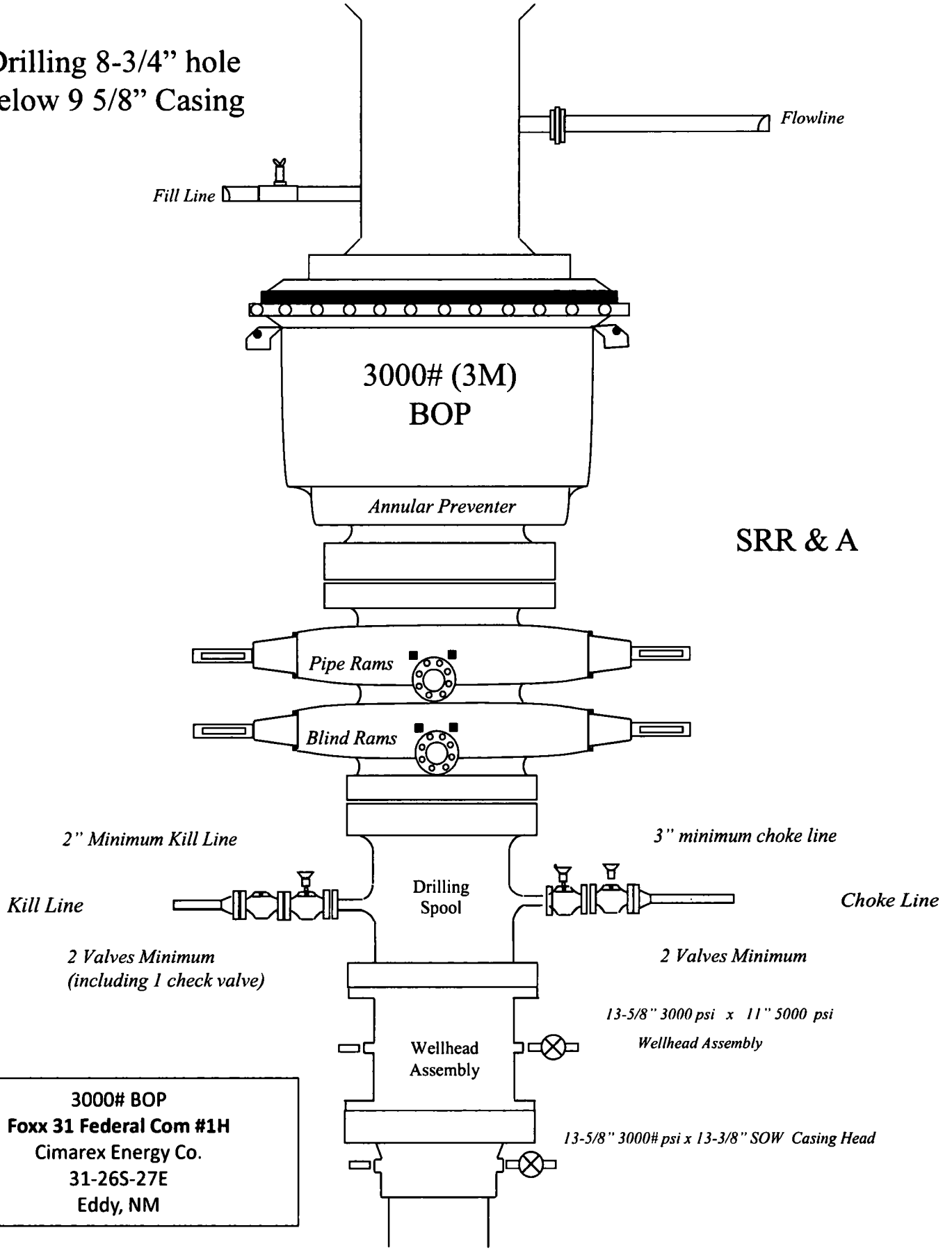
Drilling 12-1/4" hole
below 13 5/8" Casing



SRR & A

2000# BOP
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Drilling 8-3/4" hole
below 9 5/8" Casing



3000# BOP
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Foxx 31 Federal Com 1H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1905	9-5/8"	36.00	J-55	LT&C	2.00	3.48	6.61
8 3/4	0	6616	5-1/2"	17.00	L-80	LT&C	1.99	2.45	2.74
8 3/4	6616	11960	5-1/2"	17.00	L-80	BT&C	1.81	2.23	36.83
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Foxx 31 Federal Com 1H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1905	9-5/8"	36.00	J-55	LT&C	2.00	3.48	6.61
8 3/4	0	6616	5-1/2"	17.00	L-80	LT&C	1.99	2.45	2.74
8 3/4	6616	11960	5-1/2"	17.00	L-80	BT&C	1.81	2.23	36.83
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Foxx 31 Federal Com 1H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1905	9-5/8"	36.00	J-55	LT&C	2.00	3.48	6.61
8 3/4	0	6616	5-1/2"	17.00	L-80	LT&C	1.99	2.45	2.74
8 3/4	6616	11960	5-1/2"	17.00	L-80	BT&C	1.81	2.23	36.83
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Foxx 31 Federal Com 1H

Casing Assumptions

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1905	9-5/8"	36.00	J-55	LT&C	2.00	3.48	6.61
8 3/4	0	6616	5-1/2"	17.00	L-80	LT&C	1.99	2.45	2.74
8 3/4	6616	11960	5-1/2"	17.00	L-80	BT&C	1.81	2.23	36.83
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Hydrogen Sulfide Drilling Operations Plan
Foxx 31 Federal Com #1H
Cimarex Energy Co.
UL: P, Sec. 31, 26S, 27E
Eddy Co., NM

1 All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:

A. Characteristics of H_2S
B. Physical effects and hazards
C. Principal and operation of H2S detectors, warning system and briefing areas.
D. Evacuation procedure, routes and first aid.
E. Proper use of safety equipment & life support systems
F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.

H_2S Detection and Alarm Systems:

A. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.

B. An audio alarm system will be installed on the derrick floor and in the top doghouse.

3 Windsock and/or wind streamers:

A. Windsock at mudpit area should be high enough to be visible.
B. Windsock on the rig floor and / or top doghouse should be high enough to be visible.

4 Condition Flags and Signs

A. Warning sign on access road to location.
B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H_2S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.

5 Well control equipment:

A. See exhibit "E-1"

6 Communication:

A. While working under masks chalkboards will be used for communication.
B. Hand signals will be used where chalk board is inappropriate.
C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drillstem Testing:
No DSTs r cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H_2S has on tubular goods and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

H_2S Contingency Plan
Foxx 31 Federal Com #1H
Cimarex Energy Co.
UL: P, Sec. 31, 26S, 27E
Eddy Co., NM

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must:

- « Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- « Evacuate any public places encompassed by the 100 ppm ROE.
- « Be equipped with H_2S monitors and air packs in order to control the release.
- « Use the "buddy system" to ensure no injuries occur during the 432-620-1975
- « Take precautions to avoid personal injury during this operation.
- « Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- « Have received training in the:
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H_2S and SO_2

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H_2S Contingency Plan Emergency Contacts
Foxx 31 Federal Com #1H
Cimarex Energy Co.
UL: P, Sec. 31, 26S, 27E
Eddy Co., NM

Company Office			
Cimarex Energy Co. of Colorado		800-969-4789	
Co. Office and After-Hours Menu			
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Charlie Pritchard	Drilling Superintendent	432-620-1975	432-238-7084
Roy Shirley	Construction Superintendent		432-634-2136

Artesia	
Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	**575-746-2701**
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283
Carlsbad	
Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
Fire Department	**575-887-3798**
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544
Santa Fe	
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National	
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949
Other	
Boots & Coots IWC	800-256-9688 or 281-931-8884
Cudd Pressure Control	432-699-0139 or 432-563-3356
Halliburton	575-746-2757
B.J. Services	575-746-3569

Schlumberger

Cimarex Foxx 31 Federal Com #1H Rev0 RM 13Oct17 Proposal Geodetic Report

(Non-Def Plan)

Report Date:	October 13, 2017 - 10:16 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	269.980 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Foxx 31 Federal Com #1H / Foxx 31 Federal Com #1H	**TVD Reference Datum:**	RKB
Well:	Foxx 31 Federal Com #1H	**TVD Reference Elevation:**	3233.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3209.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.386 °
Survey Name:	Cimarex Foxx 31 Federal Com #1H Rev0 RM 13Oct17	**Total Gravity Field Strength:**	998.4317mgn (9.80665 Based)
Survey Date:	October 13, 2017	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	152.940 ° / 5681.142 ft / 6.156 / 0.784	**Total Magnetic Field Strength:**	47913.830 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.652 °
Location Lat / Long:	N 32° 0' 15.72266", W 104° 13' 16.43889"	**Declination Date:**	October 13, 2017
Location Grid N/E Y/X:	N 365346.270 ftUS, E 576085.620 ftUS	**Magnetic Declination Model:**	HDGM 2017
CRS Grid Convergence Angle:	0.0594 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99991047	**Grid Convergence Used:**	0.0594 °
Version / Patch:	2.10.565.0	**Total Corr Mag North->Grid North:**	7.3268 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [525' FNL, 270' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	100.00	0.00	180.00	100.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	200.00	0.00	180.00	200.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	300.00	0.00	180.00	300.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	400.00	0.00	180.00	400.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	500.00	0.00	180.00	500.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	600.00	0.00	180.00	600.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	700.00	0.00	180.00	700.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	800.00	0.00	180.00	800.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	900.00	0.00	180.00	900.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	1000.00	0.00	180.00	1000.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
	1100.00	0.00	180.00	1100.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
Nudge 2°/100' DLS	1200.00	0.00	180.00	1200.00	0.00	0.00	0.00	0.00	365346.27	576085.62	N 32 0 15.72	W 104 13 16.44
Salado (Top Salt)	*1245.00*	*0.90*	*180.00*	*1245.00*	*0.00*	*-0.35*	*0.00*	*2.00*	*365345.92*	*576085.62*	*N 32 0 15.72*	*W 104 13 16.44*
	1300.00	2.00	180.00	1299.98	0.00	-1.75	0.00	2.00	365344.53	576085.62	N 32 0 15.71	W 104 13 16.44
	1400.00	4.00	180.00	1399.84	0.00	-6.98	0.00	2.00	365339.29	576085.62	N 32 0 15.65	W 104 13 16.44
	1500.00	6.00	180.00	1499.45	0.01	-15.69	0.00	2.00	365330.58	576085.62	N 32 0 15.57	W 104 13 16.44
Hold Nudge	1600.00	8.00	180.00	1598.70	0.01	-27.88	0.00	2.00	365318.39	576085.62	N 32 0 15.45	W 104 13 16.44
	1700.00	8.00	180.00	1697.73	0.01	-41.80	0.00	0.00	365304.48	576085.62	N 32 0 15.31	W 104 13 16.44
Castille (Base Salt)	*1706.33*	*8.00*	*180.00*	*1704.00*	*0.01*	*-42.68*	*0.00*	*0.00*	*365303.60*	*576085.62*	*N 32 0 15.30*	*W 104 13 16.44*
	1800.00	8.00	180.00	1796.76	0.02	-55.71	0.00	0.00	365290.56	576085.62	N 32 0 15.17	W 104 13 16.44
	1900.00	8.00	180.00	1895.78	0.02	-69.63	0.00	0.00	365276.64	576085.62	N 32 0 15.03	W 104 13 16.44
Bell Canyon (Delaware)	*1929.51*	*8.00*	*180.00*	*1925.00*	*0.03*	*-73.74*	*0.00*	*0.00*	*365272.54*	*576085.62*	*N 32 0 14.99*	*W 104 13 16.44*
	2000.00	8.00	180.00	1994.81	0.03	-83.55	0.00	0.00	365262.73	576085.62	N 32 0 14.90	W 104 13 16.44
	2100.00	8.00	180.00	2093.84	0.03	-97.47	0.00	0.00	365248.81	576085.62	N 32 0 14.76	W 104 13 16.44
	2200.00	8.00	180.00	2192.86	0.04	-111.38	0.00	0.00	365234.90	576085.62	N 32 0 14.62	W 104 13 16.44
	2300.00	8.00	180.00	2291.89	0.04	-125.30	0.00	0.00	365220.98	576085.62	N 32 0 14.48	W 104 13 16.44
	2400.00	8.00	180.00	2390.92	0.05	-139.22	0.00	0.00	365207.06	576085.62	N 32 0 14.35	W 104 13 16.44
	2500.00	8.00	180.00	2489.94	0.05	-153.14	0.00	0.00	365193.15	576085.62	N 32 0 14.21	W 104 13 16.44
	2600.00	8.00	180.00	2588.97	0.06	-167.05	0.00	0.00	365179.23	576085.62	N 32 0 14.07	W 104 13 16.44
	2700.00	8.00	180.00	2688.00	0.06	-180.97	0.00	0.00	365165.32	576085.62	N 32 0 13.93	W 104 13 16.44
	2800.00	8.00	180.00	2787.02	0.07	-194.89	0.00	0.00	365151.40	576085.62	N 32 0 13.79	W 104 13 16.44
	2900.00	8.00	180.00	2886.05	0.07	-208.80	0.00	0.00	365137.48	576085.62	N 32 0 13.66	W 104 13 16.44
Cherry Canyon	*2936.30*	*8.00*	*180.00*	*2922.00*	*0.07*	*-213.86*	*0.00*	*0.00*	*365132.43*	*576085.62*	*N 32 0 13.61*	*W 104 13 16.44*
	3000.00	8.00	180.00	2985.08	0.08	-222.72	0.00	0.00	365123.57	576085.62	N 32 0 13.52	W 104 13 16.44
	3100.00	8.00	180.00	3084.10	0.08	-236.64	0.00	0.00	365109.65	576085.62	N 32 0 13.38	W 104 13 16.44
	3200.00	8.00	180.00	3183.13	0.09	-250.56	0.00	0.00	365095.74	576085.62	N 32 0 13.24	W 104 13 16.44
	3300.00	8.00	180.00	3282.16	0.09	-264.47	0.00	0.00	365081.82	576085.62	N 32 0 13.11	W 104 13 16.44
	3400.00	8.00	180.00	3381.18	0.10	-278.39	0.00	0.00	365067.90	576085.62	N 32 0 12.97	W 104 13 16.44
	3500.00	8.00	180.00	3480.21	0.10	-292.31	0.00	0.00	365053.99	576085.62	N 32 0 12.83	W 104 13 16.44
	3600.00	8.00	180.00	3579.24	0.11	-306.23	0.00	0.00	365040.07	576085.62	N 32 0 12.69	W 104 13 16.44
	3700.00	8.00	180.00	3678.26	0.11	-320.14	0.00	0.00	365026.16	576085.62	N 32 0 12.55	W 104 13 16.44
	3800.00	8.00	180.00	3777.29	0.12	-334.06	0.00	0.00	365012.24	576085.62	N 32 0 12.42	W 104 13 16.44
	3900.00	8.00	180.00	3876.32	0.12	-347.98	0.00	0.00	364998.32	576085.62	N 32 0 12.28	W 104 13 16.44
	4000.00	8.00	180.00	3975.34	0.13	-361.90	0.00	0.00	364984.41	576085.62	N 32 0 12.14	W 104 13 16.44
Brushy Canyon	*4076.40*	*8.00*	*180.00*	*4051.00*	*0.13*	*-372.53*	*0.00*	*0.00*	*364973.78*	*576085.62*	*N 32 0 12.04*	*W 104 13 16.44*
	4100.00	8.00	180.00	4074.37	0.13	-375.81	0.00	0.00	364970.49	576085.62	N 32 0 12.00	W 104 13 16.44
	4200.00	8.00	180.00	4173.40	0.14	-389.73	0.00	0.00	364956.58	576085.62	N 32 0 11.87	W 104 13 16.44
	4300.00	8.00	180.00	4272.43	0.14	-403.65	0.00	0.00	364942.66	576085.62	N 32 0 11.73	W 104 13 16.44
	4400.00	8.00	180.00	4371.45	0.15	-417.56	0.00	0.00	364928.74	576085.62	N 32 0 11.59	W 104 13 16.44
	4500.00	8.00	180.00	4470.48	0.15	-431.48	0.00	0.00	364914.83	576085.62	N 32 0 11.45	W 104 13 16.44
	4600.00	8.00	180.00	4569.51	0.16	-445.40	0.00	0.00	364900.91	576085.62	N 32 0 11.32	W 104 13 16.44
	4700.00	8.00	180.00	4668.53	0.16	-459.32	0.00	0.00	364887.00	576085.62	N 32 0 11.18	W 104 13 16.44
	4800.00	8.00	180.00	4767.56	0.17	-473.23	0.00	0.00	364873.08	576085.62	N 32 0 11.04	W 104 13 16.44
	4900.00	8.00	180.00	4866.59	0.17	-487.15	0.00	0.00	364859.16	576085.62	N 32 0 10.90	W 104 13 16.44
	5000.00	8.00	180.00	4965.61	0.17	-501.07	0.00	0.00	364845.25	576085.62	N 32 0 10.76	W 104 13 16.44
	5100.00	8.00	180.00	5064.64	0.18	-514.99	0.00	0.00	364831.33	576085.62	N 32 0 10.63	W 104 13 16.45
	5200.00	8.00	180.00	5163.67	0.18	-528.90	0.00	0.00	364817.42	576085.62	N 32 0 10.49	W 104 13 16.45
	5300.00	8.00	180.00	5262.69	0.19	-542.82	0.00	0.00	364803.50	576085.62	N 32 0 10.35	W 104 13 16.45
Brushy Canyon Lower	*5312.43*	*8.00*	*180.00*	*5275.00*	*0.19*	*-544.55*	*0.00*	*0.00*	*364801.77*	*576085.62*	*N 32 0 10.33*	*W 104 13 16.45*
	5400.00	8.00	180.00	5361.72	0.19	-556.74	0.00	0.00	364789.58	576085.62	N 32 0 10.21	W 104 13 16.45
	5500.00	8.00	180.00	5460.75	0.20	-570.66	0.00	0.00	364775.67	576085.62	N 32 0 10.08	W 104 13 16.45
Bone Spring	*5534.50*	*8.00*	*180.00*	*5495.00*	*0.20*	*-575.47*	*0.00*	*0.00*	*364770.85*	*576085.62*	*N 32 0 10.03*	*W 104 13 16.45*
	5600.00	8.00	180.00	5559.77	0.20	-584.57	0.00	0.00	364761.75	576085.62	N 32 0 9.94	W 104 13 16.45
Bone Spring "A" Shale	*5657.79*	*8.00*	*180.00*	*5617.00*	*0.21*	*-592.61*	*0.00*	*0.00*	*364753.71*	*576085.62*	*N 32 0 9.86*	*W 104 13 16.45*
	5700.00	8.00	180.00	5658.80	0.21	-598.49	0.00	0.00	364747.84	576085.62	N 32 0 9.80	W 104 13 16.45
	5800.00	8.00	180.00	5757.83	0.21	-612.41	0.00	0.00	364733.92	576085.62	N 32 0 9.66	W 104 13 16.45
	5900.00	8.00	180.00	5856.85	0.22	-626.32	0.00	0.00	364720.00	576085.62	N 32 0 9.52	W 104 13 16.45
	6000.00	8.00	180.00	5955.88	0.22	-640.24	0.00	0.00	364706.09	576085.62	N 32 0 9.39	W 104 13 16.45
Drop to Vertical 2°/100' DLS	6044.55	8.00	180.00	6000.00	0.23	-646.44	0.00	0.00	364699.89	576085.62	N 32 0 9.33	W 104 13 16.45

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6100.00	6.89	180.00	6054.98	0.23	-653.63	0.00	2.00	364692.70	576085.62	N 32 0 9.25	W 104 13 16.45
Bone Spring 'C' Shale	*6171.44*	*5.46*	*180.00*	*6126.00*	*0.23*	*-681.31*	*0.00*	*2.00*	*364685.02*	*576085.62*	*N 32 0 9.18*	*W 104 13 16.45*
	6200.00	4.89	180.00	6154.45	0.23	-683.89	0.00	2.00	364682.44	576085.62	N 32 0 9.15	W 104 13 16.45
	6300.00	2.89	180.00	6254.21	0.23	-670.68	0.00	2.00	364675.66	576085.62	N 32 0 9.09	W 104 13 16.45
	6400.00	0.89	180.00	6354.15	0.24	-673.98	0.00	2.00	364672.36	576085.62	N 32 0 9.05	W 104 13 16.45
Hold	6444.55	0.00	180.00	6398.70	0.24	-674.32	0.00	2.00	364672.01	576085.62	N 32 0 9.05	W 104 13 16.45
1st Bone Spring Ss	*6490.85*	*0.00*	*180.00*	*6445.00*	*0.24*	*-674.32*	*0.00*	*0.00*	*364672.01*	*576085.62*	*N 32 0 9.05*	*W 104 13 16.45*
	6500.00	0.00	180.00	6454.15	0.24	-674.32	0.00	0.00	364672.01	576085.62	N 32 0 9.05	W 104 13 16.45
	6600.00	0.00	180.00	6554.15	0.24	-674.32	0.00	0.00	364672.01	576085.62	N 32 0 9.05	W 104 13 16.45
KOP - Build 12°/100' DLS	6615.80	0.00	180.00	6569.95	0.24	-674.32	0.00	0.00	364672.01	576085.62	N 32 0 9.05	W 104 13 16.45
	6700.00	10.10	180.00	6653.71	0.24	-681.73	0.00	12.00	364664.61	576085.62	N 32 0 8.98	W 104 13 16.45
	6800.00	22.10	180.00	6749.61	0.25	-709.41	0.00	12.00	364636.92	576085.62	N 32 0 8.70	W 104 13 16.45
	6900.00	34.10	180.00	6837.66	0.26	-758.44	0.00	12.00	364589.90	576085.62	N 32 0 8.24	W 104 13 16.45
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
	7000.00	46.10	180.00	6914.01	0.29	-820.74	0.00	12.00	364525.61	576085.62	N 32 0 7.60	W 104 13 16.45
Build & Turn 12°/100' DLS	7007.47	47.00	180.00	6919.15	0.29	-826.16	0.00	12.00	364520.19	576085.62	N 32 0 7.55	W 104 13 16.45
	7100.00	47.99	195.02	6981.86	9.25	-893.40	-8.94	12.00	364452.95	576076.68	N 32 0 6.88	W 104 13 16.55
	7200.00	51.14	210.26	7046.94	38.63	-963.16	-38.30	12.00	364383.19	576047.33	N 32 0 6.19	W 104 13 16.90
	7300.00	56.07	223.88	7106.44	87.20	-1026.93	-86.85	12.00	364319.44	575998.78	N 32 0 5.56	W 104 13 17.46
	7400.00	62.32	235.82	7157.77	152.85	-1081.91	-152.47	12.00	364264.46	575933.17	N 32 0 5.02	W 104 13 18.22
	7500.00	69.48	246.39	7198.68	232.69	-1125.70	-232.29	12.00	364220.68	575853.35	N 32 0 4.59	W 104 13 19.15
	7600.00	77.21	255.97	7227.38	323.24	-1156.39	-322.84	12.00	364189.99	575762.81	N 32 0 4.28	W 104 13 20.20
	7700.00	85.28	264.97	7242.62	420.55	-1172.64	-420.14	12.00	364173.74	575665.52	N 32 0 4.12	W 104 13 21.33
Landing Point	7756.97	89.93	269.98	7245.00	477.38	-1175.14	-476.97	12.00	364171.24	575608.70	N 32 0 4.10	W 104 13 21.99
	7800.00	89.93	269.98	7245.05	520.41	-1175.15	-520.00	0.00	364171.22	575565.67	N 32 0 4.10	W 104 13 22.49
	7900.00	89.93	269.98	7245.17	620.41	-1175.19	-620.00	0.00	364171.19	575465.68	N 32 0 4.10	W 104 13 23.65
	8000.00	89.93	269.98	7245.29	720.41	-1175.22	-720.00	0.00	364171.16	575365.69	N 32 0 4.10	W 104 13 24.81
	8100.00	89.93	269.98	7245.41	820.41	-1175.25	-820.00	0.00	364171.13	575265.70	N 32 0 4.10	W 104 13 25.98
	8200.00	89.93	269.98	7245.53	920.41	-1175.28	-920.00	0.00	364171.10	575165.71	N 32 0 4.10	W 104 13 27.14
	8300.00	89.93	269.98	7245.65	1020.41	-1175.31	-1020.00	0.00	364171.06	575065.72	N 32 0 4.10	W 104 13 28.30
	8400.00	89.93	269.98	7245.77	1120.41	-1175.34	-1120.00	0.00	364171.03	574965.73	N 32 0 4.10	W 104 13 29.46
	8500.00	89.93	269.98	7245.89	1220.41	-1175.38	-1220.00	0.00	364171.00	574865.74	N 32 0 4.10	W 104 13 30.62
	8600.00	89.93	269.98	7246.01	1320.41	-1175.41	-1320.00	0.00	364170.97	574765.74	N 32 0 4.10	W 104 13 31.78
	8700.00	89.93	269.98	7246.12	1420.41	-1175.44	-1420.00	0.00	364170.94	574665.75	N 32 0 4.11	W 104 13 32.94
	8800.00	89.93	269.98	7246.24	1520.41	-1175.47	-1520.00	0.00	364170.91	574565.76	N 32 0 4.11	W 104 13 34.10
	8900.00	89.93	269.98	7246.36	1620.41	-1175.50	-1620.00	0.00	364170.87	574465.77	N 32 0 4.11	W 104 13 35.27
	9000.00	89.93	269.98	7246.48	1720.41	-1175.54	-1720.00	0.00	364170.84	574365.78	N 32 0 4.11	W 104 13 36.43
	9100.00	89.93	269.98	7246.60	1820.41	-1175.57	-1820.00	0.00	364170.81	574265.79	N 32 0 4.11	W 104 13 37.59
	9200.00	89.93	269.98	7246.72	1920.41	-1175.60	-1920.00	0.00	364170.78	574165.80	N 32 0 4.11	W 104 13 38.75
	9300.00	89.93	269.98	7246.84	2020.41	-1175.63	-2020.00	0.00	364170.75	574065.81	N 32 0 4.11	W 104 13 39.91
	9400.00	89.93	269.98	7246.96	2120.41	-1175.66	-2120.00	0.00	364170.71	573965.82	N 32 0 4.11	W 104 13 41.07
	9500.00	89.93	269.98	7247.08	2220.41	-1175.69	-2220.00	0.00	364170.68	573865.83	N 32 0 4.11	W 104 13 42.23
	9600.00	89.93	269.98	7247.19	2320.41	-1175.73	-2320.00	0.00	364170.65	573765.84	N 32 0 4.11	W 104 13 43.39
	9700.00	89.93	269.98	7247.31	2420.41	-1175.76	-2420.00	0.00	364170.62	573665.85	N 32 0 4.11	W 104 13 44.56
	9800.00	89.93	269.98	7247.43	2520.41	-1175.79	-2520.00	0.00	364170.59	573565.86	N 32 0 4.11	W 104 13 45.72
	9900.00	89.93	269.98	7247.55	2620.41	-1175.82	-2620.00	0.00	364170.56	573465.86	N 32 0 4.11	W 104 13 46.88
	10000.00	89.93	269.98	7247.67	2720.41	-1175.85	-2720.00	0.00	364170.52	573365.87	N 32 0 4.11	W 104 13 48.04
	10100.00	89.93	269.98	7247.79	2820.41	-1175.89	-2820.00	0.00	364170.49	573265.88	N 32 0 4.11	W 104 13 49.20
	10200.00	89.93	269.98	7247.91	2920.41	-1175.92	-2920.00	0.00	364170.46	573165.89	N 32 0 4.12	W 104 13 50.36
	10300.00	89.93	269.98	7248.03	3020.41	-1175.95	-3020.00	0.00	364170.43	573065.90	N 32 0 4.12	W 104 13 51.52
	10400.00	89.93	269.98	7248.15	3120.41	-1175.98	-3120.00	0.00	364170.40	572965.91	N 32 0 4.12	W 104 13 52.68
	10500.00	89.93	269.98	7248.26	3220.41	-1176.01	-3220.00	0.00	364170.36	572865.92	N 32 0 4.12	W 104 13 53.84
	10600.00	89.93	269.98	7248.38	3320.41	-1176.04	-3319.99	0.00	364170.33	572765.93	N 32 0 4.12	W 104 13 55.01
	10700.00	89.93	269.98	7248.50	3420.41	-1176.08	-3419.99	0.00	364170.30	572665.94	N 32 0 4.12	W 104 13 56.17
	10800.00	89.93	269.98	7248.62	3520.41	-1176.11	-3519.99	0.00	364170.27	572565.95	N 32 0 4.12	W 104 13 57.33
	10900.00	89.93	269.98	7248.74	3620.41	-1176.14	-3619.99	0.00	364170.24	572465.96	N 32 0 4.12	W 104 13 58.49
	11000.00	89.93	269.98	7248.86	3720.40	-1176.17	-3719.99	0.00	364170.21	572365.97	N 32 0 4.12	W 104 13 59.65
	11100.00	89.93	269.98	7248.98	3820.40	-1176.20	-3819.99	0.00	364170.17	572265.98	N 32 0 4.12	W 104 14 0.81
	11200.00	89.93	269.98	7249.10	3920.40	-1176.24	-3919.99	0.00	364170.14	572165.98	N 32 0 4.12	W 104 14 1.97
	11300.00	89.93	269.98	7249.22	4020.40	-1176.27	-4019.99	0.00	364170.11	572065.99	N 32 0 4.12	W 104 14 3.13
	11400.00	89.93	269.98	7249.33	4120.40	-1176.30	-4119.99	0.00	364170.08	571966.00	N 32 0 4.12	W 104 14 4.30
	11500.00	89.93	269.98	7249.45	4220.40	-1176.33	-4219.99	0.00	364170.05	571866.01	N 32 0 4.12	W 104 14 5.46
	11600.00	89.93	269.98	7249.57	4320.40	-1176.36	-4319.99	0.00	364170.01	571766.02	N 32 0 4.12	W 104 14 6.62
	11700.00	89.93	269.98	7249.69	4420.40	-1176.40	-4419.99	0.00	364169.98	571666.03	N 32 0 4.12	W 104 14 7.78
	11800.00	89.93	269.98	7249.81	4520.40	-1176.43	-4519.99	0.00	364169.95	571566.04	N 32 0 4.12	W 104 14 8.94
	11900.00	89.93	269.98	7249.93	4620.40	-1176.46	-4619.99	0.00	364169.92	571466.05	N 32 0 4.13	W 104 14 10.10
Cimarex Foxx 31 Federal Com #1H - PBHL [400' FSL, 330' FWL]	11959.37	89.93	269.98	7250.00	4679.78	-1176.48	-4679.37	0.00	364169.90	571406.68	N 32 0 4.13	W 104 14 10.79

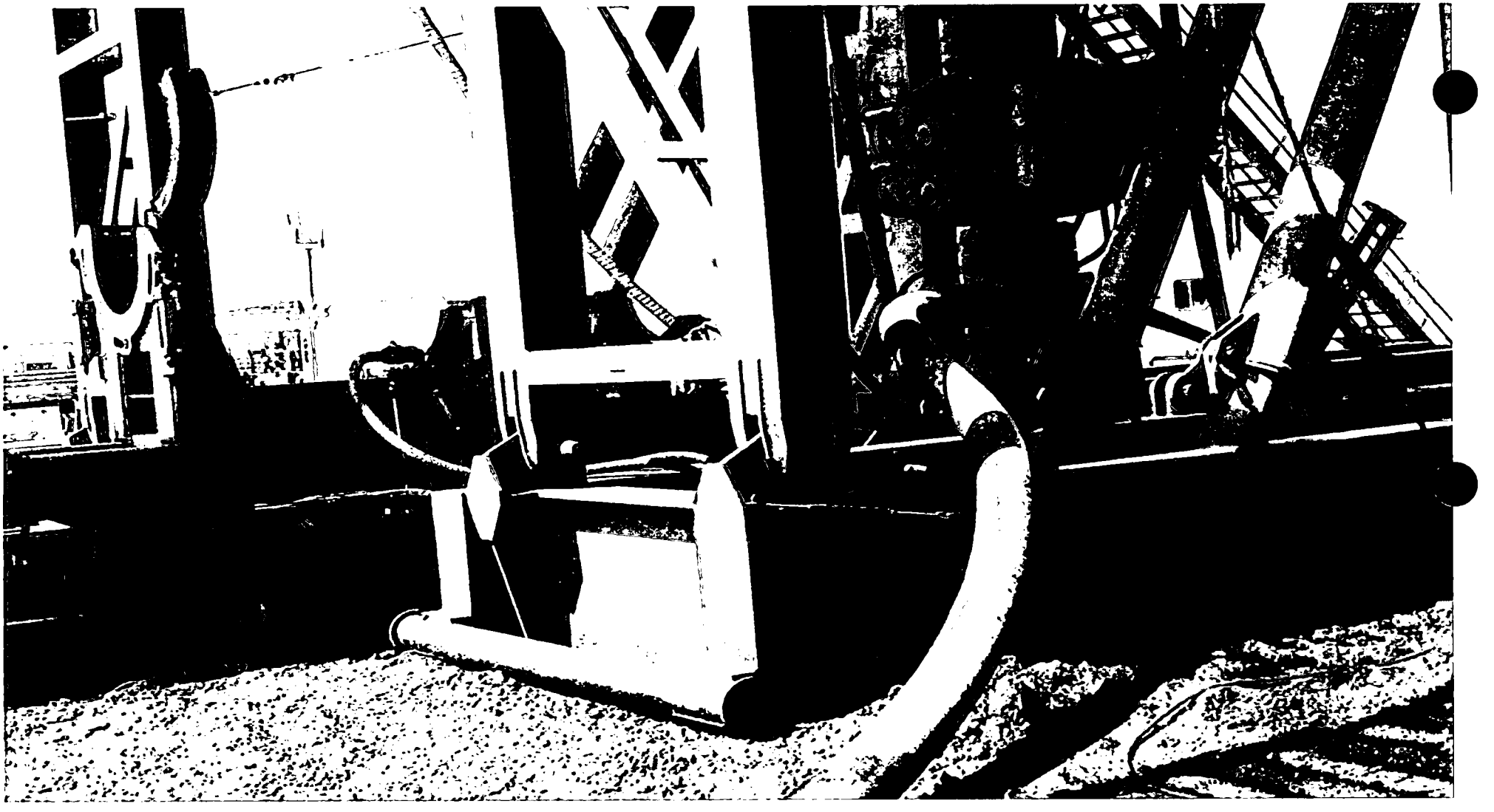
Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG-Depth Only	Original Borehole / Cimarex Foxx 31 Federal Com #1H Rev0 RM 13Oct17
	1	24.000	11959.374	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Foxx 31 Federal Com #1H Rev0 RM

Co-Flex Hose
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM



Co-Flex Hose Hydrostatic Test
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
Oderco Inc	odyd-271

HOSE SPECIFICATIONS

Type: Stainless Steel Armor Choke & Kill Hose	Hose Length: 45'ft.
I.D. 4 *INCHES*	O.D. 9 *INCHES*

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 *PSI*	15,000 *PSI*	0 *PSI*

COUPLINGS

Stem Part No.	Ferrule No.
OKC OKC	OKC OKC
Type of Coupling: Swage-It	

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
15 *MIN.*	0 *PSI*
Hose Assembly Serial Number: 79793	**Hose Serial Number:** OKC
Comments:	

Date:	Tested:	Approved:
3/8/2011		

Midwest Hose & Specialty, Inc.

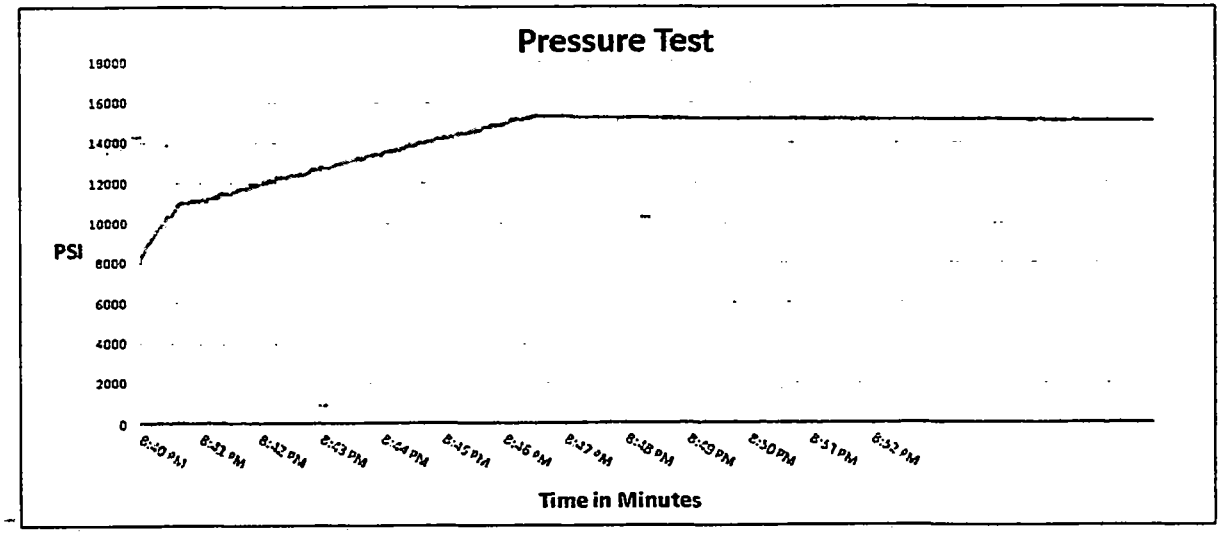
Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
C & K	45'	4 1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
4"	6.09"	6.38"	6.25"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	5544	79793



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 Minutes		15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Zac Mcconnell*

Approved By: *Kim Thomas*

Co-Flex Hose Hydrostatic Test
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Co-Flex Hose
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: DEM	PO ODYD-271

SPECIFICATIONS

Sales Order 79793	Dated: 3/8/2011

We hereby cerify that the material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards

Supplier:
Midwest Hose & Specialty, Inc.
10640 Tanner Road
Houston, Texas 77041

Comments:

Approved:	Date: 3/8/2011

Midwest Hose & Specialty, Inc.

Co-Flex Hose
Foxx 31 Federal Com #1H
Cimarex Energy Co.
31-26S-27E
Eddy, NM

Specification Sheet
Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets.The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unibolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

P.O. Box 96558 – 1421 S.E. 29th St. Oklahoma City, OK 73143 • (405) 670-6718 • Fax: (405) 670-6816

1. Geological Formations

TVD of target 7,250 Pilot Hole TD N/A
MD at TD 11,960 Deepest expected fresh water

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone	Hazards
Rustler	0	N/A	
Salado (top Salt)	1245	N/A	
Castille (Base Salt)	1704	N/A	
Bell Canyon (Delaware)	1925	N/A	
Cherry Canyon	2922	N/A	
Brushy Canyon	4051	N/A	
Brushy Canyon Lower	5275	N/A	
Bone Spring	5495	N/A	
Bone Spring A Shale	5617	N/A	
Bone Spring C Shale	6126	N/A	
1st Bone Spring	6445	N/A	
2nd Bone Spring	6907	Hydrocarbons	
2nd BS Ss Horz Target	7217	Hydrocarbons	
3rd BS Limestone	7429	N/A	

2. Casing Program

Hole Size	Casing Depth From	Casing Depth To	Casing Size	Weight (lb/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
17 1/2	0	400	13-3/8"	48.00	H-40/J-55 Hybrid	ST&C	4.04	9.45	16.77
12 1/4	0	1905	9-5/8"	36.00	J-55	LT&C	2.00	3.48	6.61
8 3/4	0	6616	5-1/2"	17.00	L-80	LT&C	1.99	2.45	2.74
8 3/4	6616	11960	5-1/2"	17.00	L-80	BT&C	1.81	2.23	36.83
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet

TVD was used on all calculations.
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	N
Is well within the designated 4 string boundary.	N
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	N
Is 2nd string set 100' to 600' below the base of salt?	N
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	N
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	N

3. Cementing Program

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	61	13.50	1.72	9.15	15.5	Lead: Class C + Bentonite
	195	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Intermediate	362	12.90	1.88	9.65	12	Lead: 35:65 (Poz:C) + Salt + Bentonite
	112	14.80	1.34	6.32	9.5	Tail: Class C + LCM
Production	447	10.50	3.45	22.18	N/A	Lead: NeoCem
	1143	14.20	1.30	5.86	14:30	Tail: 50:50 (Poz:H) + Salt + Bentonite + Fluid Loss + Dispersant + SMS

Casing String	TOC	% Excess
Surface	0	31
Intermediate	0	50
Production	1705	17

4. Pressure Control Equipment

	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type		Tested To
12 1/4	13 5/8	2M	Annular	X	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram	X	
			Other		
8 3/4	13 5/8	3M	Annular	X	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	X	
			Other		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?

5. Mud Program

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' to 400'	FW Spud Mud	8.30 - 8.80	30-32	N/C
400' to 1905'	Brine Water	9.70 - 10.20	30-32	N/C
1905' to 11960'	FW/Cut Brine	8.70 - 9.20	30-32	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

	Logging, Coring and Testing
X	Will run GR/CNL fromTD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No logs are planned based on well control or offset log information.
	Drill stem test?
	Coring?

Additional Logs Planned	Interval

7. Drilling Conditions

Condition	
BH Pressure at deepest TVD	3468 psi
Abnormal Temperature	No

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

X	H2S is present
X	H2S plan is attached

8. Other Facets of Operation

9. Wellhead

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 5/8" BOP/BOPE system with a minimum working pressure of 3000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3000 psi test. Annular will be tested to 50% of working pressure. The pressure test will be repeated at least every 30 days, as per Onshore Order No. 2.

The multi-bowl wellhead will be installed by vendor's representative. A copy of the installation instructions has been sent to the BLM field office.

The wellhead will be installed by a third-party welder while being monitored by the wellhead vendor representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 3000 psi.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

The casing string utilizing steel body pack-off will be tested to 70% of casing burst.

If well conditions dictate conventional slips will be set and BOPE will be tested to appropriate pressures based on permitted pressure requirements.

APD ID: 10400023465
Submission Date: 10/19/2017

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM
Well Number: 1H

Well Type: OIL WELL
Well Work Type: Drill

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Foxx_31_Federal_Com_1H_Existing_Road_20171017140843.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

ROW ID(s)

ID: NM132552

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Foxx_31_Federal_Com_1H_One_mile_radius_and_existing_wells_20171017140910.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Production Facility is On-Pad and is already existing.

Production Facilities map:

Foxx_31_Federal_Com_1H_Existing_Battery_20171017141135.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: INTERMEDIATE/PRODUCTION CASING, SURFACE CASING

Water source type: MUNICIPAL

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Permit Number:

Source land ownership: FEDERAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 5000

Source volume (acre-feet): 0.6444655

Source volume (gal): 210000

Water source and transportation map:

Foxx_31_Federal_Com_1H_Drilling_Water_Source_Route_20171017141524.pdf

Water source comments:

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: The drilling and testing operations will be conducted on a watered and compacted native soil grade. Soft spots will be covered with scoria, free of large rocks (3" diameter). Upon completion as a commercial producer the location will be covered with scoria, free of large rocks (3" dia.) from an existing privately owned gravel pit.
Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations

Amount of waste: 32500 pounds

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL
Disposal type description:

Disposal location description: Windmill Spraying Service hauls trash to Lea County Landfill

Waste type: DRILLING

Waste content description: Drilling Fluids, drill cuttings, water and other waste produced from the well during drilling operations.
Amount of waste: 15000 barrels

Waste disposal frequency : Weekly

Safe containment description: N/A

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Disposal type description:

Disposal location description: Haul to R360 commercial Disposal

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Foxx_31_Federal_Com_1H_Wellsite_Layout_20171017142018.pdf

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Comments: Well Site is already existing

Section 10 - Plans for Surface Reclamation

Type of disturbance: No New Surface Disturbance **Multiple Well Pad Name:** FOXX 31 FEDERAL COM

Multiple Well Pad Number: 1H-4H

Recontouring attachment:

Foxx_31_Federal_Com_1H_Interim_Reclaim_20171017160634.pdf

Drainage/Erosion control construction: To control and prevent potentially contaminated precipitation from leaving the pad site, a perimeter berm and settlement pond will be installed. Contaminated water will be removed from pond, stored in waste tanks, and disposed of at a state approved facility. Standing water or puddles will not be allowed. Drainage ditches would be established and maintained on the pad and along access roads to divert water away from operations. Natural drainage areas disturbed during construction would be re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured to near original condition prior to construction. Erosion Control Best Management Practices would be used where necessary and consist of seeding, fiber rolls, water bars, silt fences, and temporary diversion dikes. Areas disturbed during construction that are no longer needed for operations would be obliterated, re-contoured, and reclaimed to near original condition to re-establish natural drainage.

Drainage/Erosion control reclamation: All disturbed and re-contoured areas would be reseeded according to specifications. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage.

Well pad proposed disturbance (acres):	**Well pad interim reclamation (acres):** 3.4	**Well pad long term disturbance (acres):** 4.24
Road proposed disturbance (acres):	**Road interim reclamation (acres):** 27	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres):	**Powerline interim reclamation (acres):**	**Powerline long term disturbance (acres):**
Pipeline proposed disturbance (acres):	**Pipeline interim reclamation (acres):** 2.455234	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres):	**Other interim reclamation (acres):** 1.4	**Other long term disturbance (acres):** 0
Total proposed disturbance:	**Total interim reclamation:** 34.255234	**Total long term disturbance:** 4.24

Disturbance Comments: No New Disturbance. Power, Gas, SWD, Road, Well Pad, Battery are already existing. Battery Located on Pad.

Reconstruction method: After well plugging, all disturbed areas would be returned to the original contour or a contour that blends with the surrounding landform including roads unless the surface owner requests that they be left intact. In consultation with the surface owners it will be determined if any gravel or similar materials used to reinforce an area are to be removed, buried, or left in place during final reclamation. Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated. As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching, or fertilizing. Reclamation, Re-vegetation, and Drainage: All disturbed and re-contoured areas would be reseeded using techniques outlined under Phase I and II of this plan or as specified by the land owner. Approved seed mixtures would be certified weed free and consist of grasses, forbs, or shrubs similar to the surrounding area. Compacted soil areas may need to be obliterated and reclaimed to near natural conditions by re-contouring all slopes to facilitate and re-establish natural drainage

Topsoil redistribution: Salvaged topsoil, if any, would be re-spread evenly over the surfaces to be re-vegetated

Soil treatment: As necessary, the soil surface would be prepared to provide a seedbed for re-establishment of desirable vegetation. Site preparation may include gouging, scarifying, dozer track-walking, mulching or fertilizing

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used?

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project?

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation?

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: N/A

Weed treatment plan attachment:

Monitoring plan description: N/A

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: OTHER

Describe: No New Disturbance

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Operator Name: CIMAREX ENERGY COMPANY

Well Name: FOXX 31 FEDERAL COM **Well Number:** 1H

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: Onsite with Jesse Rice (BLM) and Barry Hunt (Cimarex). 10/22/2013. V-door Southeast. Top soil North, battery west, Frac pad northwest corner. Interim Reclaim: North East and south. Access Road from southeast corner, north and then east.

Other SUPO Attachment

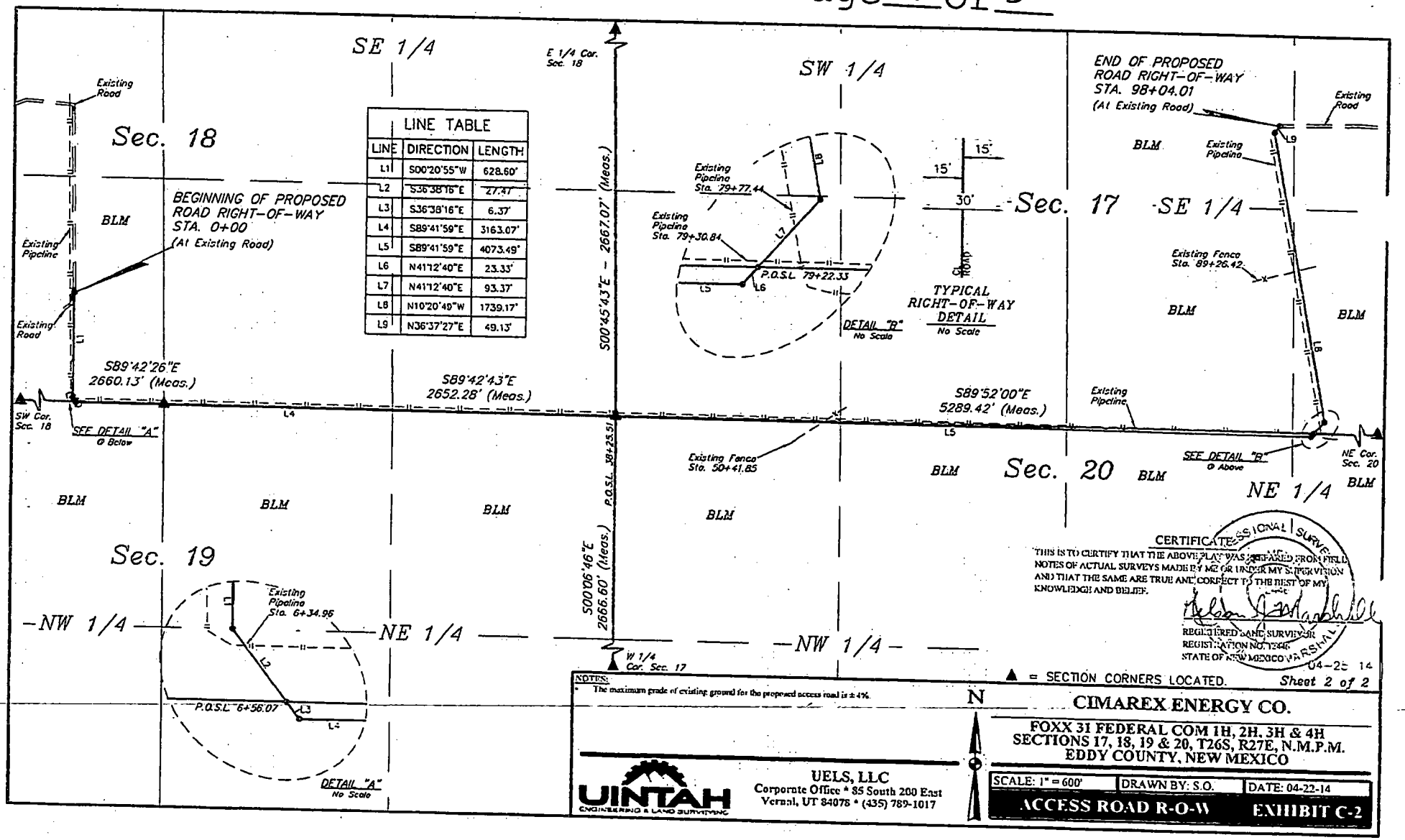
Foxx_31_Federal_Com_1H_Public_Access_20171017151510.pdf

Foxx_31_Federal_Com_1H_Road_Description_20171017151511.pdf

Foxx_31_Federal_Com_1H_Temp_Fresh_Water_Route_20171017151512.pdf

Foxx_31_Federal_Com_1H_SUPO_20171019072501.pdf

EXHIBIT B
Page 1 of 3



CERTIFICATE:

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

NEW MEXICO PROFESSIONAL SURVEYOR

REGISTERED LAND SURVEYOR
REGISTRATION NO. 12446
STATE OF NEW MEXICO

04-25-14

NOTES:
* The maximum grade of existing ground for the proposed access road is ± 4%.

▲ = SECTION CORNERS LOCATED.

Sheet 2 of 2

N

CIMAREX ENERGY CO.

FOXX 31 FEDERAL COM 1H, 2H, 3H & 4H
SECTIONS 17, 18, 19 & 20, T26S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SCALE: 1" = 600'	DRAWN BY: S.O.	DATE: 04-22-14
ACCESS ROAD R-O-W		EXHIBIT C-2

ROAD RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE SE 1/4 SW 1/4 OF SECTION 18, T26S, R27E, N.M.P.M., WHICH BEARS N38°54'04"W 839.42' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 18, THENCE S00°20'55"W 628.60'; THENCE S36°38'16"E 27.47' TO A POINT ON THE SOUTH LINE OF THE SE 1/4 SW 1/4 OF SAID SECTION 18, WHICH BEARS N89°42'26"W 514.58' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 18, THENCE S36°38'16"E 6.37'; THENCE S89°41'59"E 3163.07' TO A POINT ON THE EAST LINE OF THE NE 1/4 NE 1/4 OF SECTION 19, T26S, R27E, N.M.P.M., WHICH BEARS S00°06'46"E 5.73' FROM THE NORTHEAST CORNER OF SAID SECTION 19, THENCE S89°41'59"E 4073.49'; THENCE N41°12'40"E 23.33' TO A POINT ON THE NORTH LINE OF THE NE 1/4 NE 1/4 OF SECTION 20, T26S, R27E, N.M.P.M, WHICH BEARS N89°52'00"W 1200.60' FROM THE NORTHEAST CORNER OF SAID SECTION 20, THENCE N41°12'40"E 93.37'; THENCE N10°20'49"W 1739.17'; THENCE N36°37'27"E 49.13' TO A POINT IN THE NW 1/4 SE 1/4 OF SECTION 17, T26S, R27E, N.M.P.M., WHICH BEARS N37°57'09"W 2312.38' FROM THE SOUTHEAST CORNER OF SAID SECTION 17. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A G.P.S. OBSERVATION. CONTAINS 6.752 ACRES MORE OR LESS.

RIGHT-OF-WAY LENGTHS			
PROPERTY OWNER	FEET	ACRES	RODS
BLM SW 1/4 SECTION 18	656.07	0.452	39.76
BLM NW 1/4 SECTION 19	517.16	0.356	31.34
BLM NE 1/4 SECTION 19	2652.28	1.827	160.74
BLM NW 1/4 SECTION 20	2644.78	1.821	160.29
BLM NE 1/4 SECTION 20	1452.04	1.000	88.00
BLM SE 1/4 SECTION 17	1881.68	1.296	114.04
TOTAL ON BLM	9804.01	6.752	594.18

BEGINNING OF ROAD STA. 0+00 BEARS N38°54'04"W 839.42' FROM THE SOUTH 1/4 CORNER OF SECTION 18, T26S, R27E, N.M.P.M.

P.O.S.L. STA. 6+56.07 BEARS N89°42'26"W 514.58' FROM THE SOUTH 1/4 CORNER OF SECTION 18, T26S, R27E, N.M.P.M

P.O.S.L. STA. 38+25.51 BEARS S00°06'46"E 5.73' FROM THE NORTHEAST CORNER OF SECTION 19, T26S, R27E, N.M.P.M.

P.O.S.L. STA. 79+22.33 BEARS N89°52'00"W 1200.60' FROM THE NORTHEAST CORNER OF SECTION 20, T26S, R27E, N.M.P.M.

END OF ROAD STA. 98+04.01 BEARS N37°57'09"W 2312.38' FROM THE SOUTHEAST CORNER OF SECTION 17, T26S, R27E, N.M.P.M.

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF

NELSON J. MARSHALL
REGISTERED LAND SURVEYOR
REGISTRATION NO. 17466
STATE OF NEW MEXICO
04-25-14

Sheet 1 of 2

NOTES:
- The maximum grade of existing ground for the proposed access road is ± 4%

N

CIMAREX ENERGY CO.

FOXX 31 FEDERAL COM 1H, 2H, 3H & 4H
SECTIONS 17, 18, 19 & 20, T26S, R27E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

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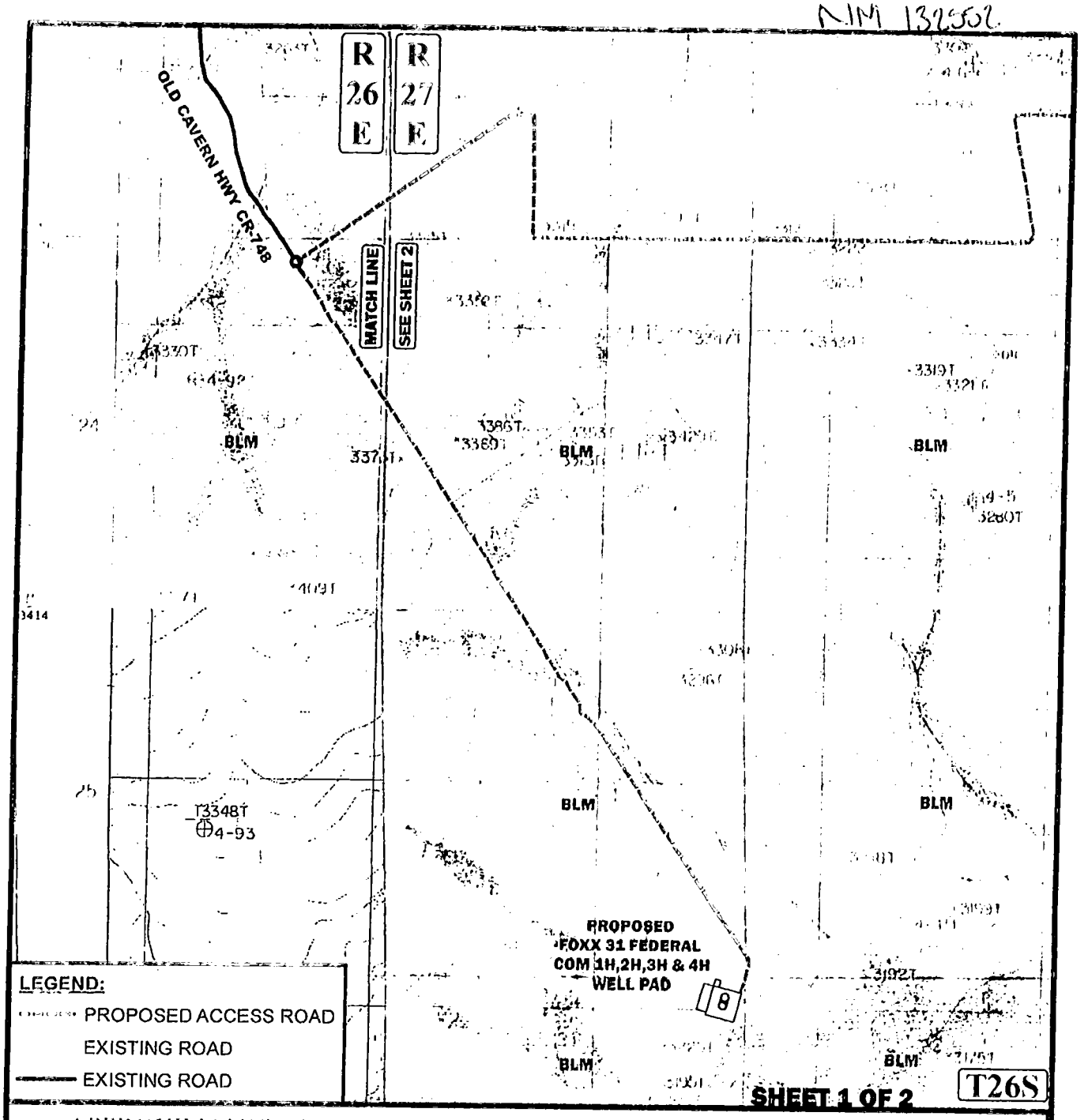
Vernal, UT 84078 * (435) 789-1017

SCALE: 1" = 600'	DRAWN BY: S.O.	DATE: 04-22-14
ACCESS ROAD R-O-W		EXHIBIT C-2

NM 132502



APPROXIMATE TOTAL ACCESS ROAD DISTANCE ON BLM LANDS 33,687'

APPROXIMATE TOTAL ACCESS ROAD DISTANCE 37,050'

*PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING & LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

SCALE: 1" = 2000'	REVISED: 09-23-13	REV: 04-24-14 S.O.
DRAWN BY: J.L.H.	REV:10-16-13J.L.G.	
DATE DRAWN: 08-29-13	REV:10-25-13 J.C.	

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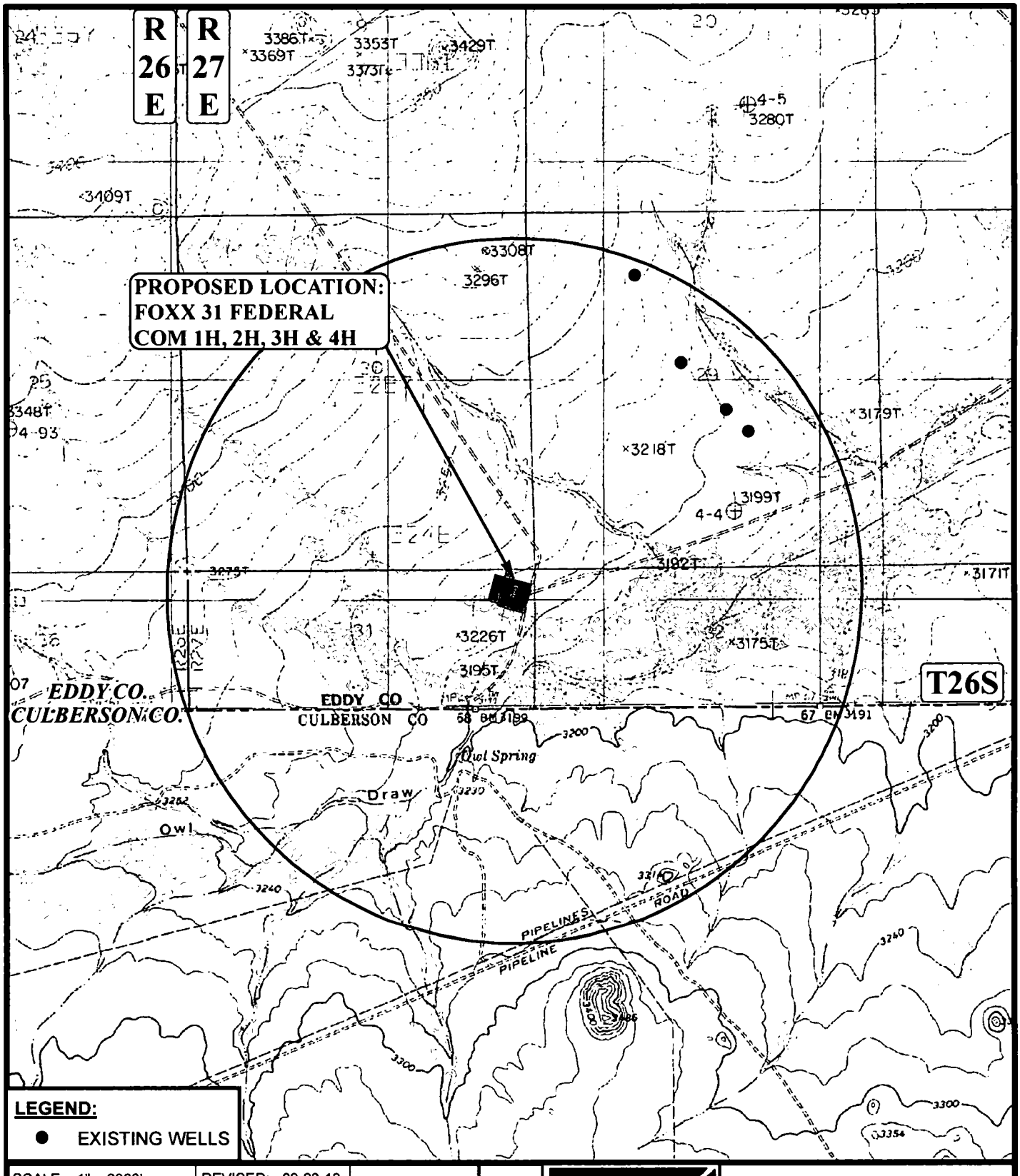
Vernal, UT 84078 * (435) 789-1017

CIMAREX ENERGY CO.

FOXX 31 FEDERAL COM 1H, 2H, 3H & 4H
SECTION 31, T26S, R27E, N.M.P.M.
NE 1/4 NE 1/4

ACCESS ROAD MAP

EXHIBIT C-1



LEGEND:

● EXISTING WELLS

SCALE: 1" = 2000'	REVISED: 09-23-13	
DRAWN BY: J.L.H.	REV:10-16-13J.L.G.	
DATE DRAWN: 08-29-13	REV:10-25-13 J.C.	

UINTAH ENGINEERING & LAND SURVEYING

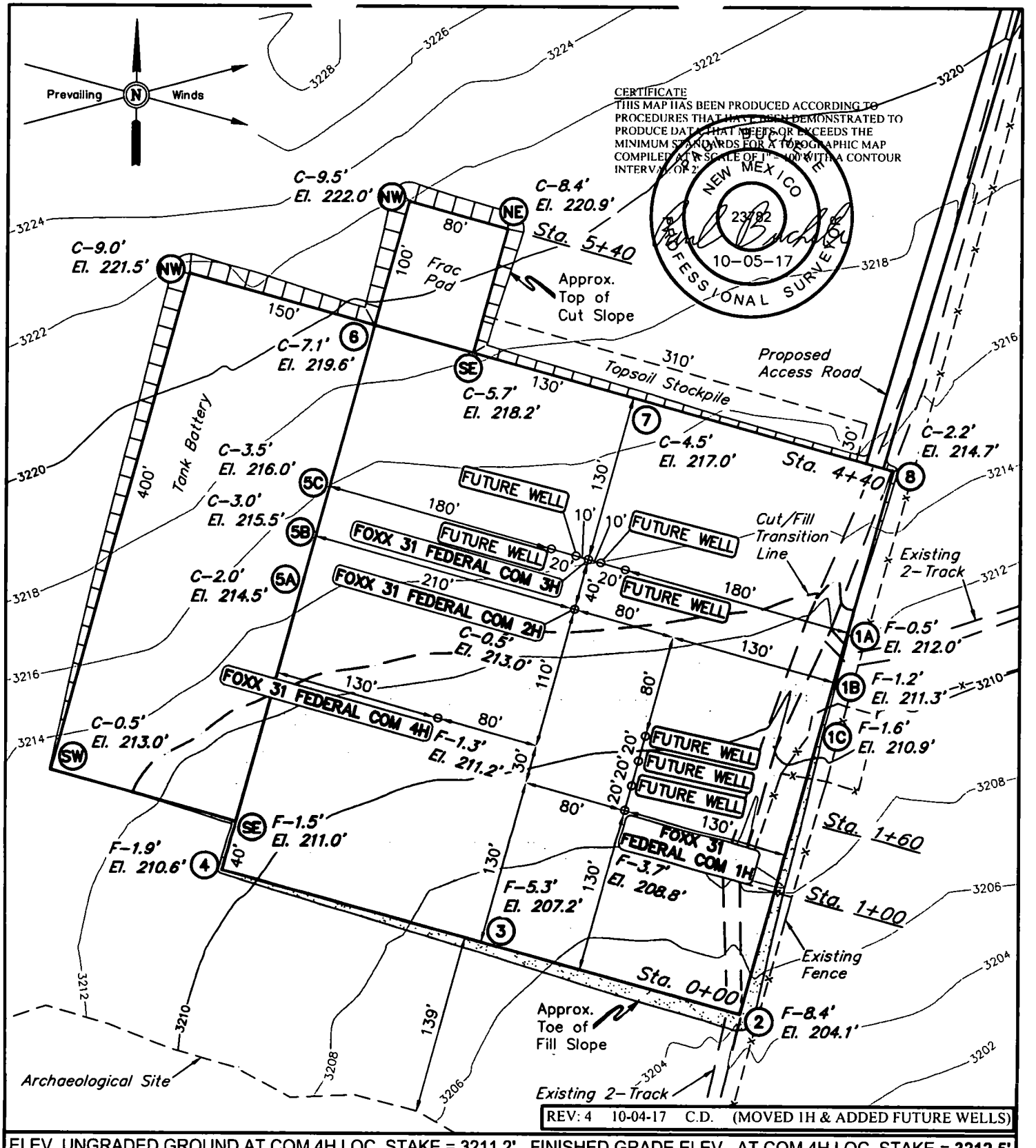
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

N

CIMAREX ENERGY CO.

FOXX 31 FEDERAL COM 1H, 2H,3H, & 4H
SECTION 31, T26S, R27E, N.M.P.M.
NE 1/4 NE 1/4

ONE MILE RADIUS PLAT EXHIBIT E



REV: 4 10-04-17 C.D. (MOVED 1H & ADDED FUTURE WELLS)

ELEV. UNGRADED GROUND AT COM 4H LOC. STAKE = 3211.2' FINISHED GRADE ELEV. AT COM 4H LOC. STAKE = 3212.5'

NOTES:

- Construct diversion ditches as needed.
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Earthwork calculations require a fill at some of the location stakes for balance. All fill is to be compacted to a minimum of 95% of the maximum dry density obtained by AASHTO method t-99.

CIMAREX ENERGY CO.

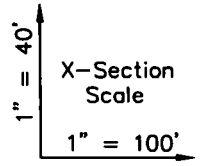
FOXX 31 FEDERAL COM 1H, 2H, 3H & 4H
SECTION 31, T26S, R27E, N.M.P.M.
NE 1/4 NE 1/4

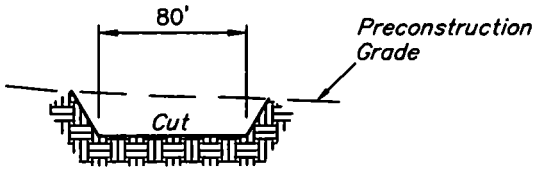
UINTAH ENGINEERING & LAND SURVEYING
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

DRAWN BY: A.D.	SCALE: 1" = 100'	
DATE: 09-03-13		

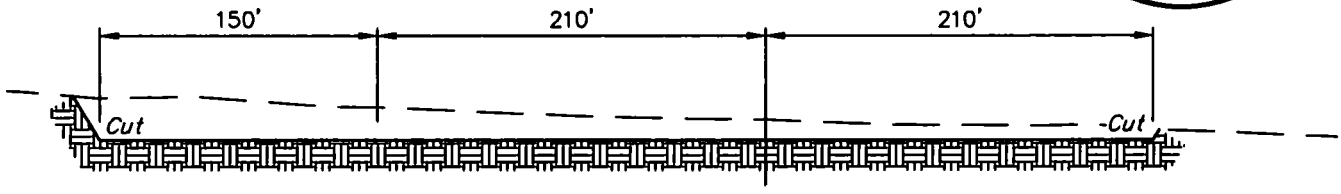
LOCATION LAYOUT

EXHIBIT J

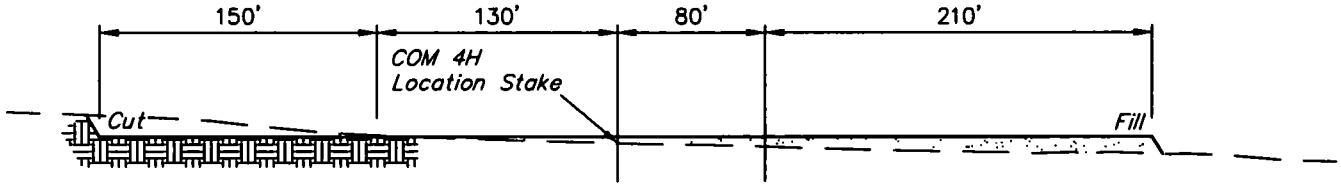




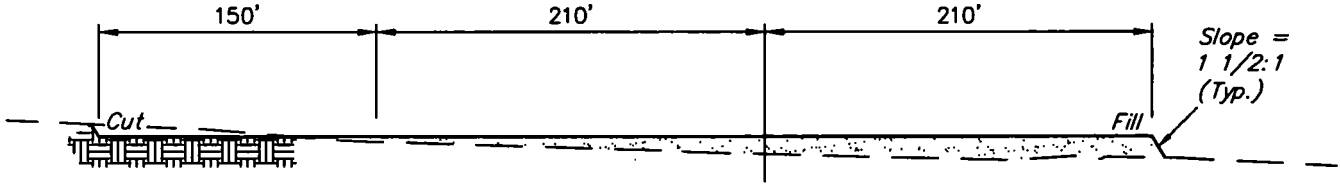
STA. 5+40



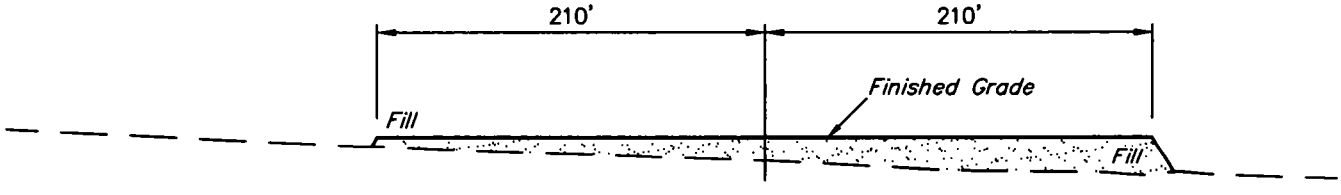
STA. 4+40



STA. 1+60



STA. 1+00



STA. 0+00

APPROXIMATE EARTHWORK QUANTITIES	
(2") TOPSOIL STRIPPING	1,670 Cu. Yds.
REMAINING LOCATION	19,090 Cu. Yds.
TOTAL CUT	**20,760 Cu. Yds.**
FILL	**13,480 Cu. Yds.**
EXCESS MATERIAL	7,280 Cu. Yds.
TOPSOIL	1,670 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	**5,610 Cu. Yds.**

APPROXIMATE SURFACE DISTURBANCE AREAS	DISTANCE	ACRES
WELL SITE DISTURBANCE	N/A	±6.356
20' WIDE ACCESS ROAD R-O-W DISTURBANCE	±9685.43'	±5.559
30' WIDE PIPELINE R-O-W DISTURBANCE	±6945.77'	±4.784
TOTAL SURFACE USE AREA	**±16631.20'**	**±16.699**

REV: 3 10-04-17 C.D. (MOVED 1H & ADDED FUTURE WELLS)

NOTES:
- Fill quantity includes 5% for compaction.
- Topsoil should not be stripped below finished grade on substructure area.

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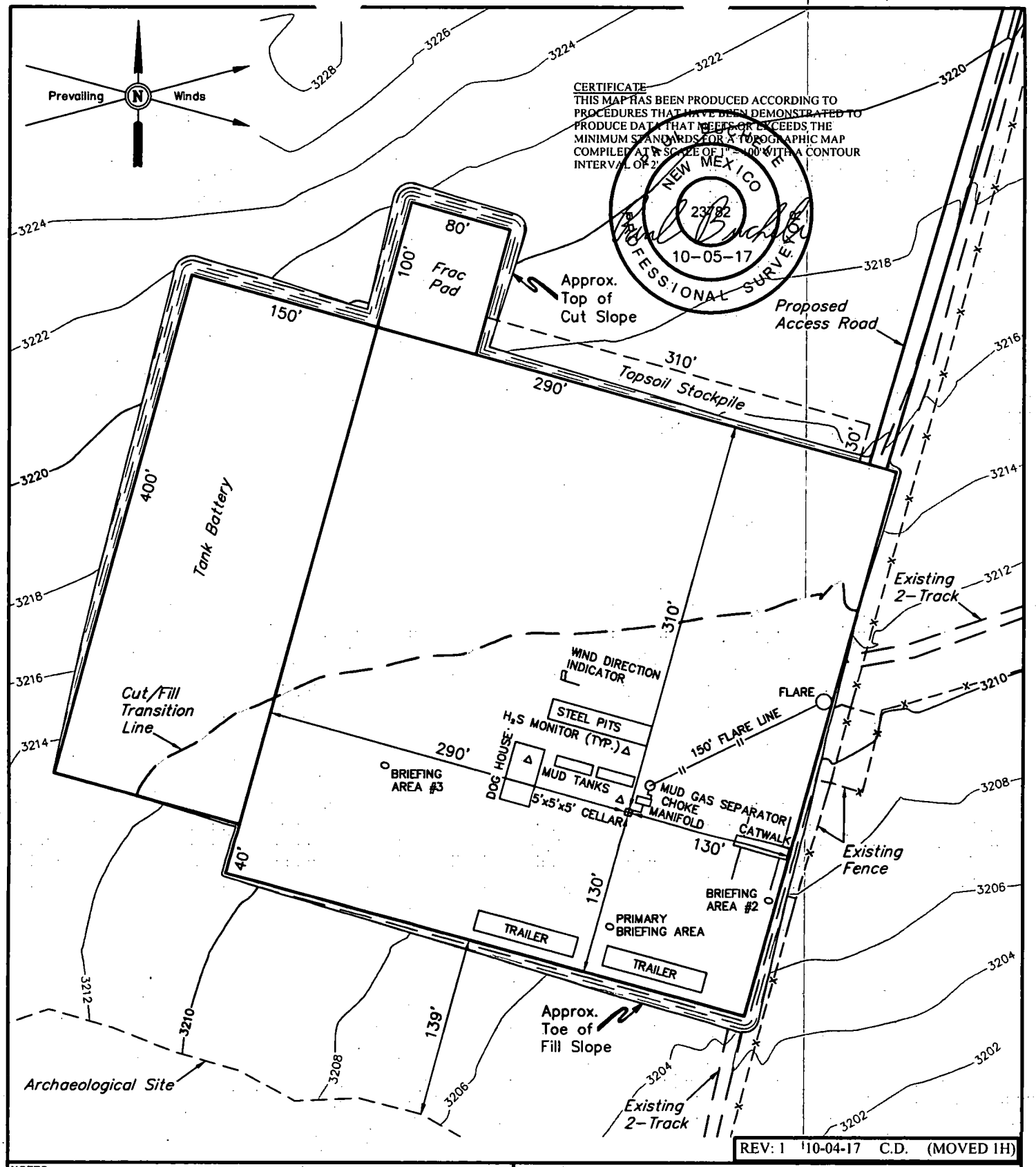
Vernal, UT 84078 * (435) 789-1017

DRAWN BY: A.D.	SCALE: AS SHOWN	
DATE: 09-03-13		

TYPICAL CROSS SECTIONS EXHIBIT J



REV: 1 10-04-17 C.D. (MOVED 1H)

NOTES:

- Flare pit is to be located a min. of 150' from the well head.

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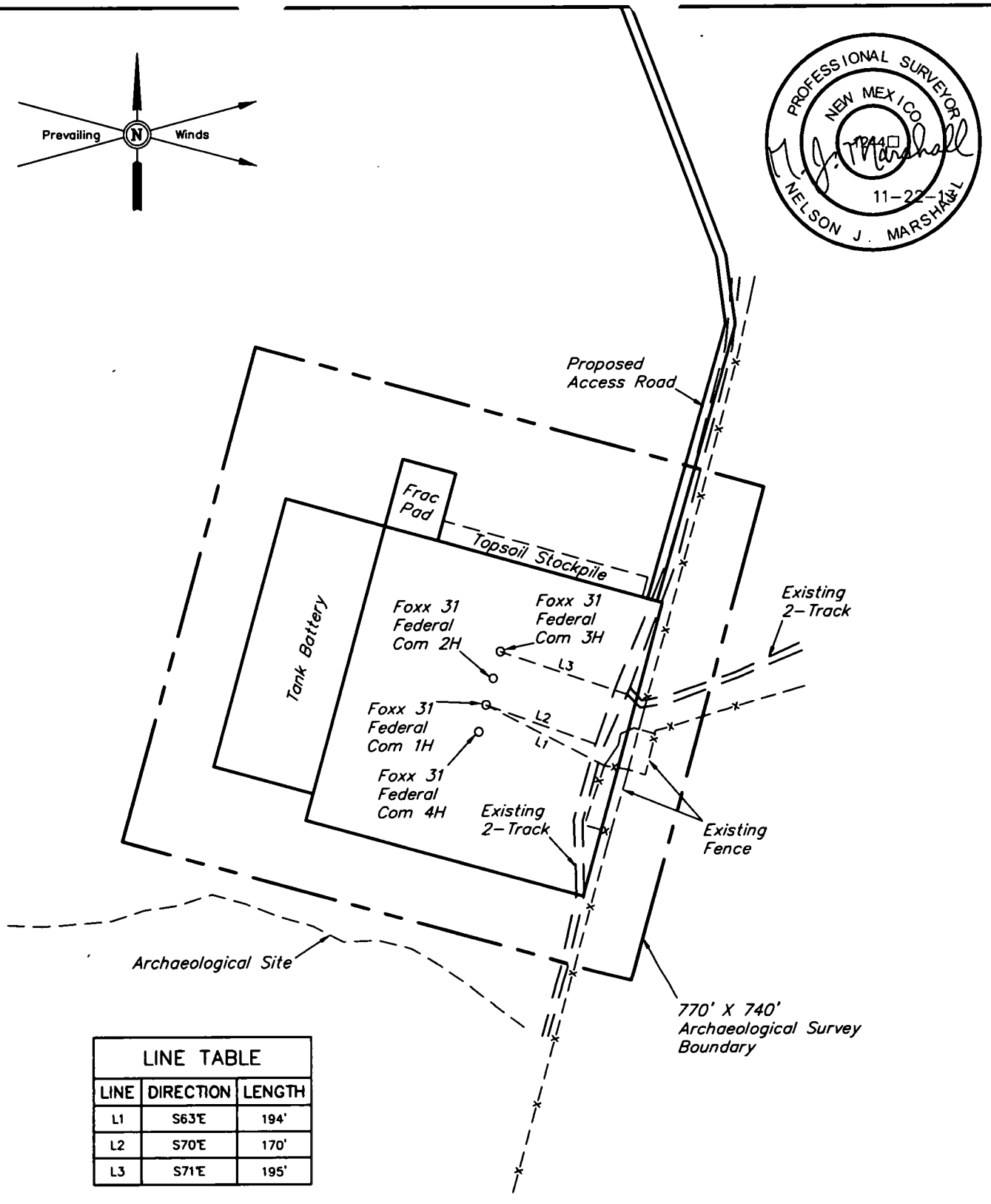
DRAWN BY: A.D.	SCALE: 1" = 100'		
DATE: 09-03-13			

TYPICAL RIG LAYOUT

EXHIBIT K



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S63°E	194'
L2	S70°E	170'
L3	S71°E	195'

NOTES:

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NE 1/4 NE 1/4

DRAWN BY: A.D.	SCALE: 1" = 200'	
DATE: 09-03-13	REVISED: 11-02-13 □S.	

ARCHAEOLOGICAL SURVEY BOUNDARY

EXHIBIT L

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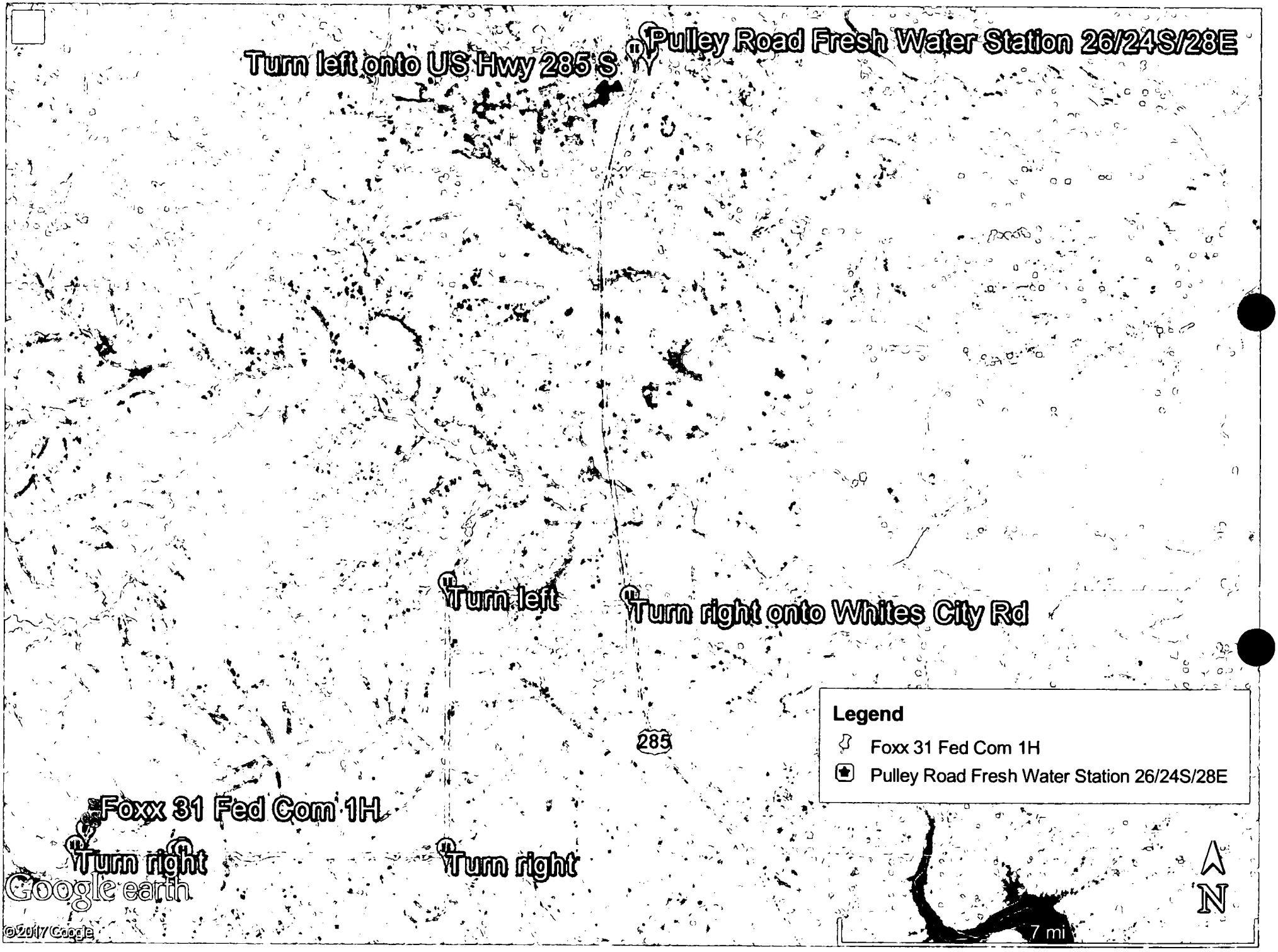
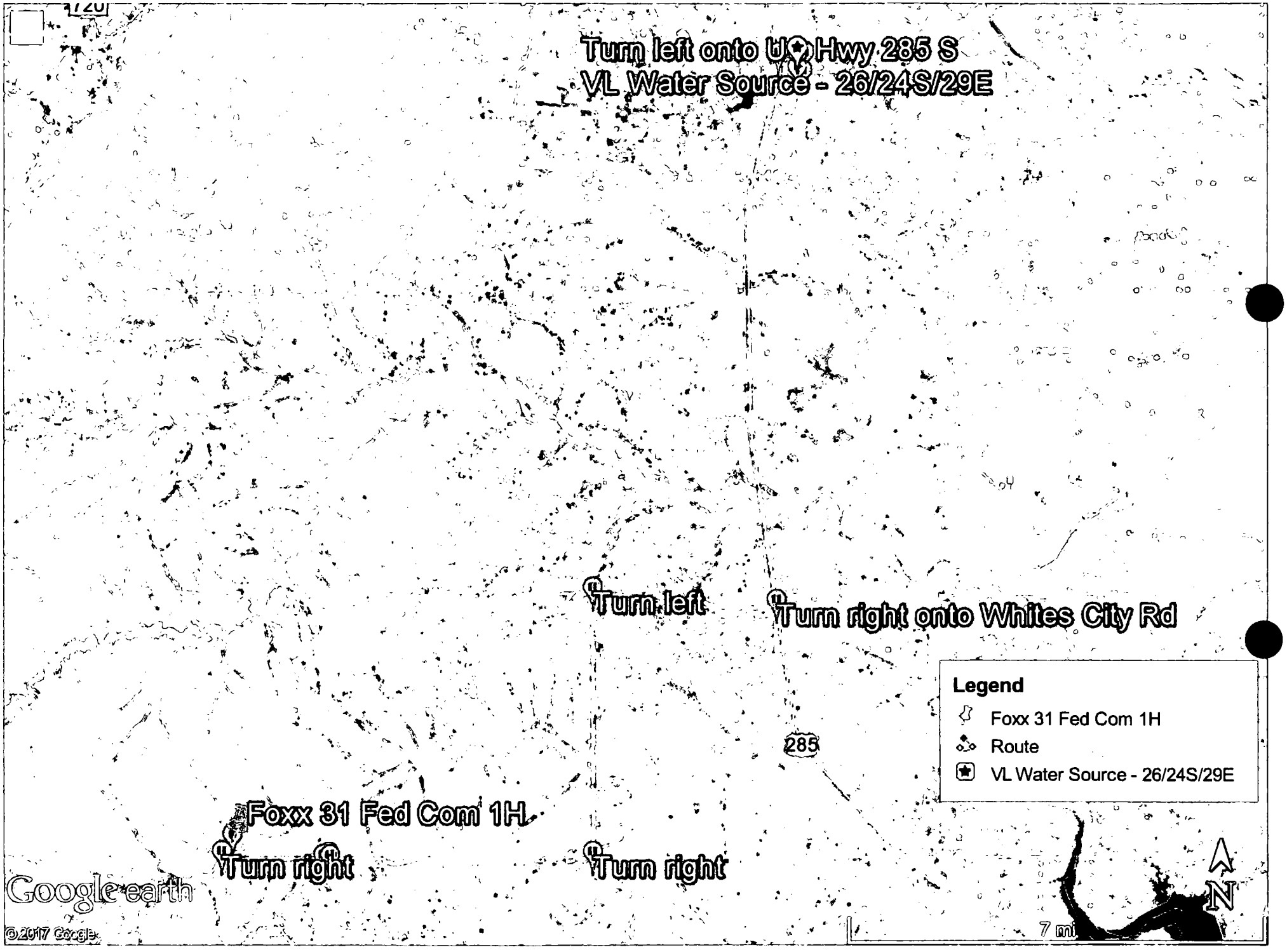
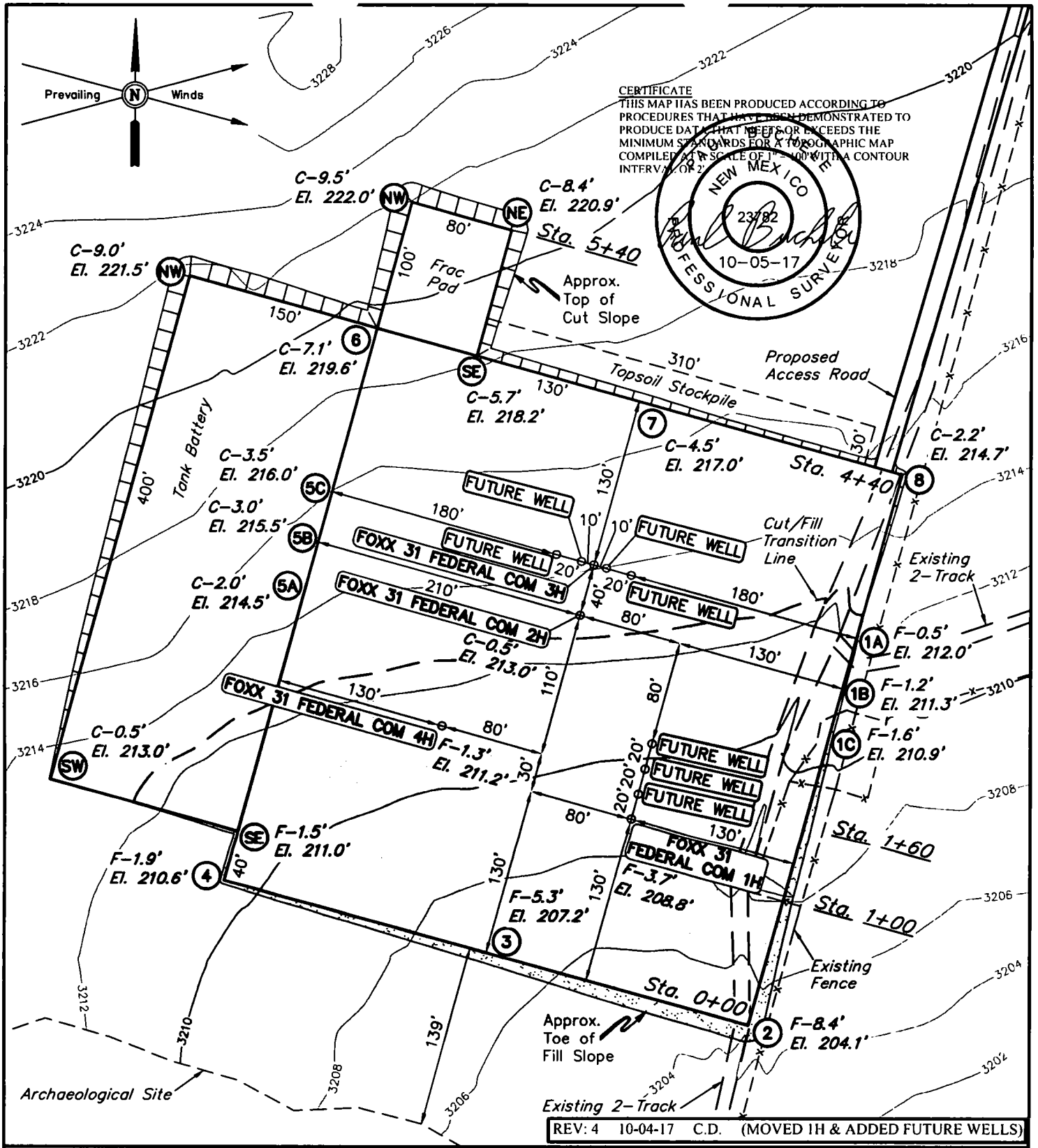

Pulley Road Fresh Water Station 26/24S/28E
Turn left onto US Hwy 285 S
Turn left
Turn right onto Whites City Rd
285
Foxx 31 Fed Com 1H
Turn right
Turn right
Legend
Foxx 31 Fed Com 1H
Pulley Road Fresh Water Station 26/24S/28E
7 mi
N
Google earth
©2017 Google


Turn left onto W Hwy 285 S
VL Water Source - 26/24S/29E
Turn left
Turn right onto Whites City Rd
285
Foxx 31 Fed Com 1H
Turn right
Turn right
Legend
Foxx 31 Fed Com 1H
Route
VL Water Source - 26/24S/29E
7 mi
N
Google earth
© 2017 Google



REV: 4 10-04-17 C.D. (MOVED 1H & ADDED FUTURE WELLS)

ELEV. UNGRADED GROUND AT COM 4H LOC. STAKE = 3211.2' FINISHED GRADE ELEV. AT COM 4H LOC. STAKE = **3212.5'**

NOTES:

- Construct diversion ditches as needed.
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Earthwork calculations require a fill at some of the location stakes for balance. All fill is to be compacted to a minimum of 95% of the maximum dry density obtained by AASHTO method t-99.

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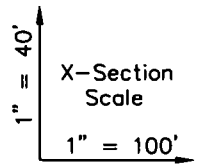
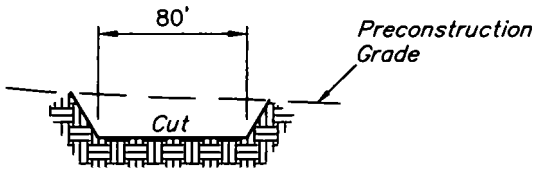
DRAWN BY: A.D.	SCALE: 1" = 100'	
DATE: 09-03-13		

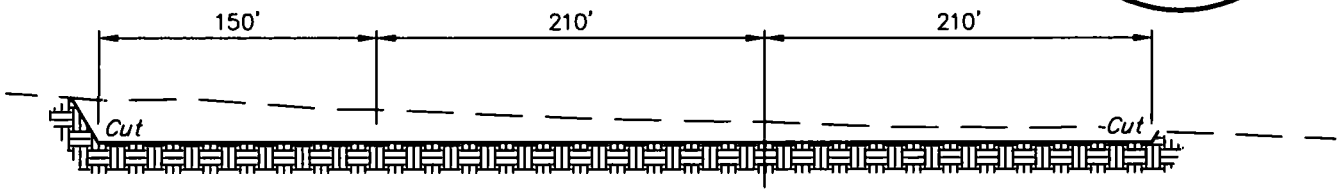
LOCATION LAYOUT

EXHIBIT J

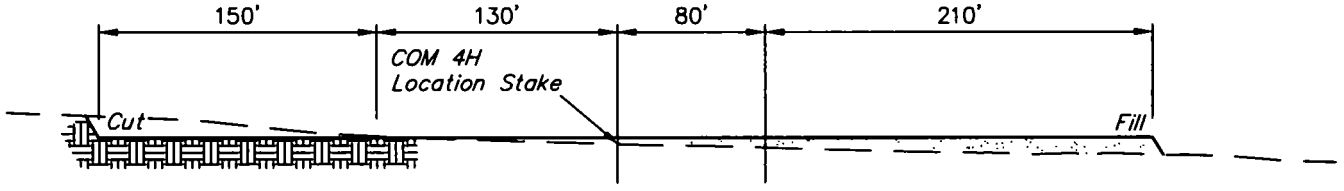




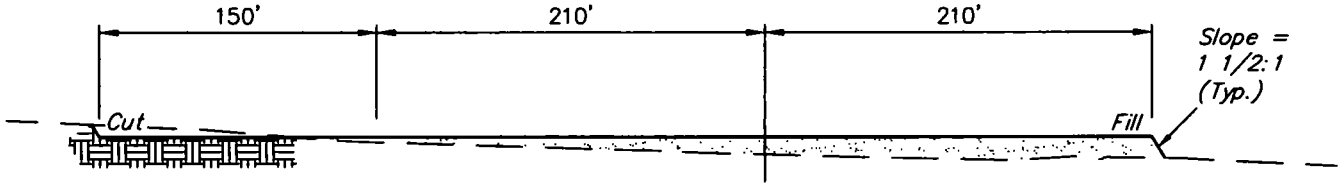
STA. 5+40



STA. 4+40



STA. 1+60



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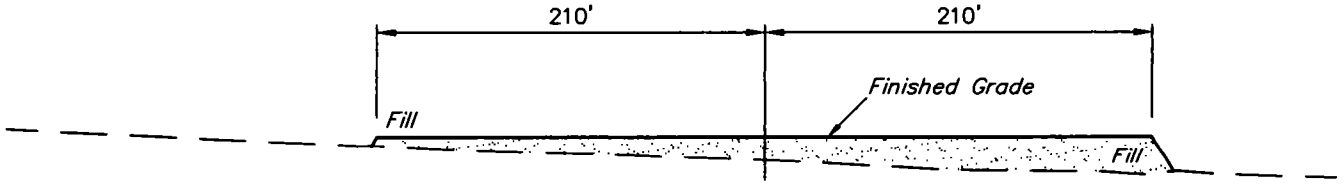

STA. 0+00

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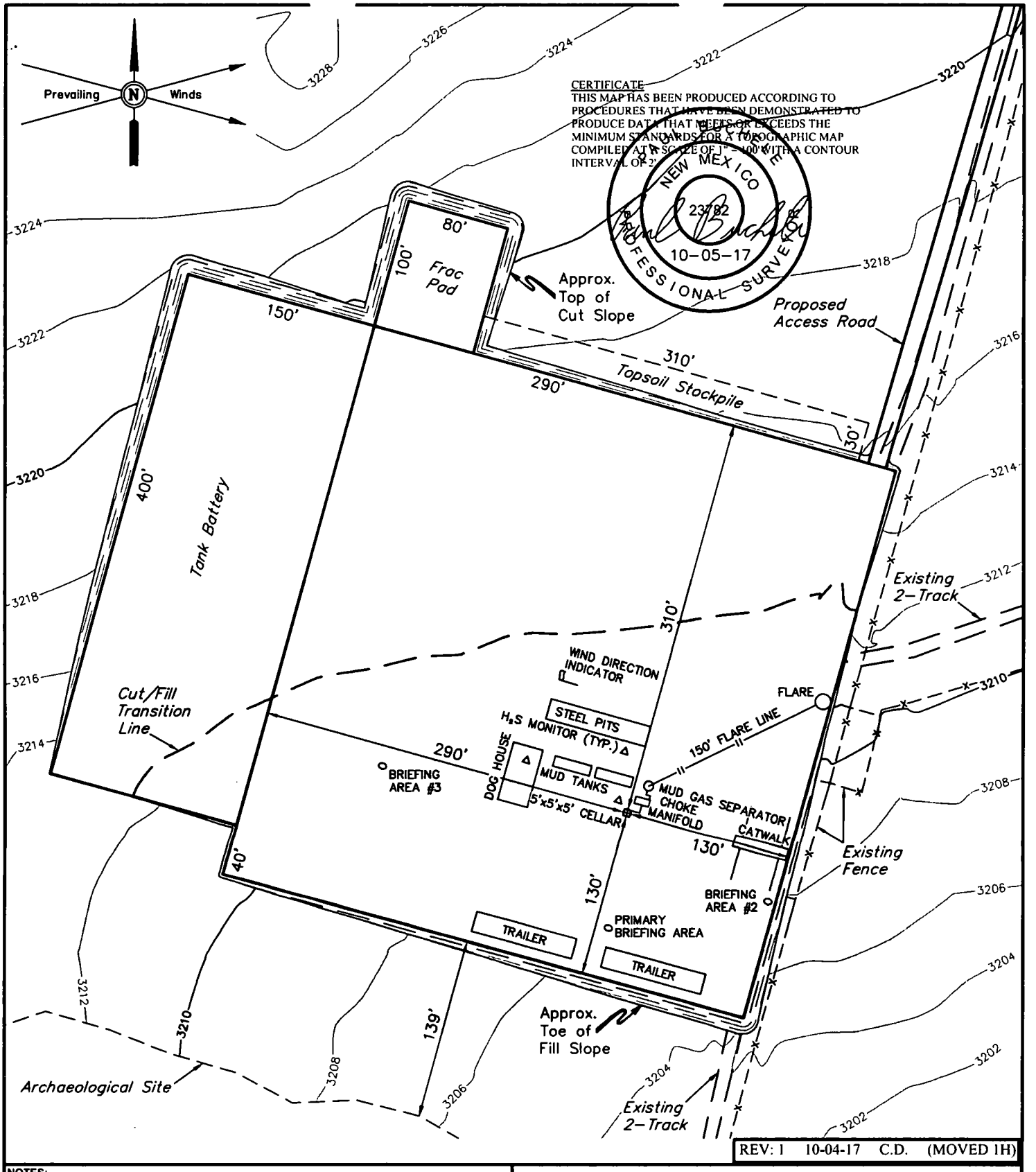
DRAWN BY: A.D.	SCALE: AS SHOWN	
DATE: 09-03-13		

TYPICAL CROSS SECTIONS EXHIBIT J



REV: 1 10-04-17 C.D. (MOVED 1H)

NOTES:

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NE 1/4 NE 1/4

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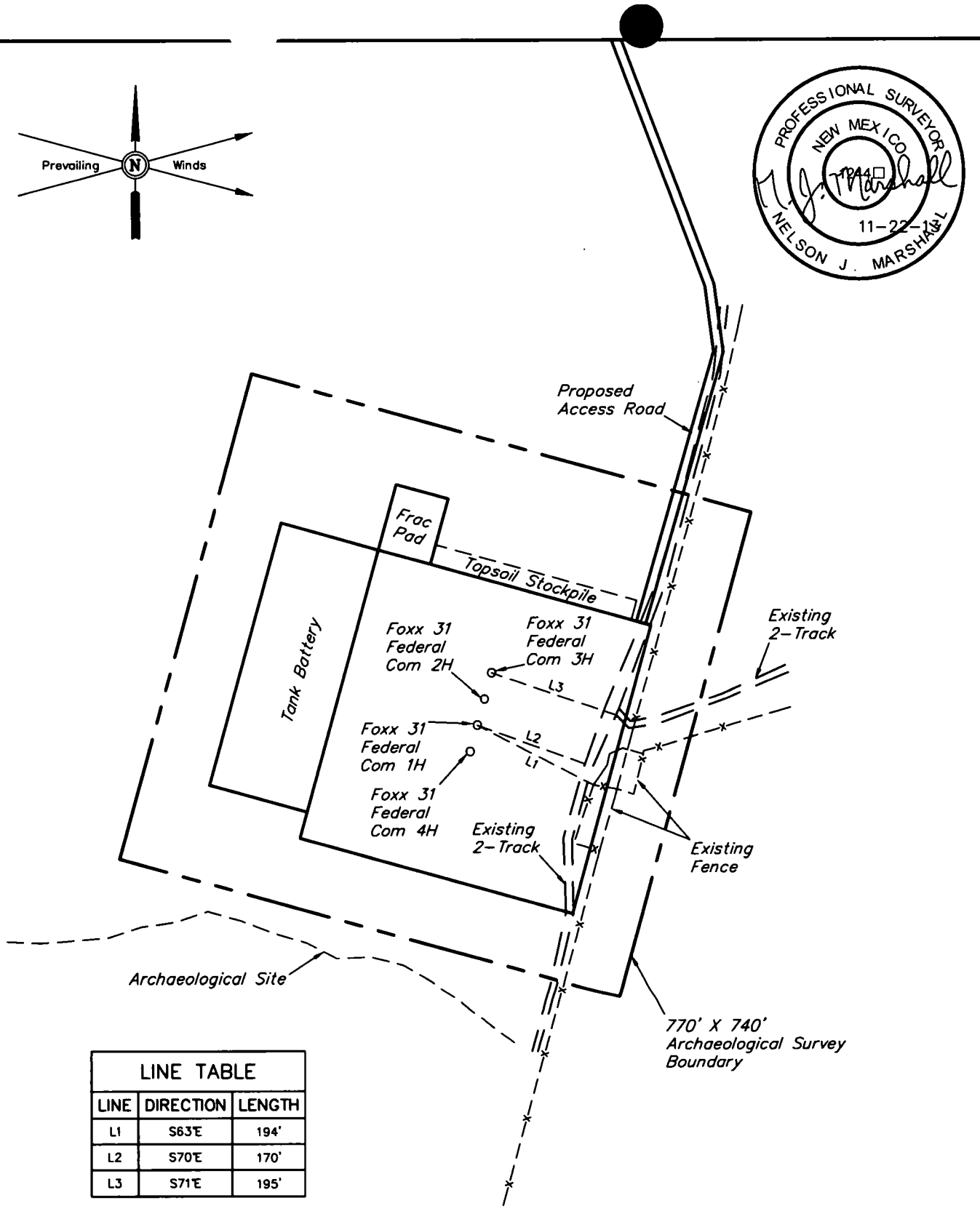
DRAWN BY: A.D.	SCALE: 1" = 100'	
DATE: 09-03-13		

TYPICAL RIG LAYOUT

EXHIBIT K



LINE TABLE		
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CIMAREX **CIMAREX ENERGY CO.**

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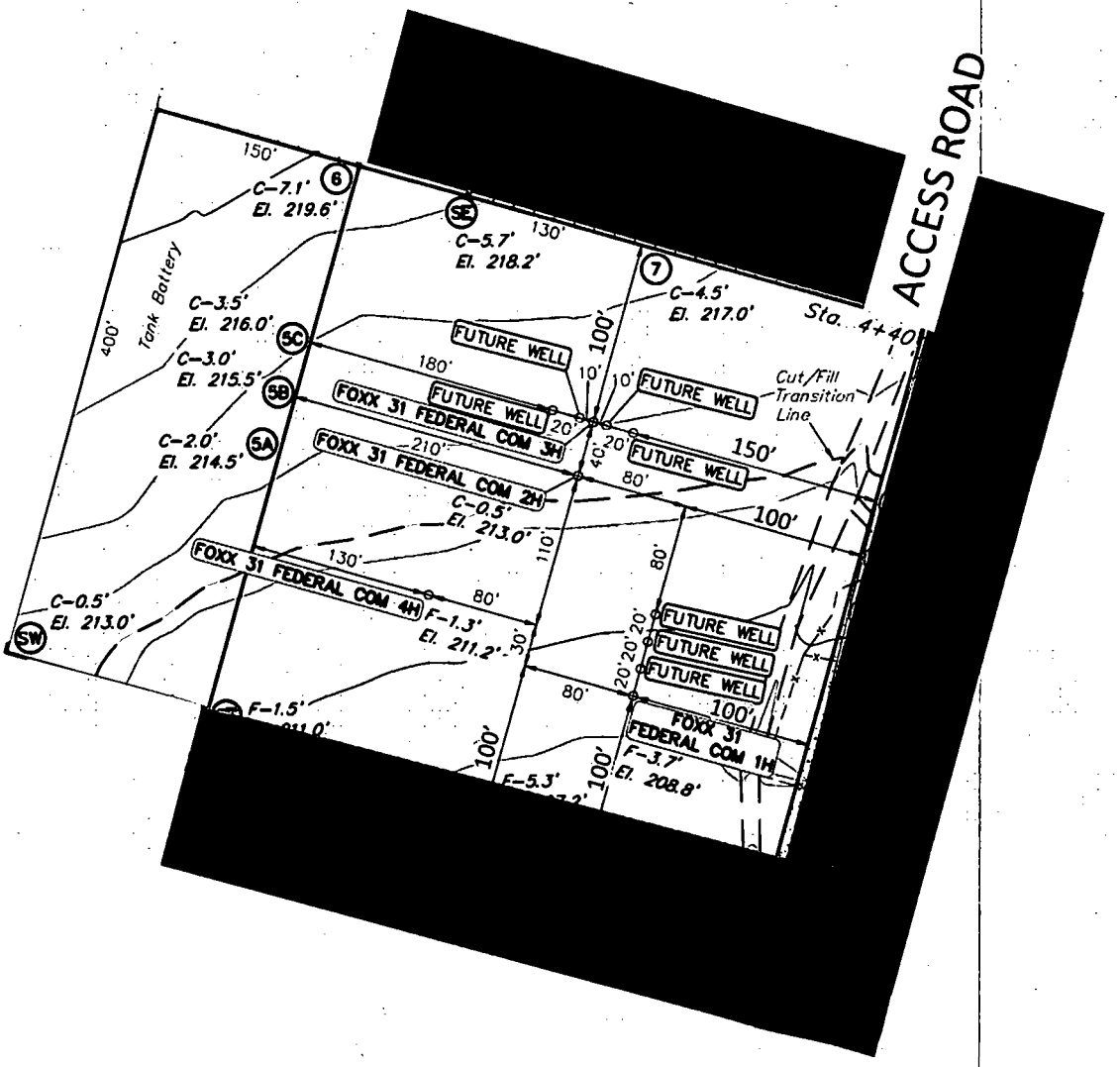
DRAWN BY: A.D.	SCALE: 1" = 200'	
DATE: 09-03-13	REVISED: 11-02-13 □S.	

ARCHAEOLOGICAL SURVEY BOUNDARY — EXHIBIT L



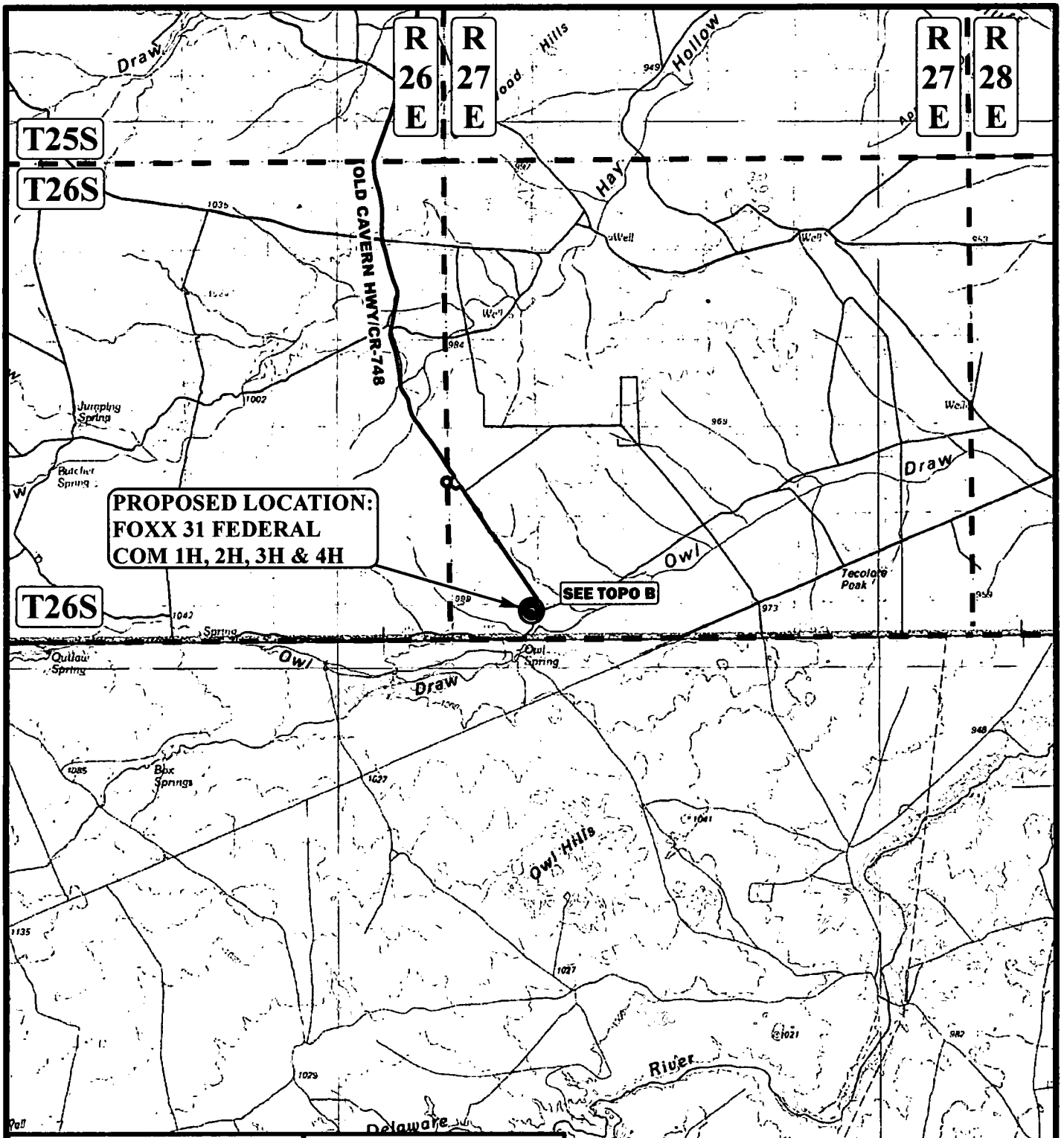
Pad will be reclaimed after cessation of drilling operations.
Please see Surface Use Plan for pad reclamation plans.

N

Well locations

Interim Reclamation

Exhibit P
Interim Reclamation Diagram
Foxx 31 Federal Com 1H
Cimarex Energy Co.
Sec 31, 26S, 27E
Eddy County, NM



LEGEND:

PROPOSED LOCATION

MALAGA, NEW MEXICO IS +/- 17.6 MILES NORTHEASTERLY

SCALE: 1:100,000	REV: 09-23-13	REV:10-25-16 J.M.F.
DRAWN BY: J.L.H.	REV:10-16-13J.L.G.	
DATE DRAWN: 08-16-13	REV:10-25-13 J.C.	

N

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PUBLIC ROAD MAP

EXHIBIT B

BEGINNING AT OLD CAVERN HIGHWAY/COUNTY ROAD 748 FOLLOW ROAD FLAGS IN A SOUTHEASTERLY, THEN NORTHEASTERLY, THEN SOUTHEASTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 9,685' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM OLD CAVERN HIGHWAY/COUNTY ROAD 748 TO THE PROPOSED LOCATION IS APPROXIMATELY 9,685'.

SCALE: 1:100,000	REV: 09-23-13	REV:10-25-16 J.M.F.
DRAWN BY: J.L.H.	REV:10-16-13J.L.G.	
DATE DRAWN: 08-16-13	REV:10-25-13 J.C.	

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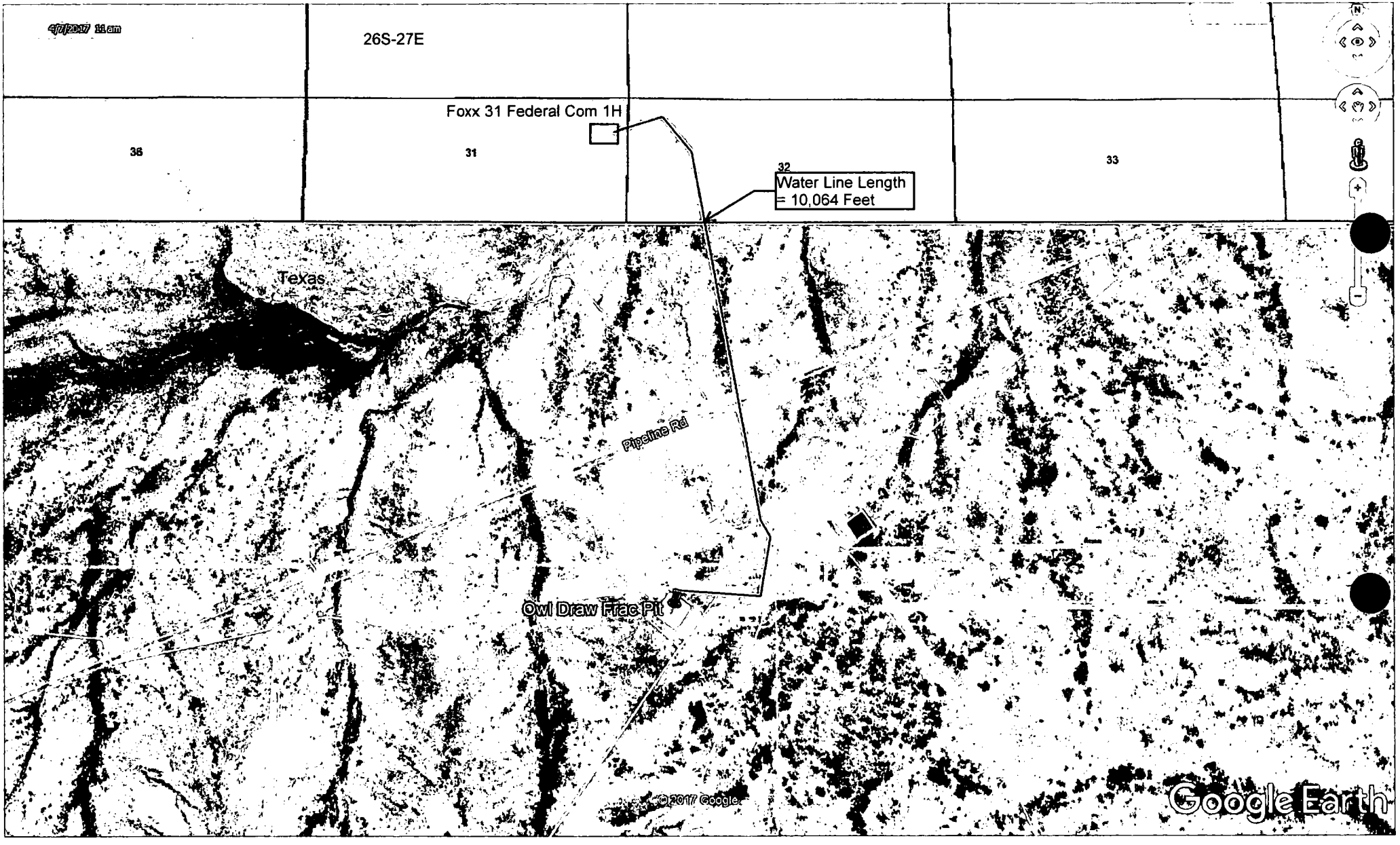
ROAD DESCRIPTION — EXHIBIT A

Foxx 31 Federal Com 1H Proposed Frac water transfer line route. Eddy County, NM



1 10" water line

Cimarex Foxx 31 Federal Com #1H
Surface Use Plan

Upon approval of the Application for Permit to Drill (APD) the following surface use plan of operations will be followed and carried out. The surface use plan outlines the proposed surface disturbance. If any other disturbance is needed after the APD is approved, a BLM sundry notice or right of way application will be submitted for approval prior to any additional surface disturbance.

Existing Roads

- Directions to location - Exhibit A.
- Public access route - Exhibit B.
- Existing access road for the proposed project. Please see Exhibit B and C.
- Cimarex Energy will:
    - Improve and/or maintain existing road(s) condition the same as or better than before the operations began.
    - Provide plans for improvement and /or maintenance of existing roads if requested.
    - Repair or replace damaged or deteriorated structures as needed. Including cattle guards and culverts.
    - Prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.
    - Obtain written BLM approval prior to the application of surfactants, binding agents, or other dust suppression chemicals on the roadways.
- The maximum width of the driving surface will be 18'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

New or Reconstructed Access Roads

No new roads are proposed for this project.

Well Radius Map

Please see Exhibit E for wells within one mile or proposed well SHL and BHL.

Proposed or Existing Production Facility

An existing battery will be utilized for the project if the well is productive.

- Foxx 31 Federal Battery
    - Battery Pad diagram - Exhibit F
    - Battery will not require an expansion in order to accomodate additional production equipment for the project.
    - Battery Pad location previously approved
        - APD: Foxx 31 Federal #4H.

Gas Pipeline Specifications

- No new gas pipelines are required for this project.

Salt Water Disposal Specifications

- No new SWD pipelines are required for this project.

Power Lines

- No new power line is required for this project.

Well Site Location

- An existing well pad will be used to drill the proposed well.
    - Wells drilled or to be drilled: Foxx 31 Federal #1H-#4H.
- Well pad will not require expansion in order to accommodate additional drilling wells. .
- Well pad previously approved. APD: Foxx 31 Federal #4H.

Flowlines and Gas Lift Pipelines

- Flowlines
  - Cimarex Energy plans to construct on-lease flowlines to service the well. There will be no additional disturbance as the battery is on pad.
  - Flowline will be buried on pad. 6" HP steel for oil, gas, and water production.

Water Resources

- A temporary surface fresh water pipeline(s) will be utilized for this project.
- Cimarex plans to lay the fresh water surface pipeline(s) prior to commencement of the stimulation job.
- 10" lay-flat surface pipeline.
- The surface pipeline(s) will follow the road from a frac pit to the well.
- Length: 10,064'.
- Operating pressure: <140 psi.
- Fresh water will be purchased from a 3rd party.
- Please see Exhibit O for proposed route.

Methods of Handling Waste

- Drilling fluids, produced oil, and water from the well during drilling and completion operations will be stored safely and disposed of properly in a NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around well site will be collected for disposal.
- Human waste and grey water will be contained and disposed of properly at a state approved disposal site.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste will be removed and disposed of properly at a state approved disposal site.
- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Waste Minimization Plan

See Gas Capture Plan.

Ancillary Facilities

No camps or airstrips to be constructed.

Interim and Final Reclamation

- Rehabilitation of the location will start in a timely manner after all proposed drilling wells have been drilled from the pad or if drilling operations have ceased as outlined below:
  - No approved or pending drill permits for wells located on the drill pad
  - No drilling activity for 5 years from the drill pad
- Surfacing materials will be removed and returned to a mineral pit or recycled to repair or build roads and well pads.
- Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.
- Exhibit P illustrates the proposed Surface Reclamation plans after cessation of drilling operations as outlined above.
  - The areas of the location not essential to production facilities and operations will be reclaimed and seeded per BLM requirements.
- Operator will amend the surface reclamation plan if well is a dry hole and/or a single well pad.

Surface Ownership

- The wellsite is on surface owned by BLM.
- A copy of Surface Use Agreement has been given to the surface owner.
- The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.

Cultural Resource Survey - Archeology

- Cultural Resources Survey will be conducted for the entire project as proposed in the APD and submitted to the BLM for review and approval.

On Site Notes and Information
Onsite Date: 10/22/2013
BLM Personnel on site: Jesse Rice
Cimarex Energy personnel on site: Barry Hunt
Pertinent information from onsite:
V-door Southeast. Top soil North, battery west, Frac pad northwest corner. Interim Reclaim: North East and south. Access Road from southeast corner, north and then east.

AFMSS

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

PWD Data Report
06/14/2018

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

06/14/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001188

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: