Form 3160-3
(June 2015)

HOBBS OCD
OCT 16 2019
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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR RE-ENTER**

5. Lease Serial No.
NMLC0063798

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
BLUE KRAIT 23-14 FED COM
31H (316705)

2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY LP (6137)

9. API Well No.
30-025-46830

3a. Address
333 West Sheridan Avenue Oklahoma City OK 73102

3b. Phone No. *(include area code)*
(800)583-3866

10. Field and Pool, or Exploratory
BRININSTOOL / WOLFCAMP (98135)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 245 FSL / 980 FWL / LAT 32.196523 / LONG -103.548475
At proposed prod. zone NWNW / 20 FNL / 380 FWL / LAT 32.224805 / LONG -103.54834

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 23 / T24S / R33E / NMP

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

12. County or Parish
LEA

13. State
NM

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

16. No of acres in lease
2480

17. Spacing Unit dedicated to this well
320

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

19. Proposed Depth
12525 feet / 22473 feet

20. BLM/BIA Bond No. in file
FED: CO1104

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3556 feet

22. Approximate date work will start*
08/25/2019

23. Estimated duration
45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 requested by the BLM.

| 25. Signature | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Rebecca Deal / Ph: (405)552-6556 | 01/28/2019 |

Title
Regulatory Compliance Professional

| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Cody Layton / Ph: (575)234-5959 | 09/30/2019 |

| Title | Office |
|---|---|
| Assistant Field Manager Lands & Minerals | 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.

OCD Rec 10/15/19

APPROVED WITH CONDITIONS
Approval Date: 09/30/2019

KZ 10/16/19

REQUIRES NSL

(Continued on page 2)

*(Instructions on page 2)

## 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 I: 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 wen, 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 directionany 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.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

## NOTICES

The Privacy Act of 1974 and 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 wen 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 win 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 conects this information to anow 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 Conection 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: SWSW / 245 FSL / 980 FWL / TWSP: 24S / RANGE: 33E / SECTION: 23 / LAT: 32.196523 / LONG: -103.548475 ( TVD: 0 feet, MD: 0 feet )
   PPP: SWSW / 345 FSL / 980 FWL / TWSP: 24S / RANGE: 33E / SECTION: 23 / LAT: 32.196798 / LONG: -103.548473 ( TVD: 11952 feet, MD: 11954 feet )
   BHL: NWNW / 20 FNL / 380 FWL / TWSP: 24S / RANGE: 33E / SECTION: 14 / LAT: 32.224805 / LONG: -103.54834 ( TVD: 12525 feet, MD: 22473 feet )

## BLM Point of Contact

Name: Ciji Methola
Title: GIS Support - Adjudicator
Phone: 5752345924
Email: cmethola@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.

AFMSS

U.S. Department of the Interior
Bureau of Land Management

*Application for Permit to Drill*

**APD Package Report**

Date Printed: 10/09/2019 07:20 AM

APD ID: 10400038419
APD Received Date: 01/28/2019 08:04 AM
Operator: DEVON ENERGY PRODUCTION CC

Well Status: AAPD
Well Name: BLUE KRAIT 23-14 FED
Well Number: 31H

APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  -- Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 2 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 2 file(s)
  -- Casing Design Assumptions and Worksheet(s): 4 file(s)
  -- Hydrogen sulfide drilling operations plan: 1 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 3 file(s)
  -- Other Facets: 13 file(s)
  -- Other Variances: 3 file(s)
- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 1 file(s)
  -- New Road Map: 2 file(s)
  -- New road access plan attachment: 1 file(s)
  -- Access road engineering design attachment: 1 file(s)
  -- Attach Well map: 1 file(s)
  -- Production Facilities map: 5 file(s)
  -- Water source and transportation map: 1 file(s)
  -- Construction Materials source location attachment: 2 file(s)
  -- Well Site Layout Diagram: 1 file(s)
  -- Recontouring attachment: 1 file(s)
- PWD Report
- PWD Attachments

-- None

- Bond Report
- Bond Attachments
  -- None

# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | **Devon Energy Production Company LP** |
| **LEASE NO.:** | **NMLC0063798** |
| **WELL NAME & NO.:** | Blue Krait 23-14 Fed 31H |
| **SURFACE HOLE FOOTAGE:** | 245'/S & 980'/W |
| **BOTTOM HOLE FOOTAGE** | 20'/N & 380'/W |
| **LOCATION:** | Section 23, T.24 S., R.33 E., NMPM |
| **COUNTY:** | Lea 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 |
| Other | ☑ Fluid Filled | ☑ Cement Squeeze | ☐ Pilot Hole |
| Special Requirements | ☐ Water Disposal | ☐ COM | ☐ Unit |

## A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Pitchfork Ranch Pool**. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

## B. CASING

**Primary Casing Design:**

1. The **10-3/4** inch surface casing shall be set at approximately **1350 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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)
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.

**Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

**Option 1 (Single Stage):**

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

**Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

**Operator has proposed to pump down 10-3/4" X 7-5/8" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.**

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.
  **Cement excess is less than 25%, more cement might be required. (14%)**

**Alternate Casing Design:**

4. The **13-3/8** inch surface casing shall be set at approximately **1350 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    e. 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.
    f. 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)
    g. 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.
    h. If cement falls back, remedial cementing will be done prior to drilling out that string.

    **Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.**

5. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

    **Option 1 (Single Stage):**

    - Cement to surface. If cement does not circulate see B.1.a, c-d above.

    **Option 2:**

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

    c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

    d. Second stage above DV tool:

    - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

**Operator has proposed to pump down 13-3/8" X 8-5/8" annulus. Operator must run a CBL from TD of the 8-5/8" casing to surface. Submit results to BLM.**

6. 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.
      **Cement excess is less than 25%, more cement might be required. (0%)**

## 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.

**Option 1:**

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

**Option 2:**

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    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.

# 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)

☒ 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 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: 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. 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.

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 not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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. The results of the test shall be reported to the appropriate BLM office.

f. 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.

g. 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 if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. 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.

# PECOS DISTRICT
# SURFACE USE
# CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | Devon Energy Production Company LP |
| WELL NAME & NO.: | Blue Krait 23-14 Fed 31H |
| SURFACE HOLE FOOTAGE: | 245'/S & 980'/W |
| BOTTOM HOLE FOOTAGE | 20'/N & 380'/W |
| LOCATION: | Section 23, T.24 S., R.33 E., NMPM |
| COUNTY: | Lea 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)

**Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken**: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Timing Limitation Exceptions:**
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

**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. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

**Avian Power line stip:**

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

## Hydrology

The entire well pad(s) 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 with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. 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 water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. 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.

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, whichever is greater. 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.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

**Cattleguards**
Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

**Fence Requirement**
Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

**Livestock Watering Requirement**
Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

# 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.

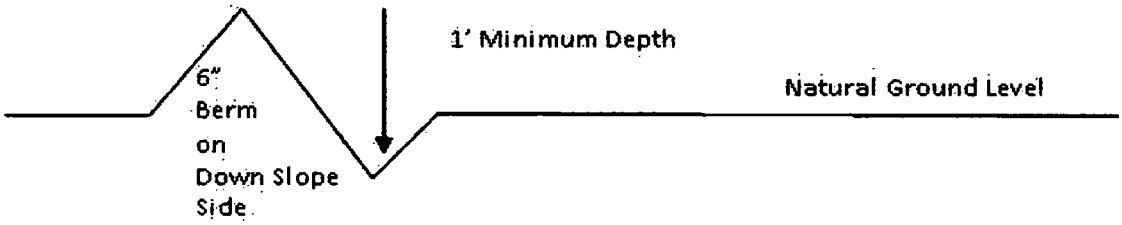
**Turnouts**
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**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

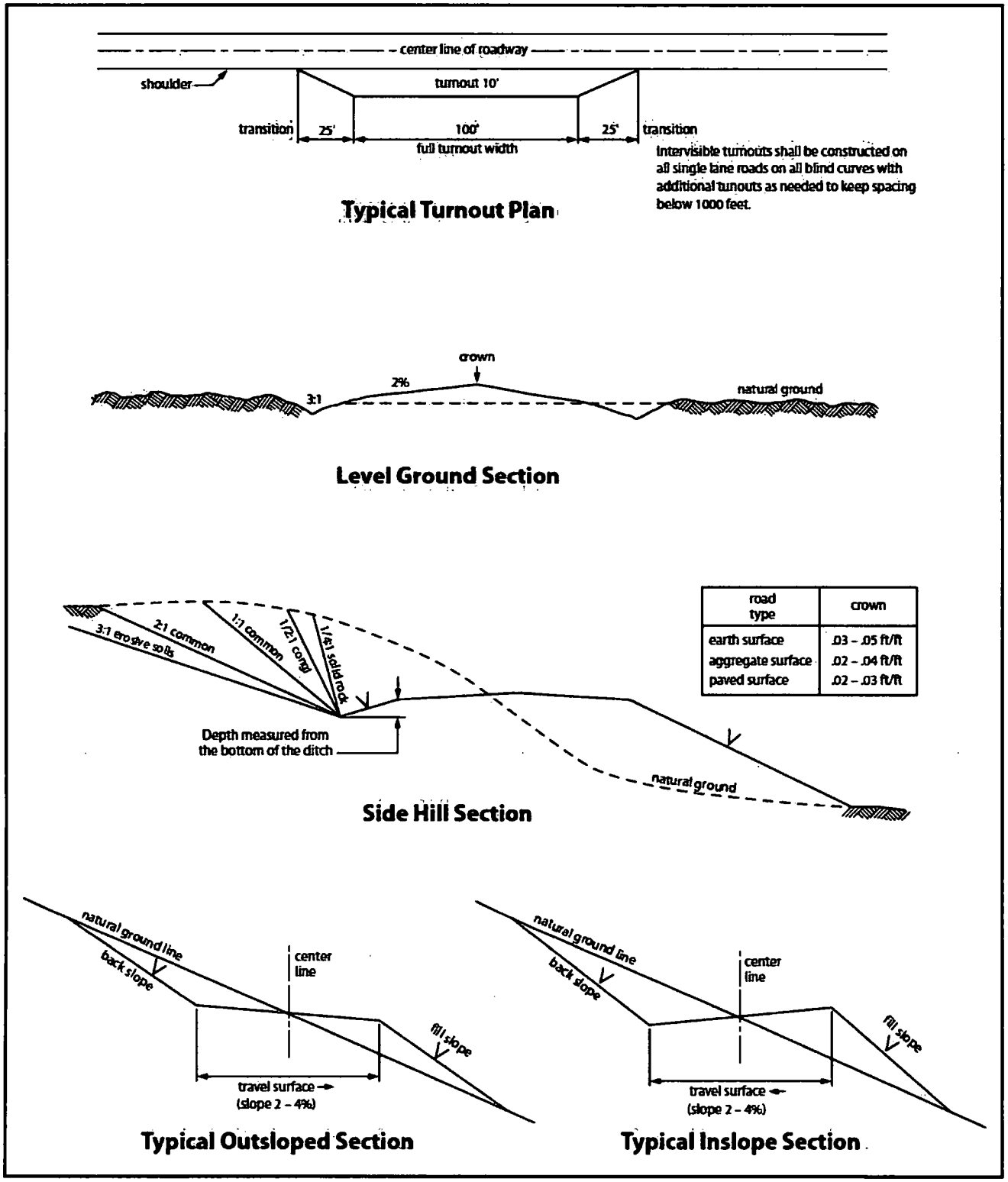



**Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.**

# 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).

## B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands,

the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

| | |
|---|---|
| ( ) seed mixture 1 | ( ) seed mixture 3 |
| ( ) seed mixture 2 | ( ) seed mixture 4 |
| (X) seed mixture 2/LPC | ( ) Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

## C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized

under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the

facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken**:
Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for

exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES

A copy of the application (Grant/Sundry Notice) and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statues.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such

discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.

8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

10. 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.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site 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 the abandonment of the site. All pads and 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. 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).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

| | |
|---|---|
| ( ) seed mixture 1 | ( ) seed mixture 3 |
| ( ) seed mixture 2 | ( ) seed mixture 4 |
| (X) seed mixture 2/LPC | ( ) Aplomado Falcon Mixture |

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - 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

16. 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.

17. 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.

18. 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.

19. Special Stipulations:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

**Lesser Prairie-Chicken**

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except

between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

**Timing Limitation Exceptions:**

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

## 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).

## Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

| Species | lb/acre |
|---|---|
| Plains Bristlegrass | 5lbs/A |
| Sand Bluestem | 5lbs/A |
| Little Bluestem | 3lbs/A |
| Big Bluestem | 6lbs/A |
| Plains Coreopsis | 2lbs/A |
| Sand Dropseed | 1lbs/A |

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

AFMSS

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

# Operator Certification Data Report

10/09/2019

## 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:** Rebecca Deal **Signed on:** 01/24/2019

**Title:** Regulatory Compliance Professional

**Street Address:** 333 W. Sheridan Ave

**City:** OKC **State:** OK **Zip:** 73102

**Phone:** (405)552-6556

**Email address:** blake.richardson@dvn.com

## Field Representative

**Representative Name:** Blake Richardson

**Street Address:** 333 W SHERIDAN AVE

**City:** OKC **State:** OK **Zip:** 73102

**Phone:** (405)552-6556

**Email address:** blake.richardson@dvn.com

AFMSS

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

# Application Data Report

10/09/2019

**APD ID:** 10400038419 **Submission Date:** 01/28/2019

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

[redacted]

Show Final Text

## Section 1 - General

**APD ID:** 10400038419 **Tie to previous NOS?** **Submission Date:** 01/28/2019

**BLM Office:** CARLSBAD **User:** Rebecca Deal **Title:** Regulatory Compliance Professional

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

**Lease number:** NMLC0063798 **Lease Acres:** 2480

**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:** DEVON ENERGY PRODUCTION COMPANY LP

**Operator letter of designation:**

## Operator Info

**Operator Organization Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Operator Address:** 333 West Sheridan Avenue **Zip:** 73102

**Operator PO Box:**

**Operator City:** Oklahoma City **State:** OK

**Operator Phone:** (800)583-3866

**Operator Internet Address:**

## Section 2 - Well Information

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

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

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

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H **Well API Number:**

**Field/Pool or Exploratory?** Field and Pool **Field Name:** BRINNINSTOOL **Pool Name:** WOLFCAMP

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

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** NO **New surface disturbance?**

**Type of Well Pad:** MULTIPLE WELL **Multiple Well Pad Name:** BLUE KRAIT 23 FED WELLPAD **Number:** 5

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

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** **Distance to nearest well:** 120 FT **Distance to lease line:** 245 FT

**Reservoir well spacing assigned acres Measurement:** 320 Acres

**Well plat:** BLUE_KRAIT_23_14_FED_31H_C_102_20190124113955.pdf

**Well work start Date:** 08/25/2019 **Duration:** 45 DAYS

## Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83 **Vertical Datum:** NAVD88

**Survey number:** **Reference Datum:**

| | 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 | 245 | FSL | 980 | FWL | 24S | 33E | 23 | Aliquot SWSW | 32.196523 | -103.548475 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0063798 | 3556 | 0 | 0 |
| KOP Leg #1 | 345 | FSL | 980 | FWL | 24S | 33E | 23 | Aliquot SWSW | 32.196798 | -103.548473 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0063798 | -8396 | 11954 | 11952 |
| PPP Leg #1 | 345 | FSL | 980 | FWL | 24S | 33E | 23 | Aliquot SWSW | 32.196798 | -103.548473 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0063798 | -8396 | 11954 | 11952 |

HOBBS OCD

OCT 15 2019

RECEIVED

Intent [x] As Drilled [ ]

| API # |
|---|
| |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| DEVON ENERGY PRODUCTION COMPANY, LP. | BLUE KRAIT 23-14 FED | 31H |

Kick Off Point (KOP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| | 23 | 24S | 33E | | 345 | FSL | 980 | FWL | LEA |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.196798 | -103.548473 | 83 |

First Take Point (FTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| M | 23 | 24 | 33 | | 100 | SOUTH | 1026 | WEST | LEA |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.196124 | 103.548326 | 83 |

Last Take Point (LTP)

| UL | Section | Township | Range | Lot | Feet | From N/S | Feet | From E/W | County |
|---|---|---|---|---|---|---|---|---|---|
| D | 14 | 24 | 33 | | 100 | NORTH | 1026 | WEST | LEA |

| Latitude | Longitude | NAD |
|---|---|---|
| 32.224585 | 103.548339 | 83 |

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [ ]

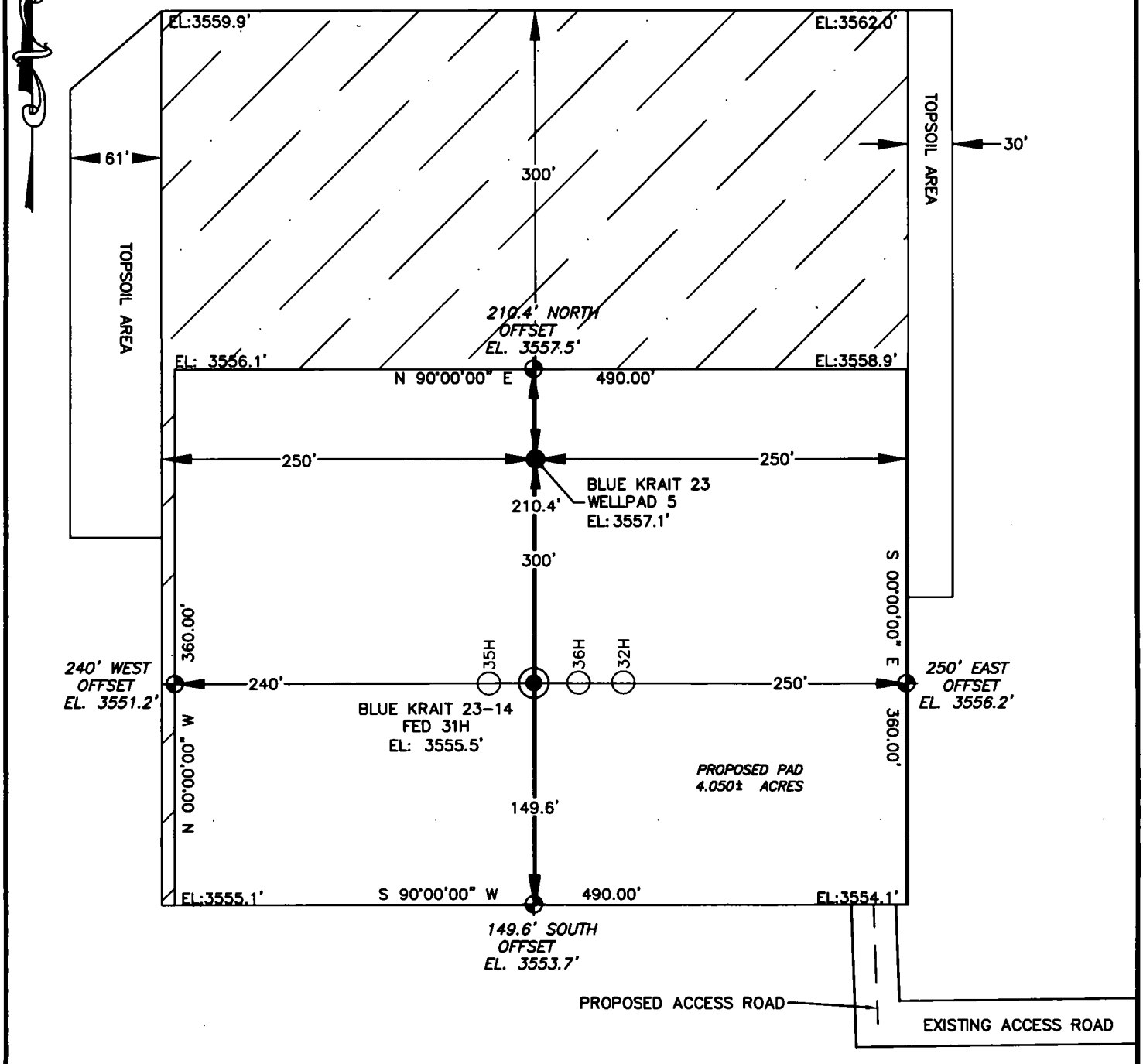
If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

| API # |
|---|
| |

| Operator Name: | Property Name: | Well Number |
|---|---|---|
| | | |

KZ 06/29/2018

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# SITE MAP




*Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.*

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

0 100 200

*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.

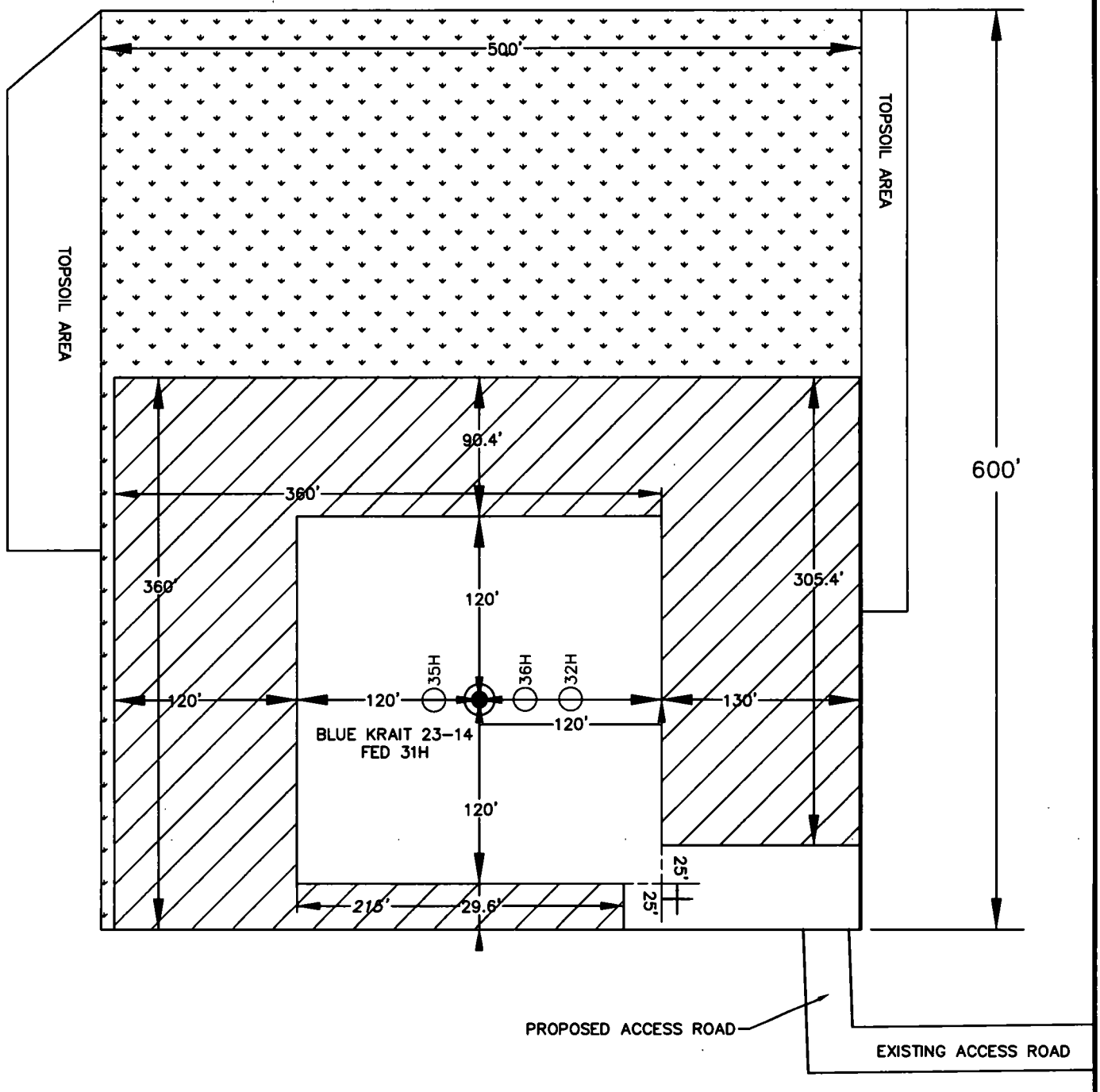
*HORIZON ROW LLC*

*DEVON ENERGY PRODUCTION CO., L.P.*

Drawn by: CHRIS MAAS | Date: 11/28/2018

Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# INTERIM SITE BUILD PLAN




DENOTES INTERIM PAD RECLAMATION AREA

DENOTES GRADING SITE RECLAMATION AREA

2.548± ACRES INTERIM PAD RECLAMATION AREA
2.837± ACRES GRADING SITE RECLAMATION AREA
1.502± ACRES NON-RECLAIMED AREA
6.887± ACRES GRADING SITE RECLAMATION AREA

0 100 200

DEVON ENERGY PRODUCTION COMPANY, L.P.
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LEA COUNTY, STATE OF NEW MEXICO

HORIZON ROW LLC

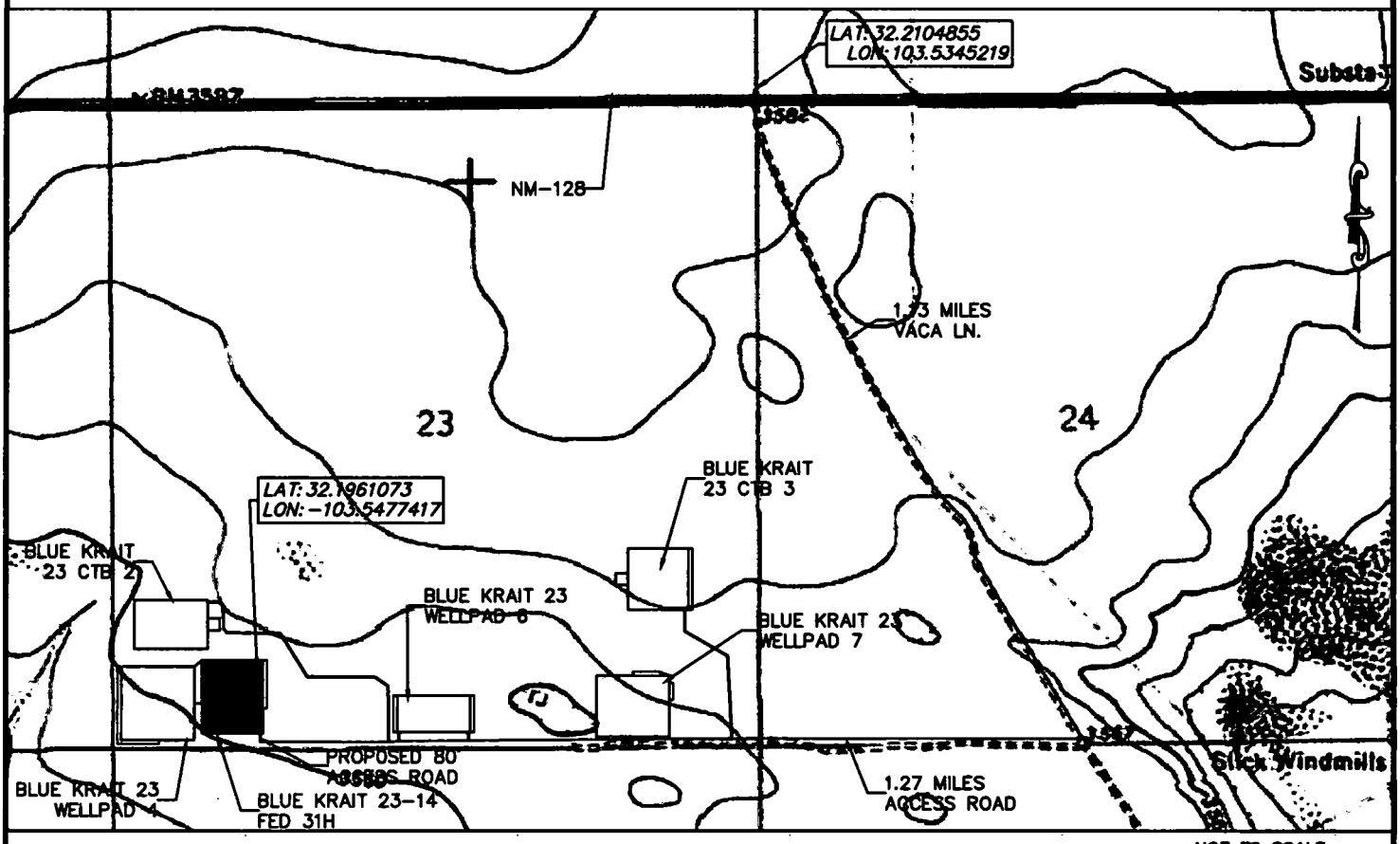
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 11/28/2018

Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# VICINITY MAP




NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
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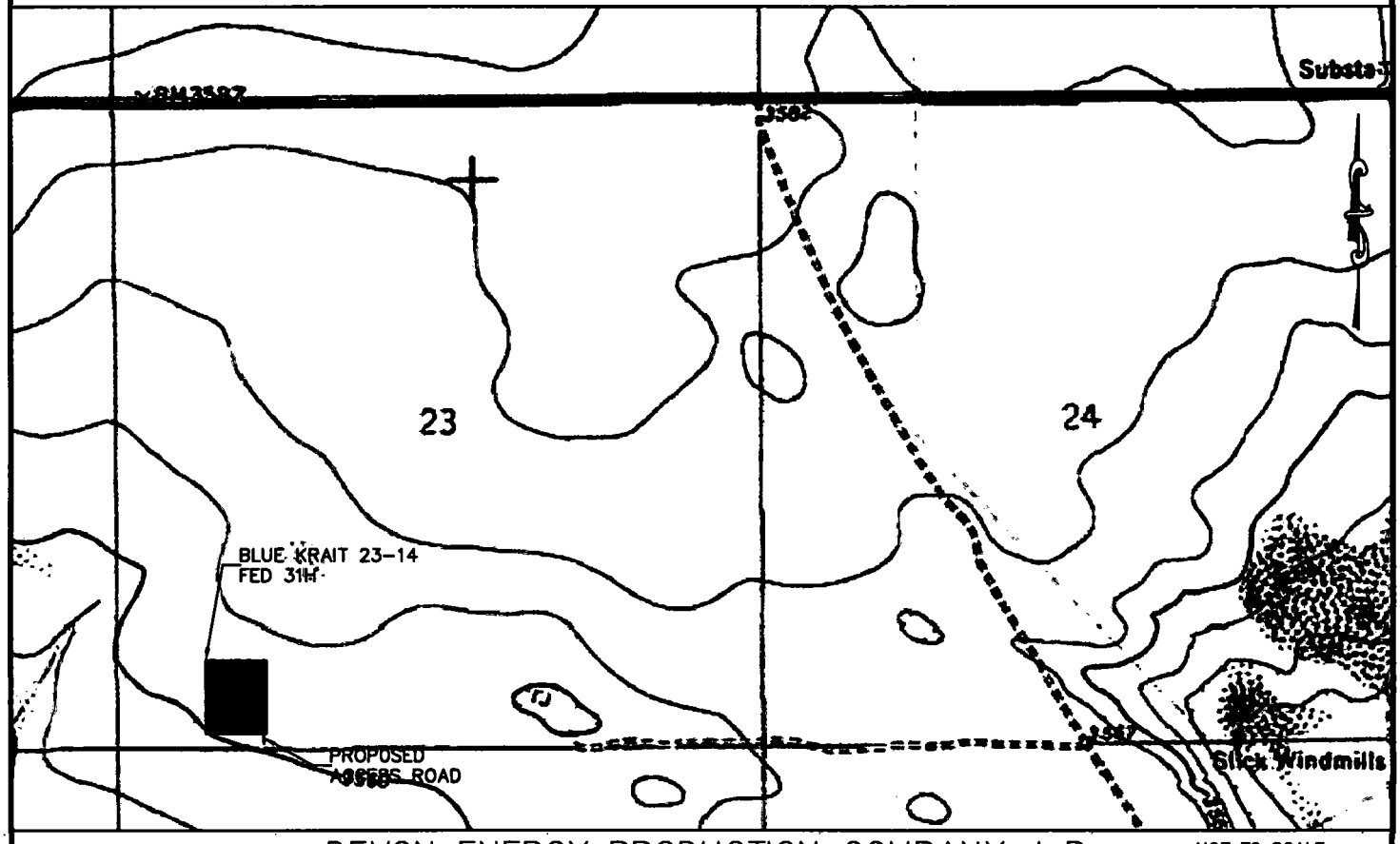
LEA COUNTY, STATE OF NEW MEXICO

*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.

| | | |
|---|---|---|
| *HORIZON ROW LLC* | | Drawn for: devon |
| *DEVON ENERGY PRODUCTION CO., L.P.* | | |
| Drawn by: CHRIS MAAS | Date: 11/28/2018 | |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# LOCATION VERIFICATION MAP




NOT TO SCALE

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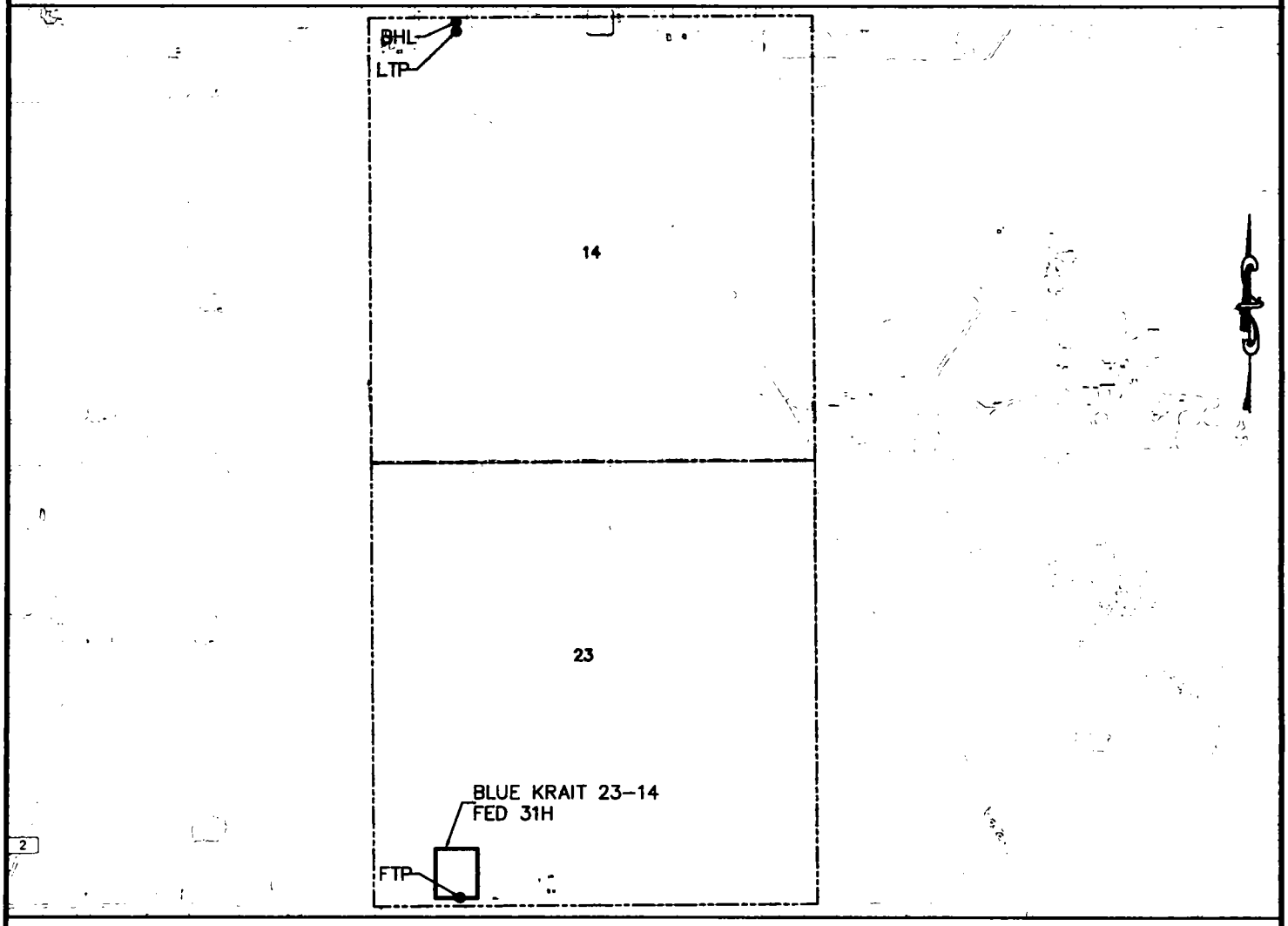
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

0 1500 3000

| | |
|---|---|
| HORIZON ROW LLC | Drawn for: devon |
| DEVON ENERGY PRODUCTION CO., L.P. | |
| Drawn by: CHRIS MAAS | Date: 11/28/2018 |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL PHOTO

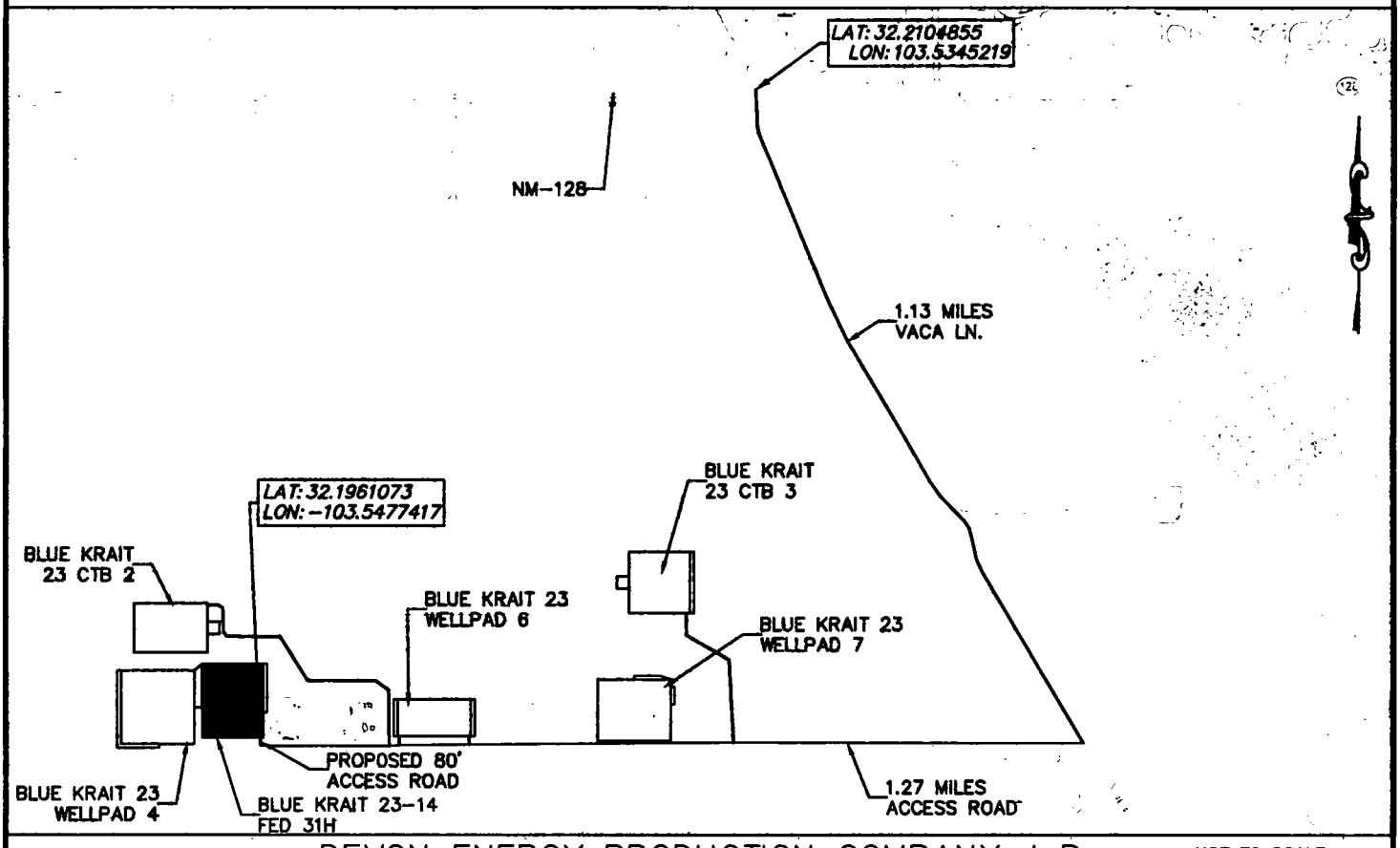



DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

0 2000 4000

| | |
|---|---|
| HORIZON ROW LLC | Drawn for: |
| DEVON ENERGY PRODUCTION CO., L.P. | devon |
| Drawn by: CHRIS MAAS | Date: 11/28/2018 |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP




NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
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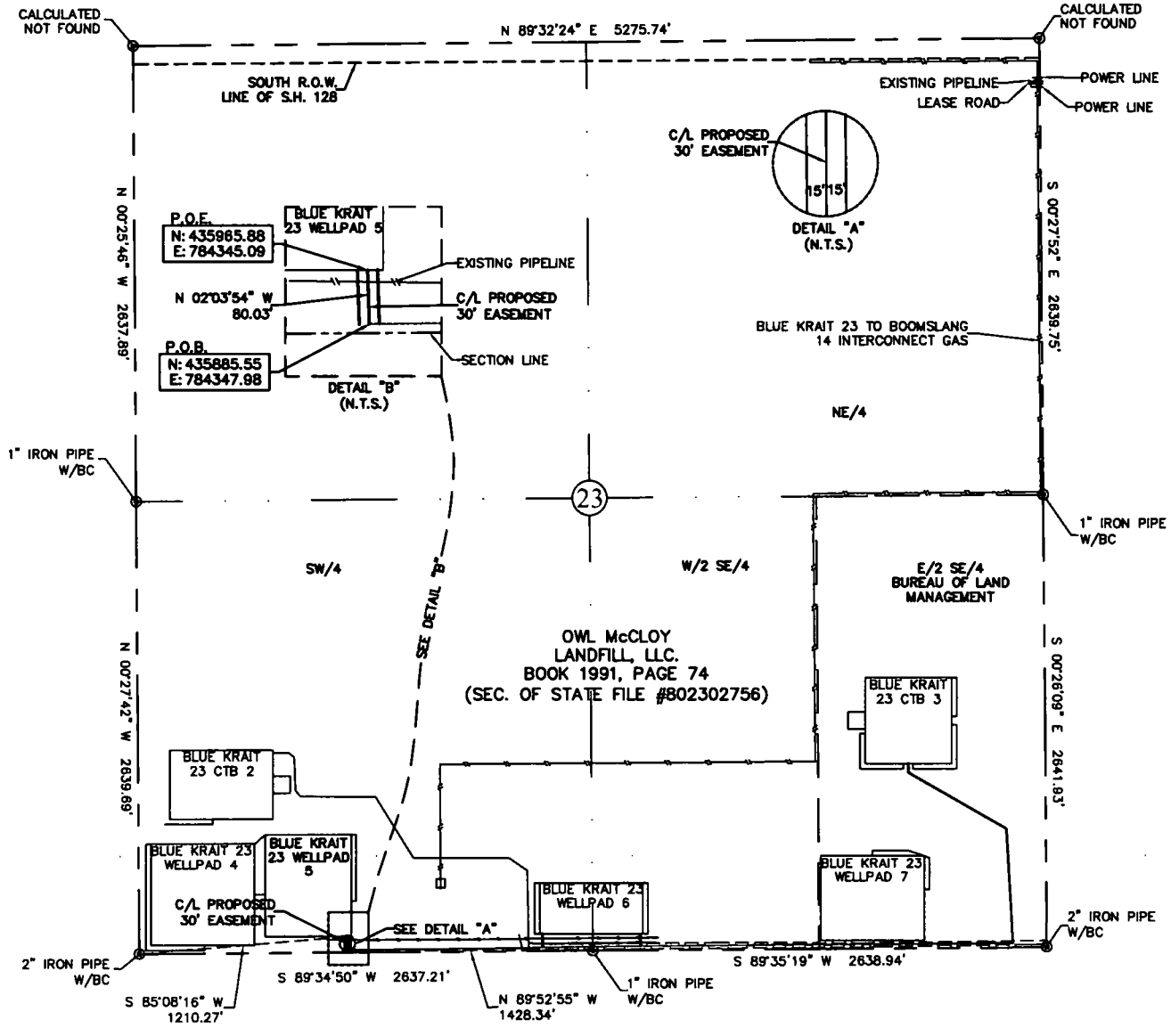
| | | |
|---|---|---|
| HORIZON ROW LLC | | Drawn for: devon |
| DEVON ENERGY PRODUCTION CO., L.P. | | |
| Drawn by: CHRIS MAAS | Date: 11/28/2018 | |

# EXHIBIT "A"
## ACCESS ROAD PLAT
## SECTION 23, T24S–R33E, N.M.P.M.
## LEA COUNTY, NEW MEXICO




30' EASEMENT AREA = 0.055 ACRE(S)
80.03 FEET OR 4.85 RODS

0+00.0 P.O.B./EXISTING ACCESS ROAD
0+62.9 EXISTING PIPELINE
0+80.3 P.O.E./BLUE KRAIT 23 WELLPAD 5

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Date Signed: 11-28-2018
Hortzonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Hortzonrow, LLC

0 1000 2000

| | | | |
|---|---|---|---|
| HORIZON ROW LLC | DEVON ENERGY PRODUCTION COMPANY, L.P. | | LINE NUMBER: 7610117R |
| Drawn for: devon | BLUE KRAIT 23 WELLPAD 5 ACCESS ROAD | | WBS NUMBER: XX-129903.01.SLC |
| | | | SCALE: 1" = 1000' |
| | PROPOSED 30' EASEMENT ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC SECTION 23, T24S–R33E, N.M.P.M. | | REVISIONS: |
| Drawn by: CHRIS MAAS | Date: 11/15/2018 | | DATE OF SURVEY: 8/20/18 |

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 Secretary of State file #802302756of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 89°52'55" W, a distance of 1428.34' to the **Point of Beginning** of this easement having coordinates of Northing= 435885.55 feet, Easting=784347.98 feet and continuing the following course;

Thence N 02°03'54" W, a distance of 80.03' to the **Point of Ending** having coordinates of Northing=435965.88 feet, Easting=784345.09 feet, from said point a 2" iron pipe w/BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 85°08'16" W a distance of 1210.27', covering **80.03' or 4.85 rods** and having an area of **0.055 acres.**

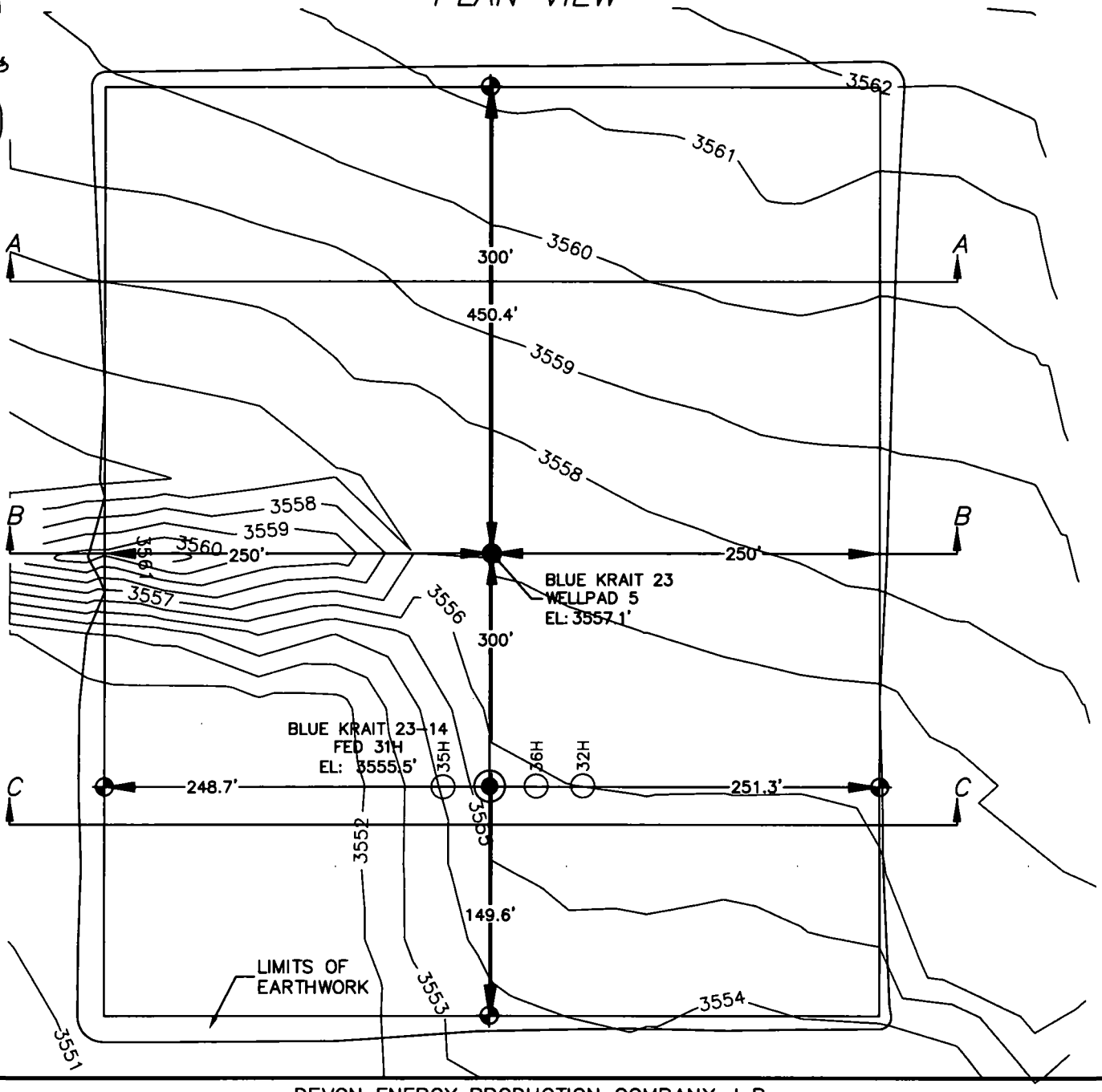
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 11/28/2018
Horizon Row, LLC
924 Richardson Dr., Jasper, TX
(903) 388-3045 75951
Employee of Horizon Row, LLC

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# PLAN VIEW

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AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

0 100 200

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

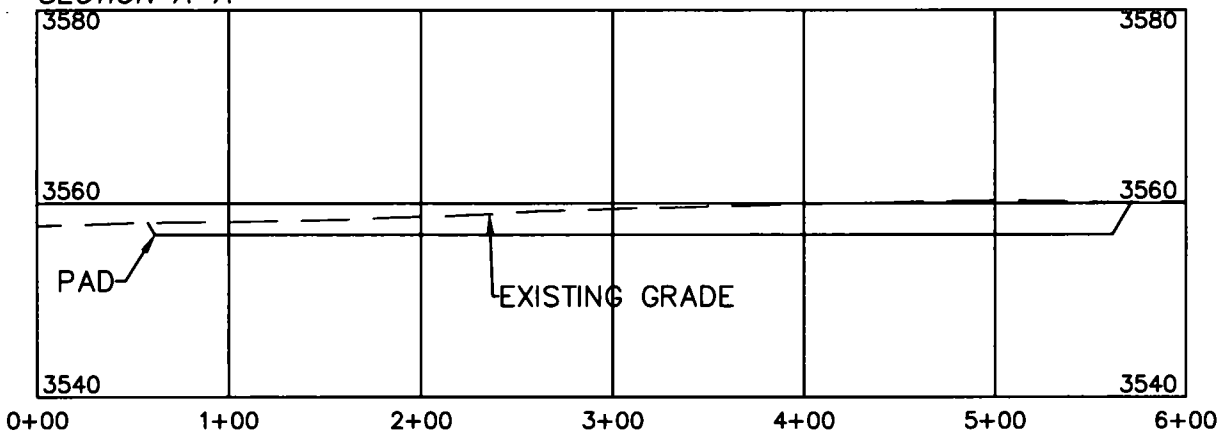
Drawn by: CHRIS MAAS

Date: 11/28/2018

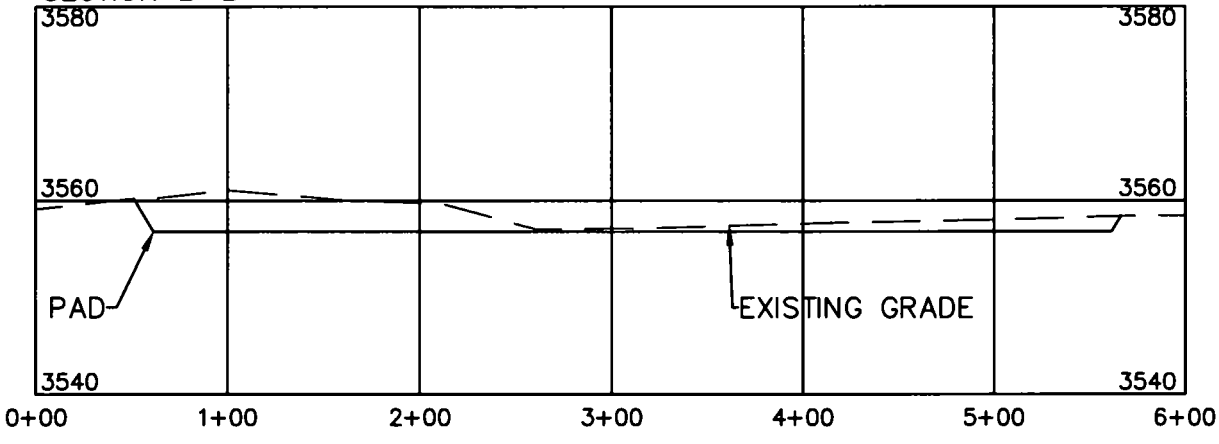
Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# CROSS SECTIONS

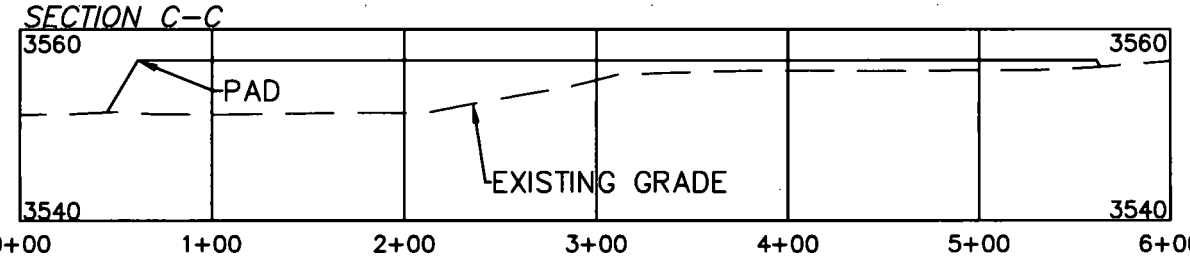
SECTION A–A




SECTION B–B




SECTION C–C




DEVON ENERGY PRODUCTION COMPANY, L.P.
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LEA COUNTY, STATE OF NEW MEXICO

SCALE 1" = 100' HORIZONTAL
SCALE 1" = 20' VERTICAL

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 11/28/2018

Drawn for: devon

**APD ID:** 10400038419 **Submission Date:** 01/28/2019

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

[redacted]

Show Final Text

## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 1 | — | 3555 | 0 | 0 | OTHER : Surface | NONE | N |
| 2 | RUSTLER | 2454 | 1101 | 1101 | SANDSTONE | NONE | N |
| 3 | TOP SALT | 1933 | 1622 | 1622 | SALT | NONE | N |
| 4 | BASE OF SALT | -1493 | 5048 | 5048 | LIMESTONE | NONE | N |
| 5 | BELL CANYON | -1712 | 5267 | 5267 | SANDSTONE | NATURAL GAS,OIL | N |
| 6 | CHERRY CANYON | -2986 | 6301 | 6301 | SANDSTONE | NATURAL GAS,OIL | N |
| 7 | BRUSHY CANYON | -4616 | 7931 | 7931 | SANDSTONE | NATURAL GAS,OIL | N |
| 8 | BONE SPRING | -6126 | 9441 | 9441 | SHALE | NATURAL GAS,OIL | N |
| 9 | BONE SPRING 1ST | -6645 | 10200 | 10200 | SANDSTONE | NATURAL GAS,OIL | N |
| 10 | BONE SPRING 2ND | -7305 | 10860 | 10860 | SANDSTONE | NATURAL GAS,OIL | N |
| 11 | BONE SPRING 3RD | -8641 | 12196 | 12196 | SANDSTONE | NATURAL GAS,OIL | N |
| 12 | WOLFCAMP | -8702 | 12257 | 12257 | SHALE | NATURAL GAS,OIL | Y |
| 13 | STRAWN | -10245 | 13800 | 13800 | LIMESTONE | NATURAL GAS,OIL | N |

## Section 2 - Blowout Prevention

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**Pressure Rating (PSI):** 10M **Rating Depth:** 12525

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below intermediate casing, a BOP/BOPE system with the above minimum rating will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart. Devon requests a variance to run a 5M annular on a 10M BOP system. See separately attached variance request and support documents in AFMSS.
**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. 5M annular on 10M system will be tested to 100% of rated working pressure.
**Choke Diagram Attachment:**

10M_BOPE_CHK_DR_CLS_RKL_20190124094056.pdf

**BOP Diagram Attachment:**

10M_BOPE_CHK_DR_CLS_RKL_20190124094339.pdf

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**Pressure Rating (PSI):** 5M **Rating Depth:** 11965

**Equipment:** BOP/BOPE will be installed per Onshore Oil & Gas Order #2 requirements prior to drilling below surface casing, a BOP/BOPE system with the above minimum rating will be installed on the wellhead system. BOP/BOPE will be tested by an independent service company per Onshore Oil & Gas Order #2 requirements and MASP (Maximum Anticipated Surface Pressure) calculations. If the system is upgraded, all the components installed will be functional and tested.
**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart.
**Testing Procedure:** A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.
**Choke Diagram Attachment:**

5M_BOPE__CK_20190124094439.pdf

**BOP Diagram Attachment:**

5M_BOPE__CK_20190124094446.pdf

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**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

## 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 | 14.75 | 10.75 | NEW | API | N | 0 | 1350 | 0 | 1350 | | | 1350 | J-55 | 40.5 | ST&C | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 2 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 0 | 11965 | 0 | 11965 | | | 11965 | P-110 | 29.7 | OTHER - BTC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 3 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 0 | 22472 | 0 | 12525 | | | 22472 | P-110 | 20 | OTHER - VAM SG | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Surf_Csg_Ass_20190124115132.pdf

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**Casing Attachments**

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Int_Csg_Ass_20190124094716.pdf

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

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

**Casing Design Assumptions and Worksheet(s):**

Prod_Csg_Ass_20190124115211.pdf

## Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SURFACE | Lead | | 0 | 1350 | 864 | 1.33 | 13.2 | 1149 | 50 | CLASS C | Class C + adds |
| INTERMEDIATE | Lead | | 0 | 7965 | 1161 | 1.85 | 9 | 2148 | 30 | TUNED | TUNED LIGHT |
| INTERMEDIATE | Tail | | 7965 | 11965 | 848 | 1.33 | 13.2 | 1128 | 30 | CLASS H | Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite |

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCTION | Lead | | 11465 | 22472 | 769 | 1.33 | 13.2 | 1023 | 25 | Class H | 0.125 lbs/sack Poly-E-Flake |

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

**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 | 1350 | WATER-BASED MUD | 8.5 | 9 | | | | 2 | | | |
| 0 | 11965 | SALT SATURATED | 9 | 10 | | | | 2 | | | |
| 11965 | 22472 | OIL-BASED MUD | 10 | 10.5 | | | | 12 | | | |

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

## Section 6 - Test, Logging, Coring

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

Will run GRMWD from TD to from KOP. Cement bond logs will be run in vertical to determine top of cement. Stated logs run will be in the Completion Report and submitted to the BLM.

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

CALIPER,CBL,DS,GR,MUDLOG

**Coring operation description for the well:**

N/A

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 6839 **Anticipated Surface Pressure:** 4083.5

**Anticipated Bottom Hole Temperature(F):** 182

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geoharzards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

Blue_Krait_23_14_Fed_31H_H2S_Plan_20190124115352.pdf

## Section 8 - Other Information

**Proposed horizontal/directional/multi-lateral plan submission:**

Blue_Krait_23_14_Fed_31H_Drilling_Plan_20190124120236.pdf
Blue_Krait_23_14_Fed_31H_DIR_SVY_20190124120254.pdf
Blue_Krait_23_14_Fed_31H_Plot_20190124120255.pdf

**Other proposed operations facets description:**

DIRECTIONAL SURVEY
PLOT
DRILLING PLAN
MULTI-BOWL VERBIAGE
MULTI-BOWL WELLHEAD - 2 VARIATIONS OF 10M
10M ANNULAR VARIANCE DOC & SCHEMATIC
CLOSED LOOP DESIGN PLAN
CO-FLEX HOSE
SPUDDER RIG REQUEST
GCP FORM
SPEC SHEETS - 6

**Other proposed operations facets attachment:**

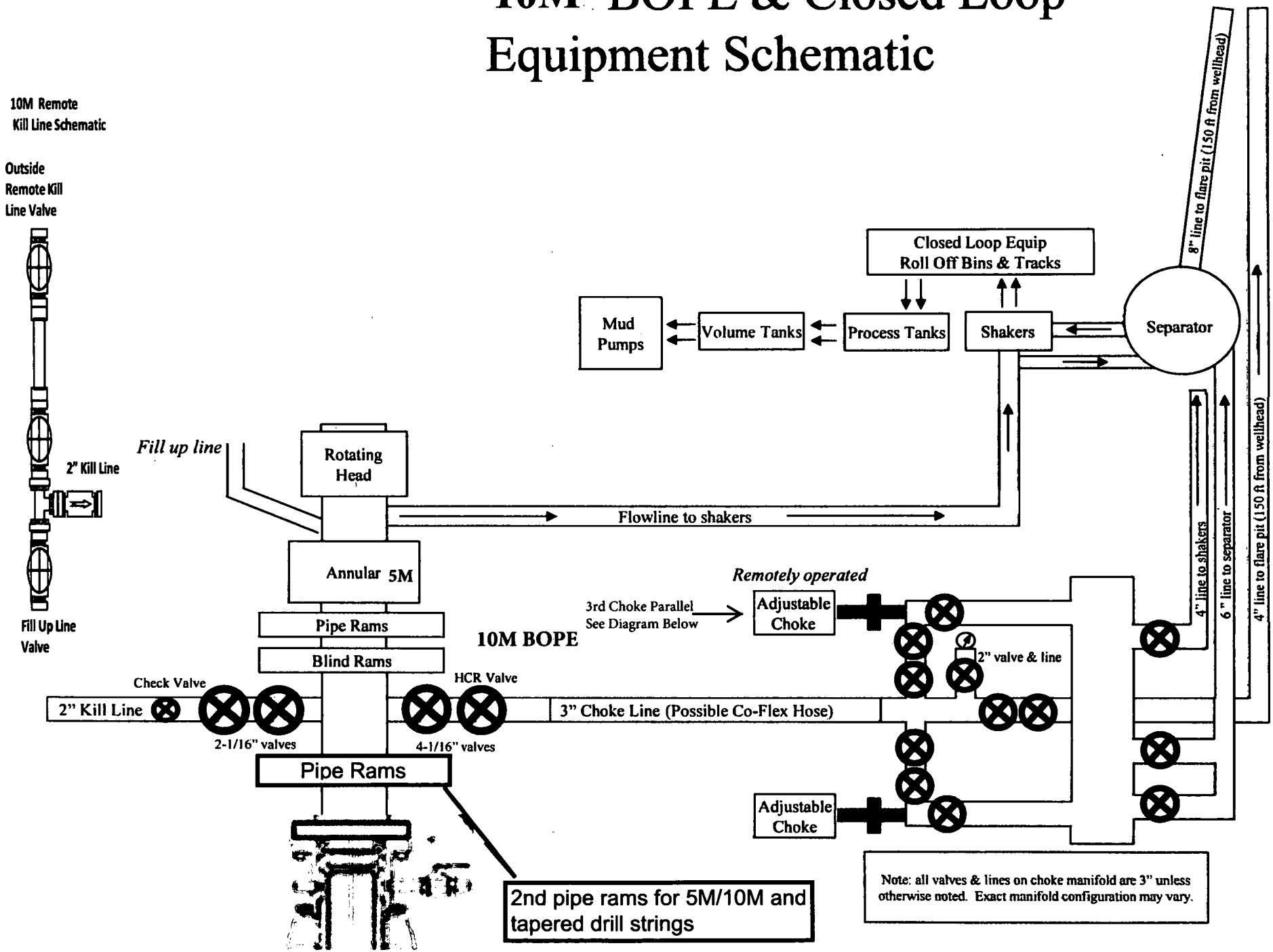
7.625_29.70_P110_Flushmax_20180802151741.pdf

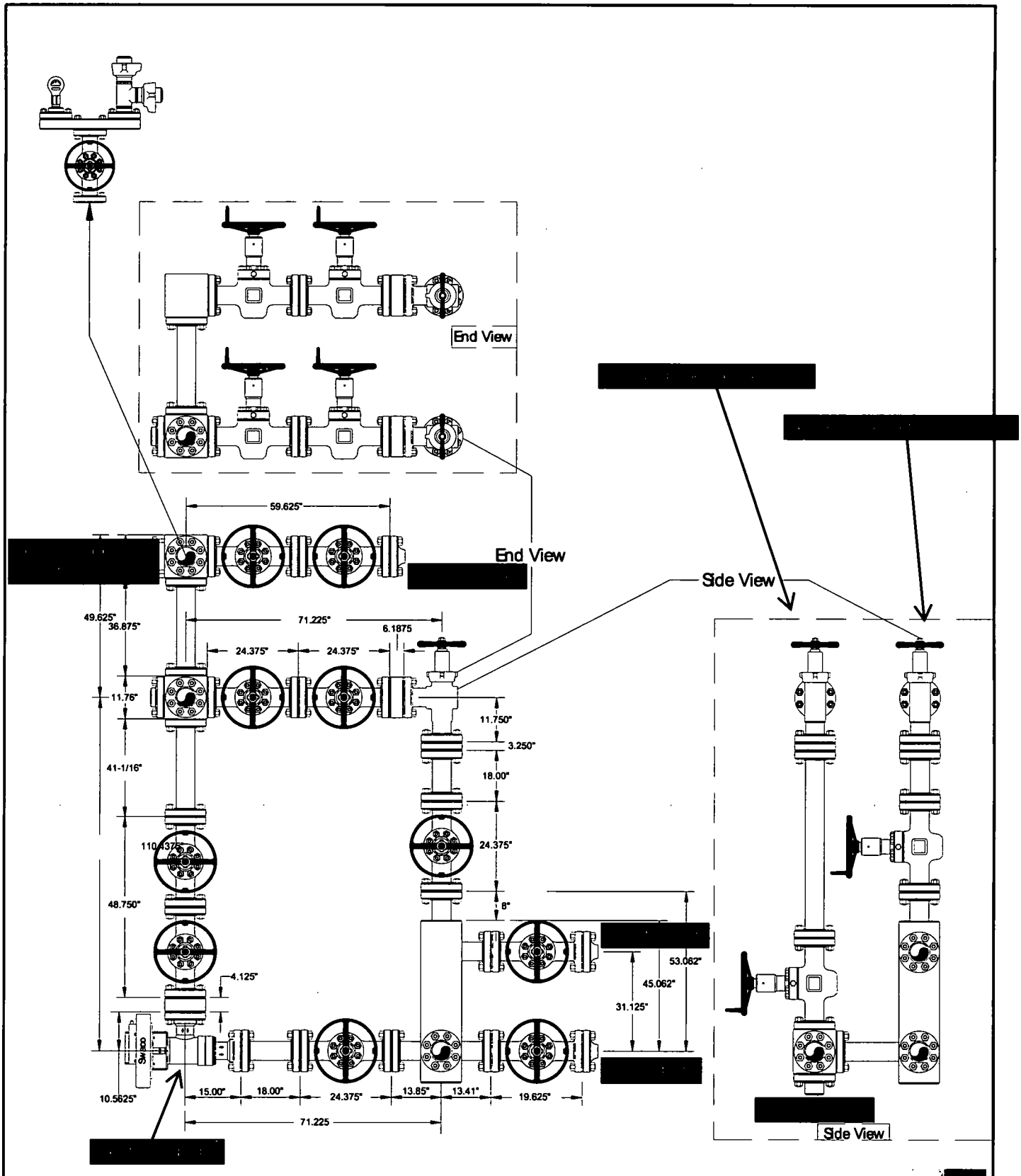
5.5_x_20_P110_EC_VAMSG_20180802151740.pdf
8.625_32__P110EC___7.875_SD_20180802151742.pdf
13.375_48__H40_20190124102551.pdf
5_500in_17_00__P110RY_DWC_C_20190124102614.pdf
MB_Verb_10M_20190124102727.pdf
Spudder_Rig_Info_20190124102728.pdf
MB_Wellhd_5M___Wolfcamp_5M_20190124103216.pdf
MB_Wellhd_10M_2_20190124102943.PDF
MB_Wellhd_10M_20190124102944.pdf
Clsd_Loop_20190124102727.pdf
Blue_Krait_23_Fed_WP_5_GCP_20190124102726.pdf
10.750_40.50__J55_USS_20190124102537.PDF

**Other Variance attachment:**

10M_BOPE_CHK_DR_CLS_RKL_20190124102805.pdf
Annular_Variance___Preventer_Summary_20190124102747.pdf
Co_flex_20190124102748.pdf

# 10M BOPE & Closed Loop Equipment Schematic





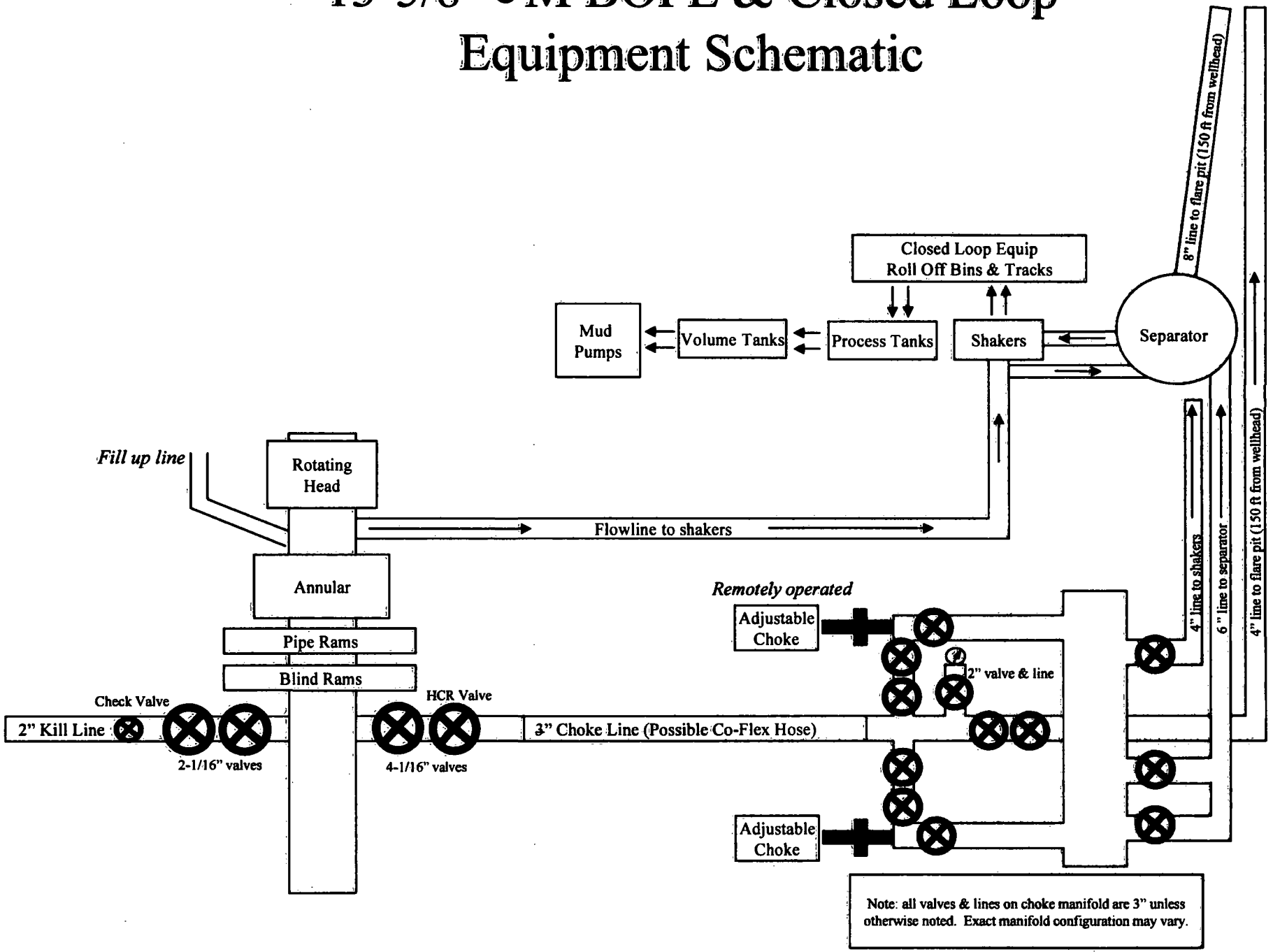

## Helmerich & Payne

Flex 3 Rig w/ 3 Chokes

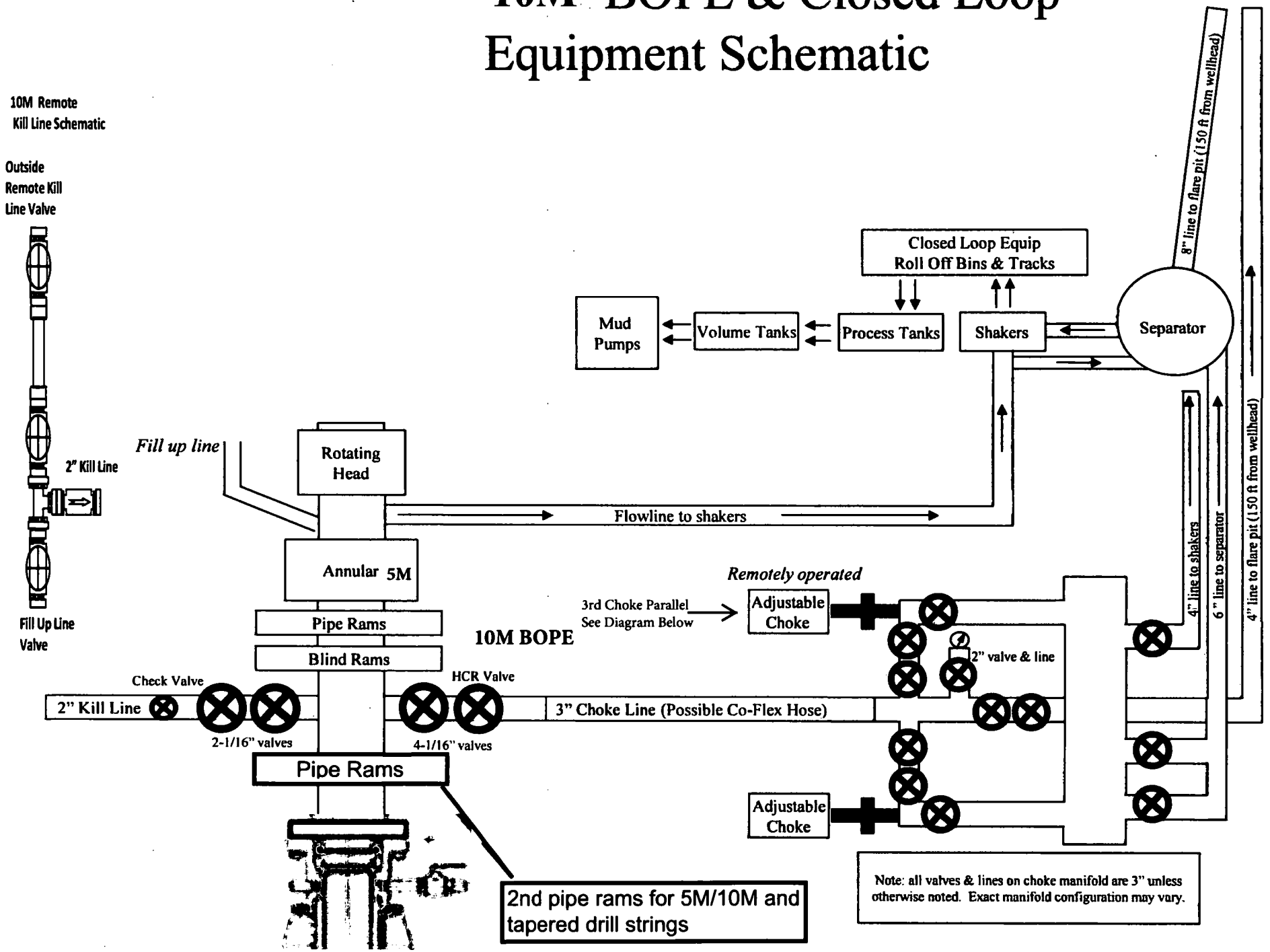
devon

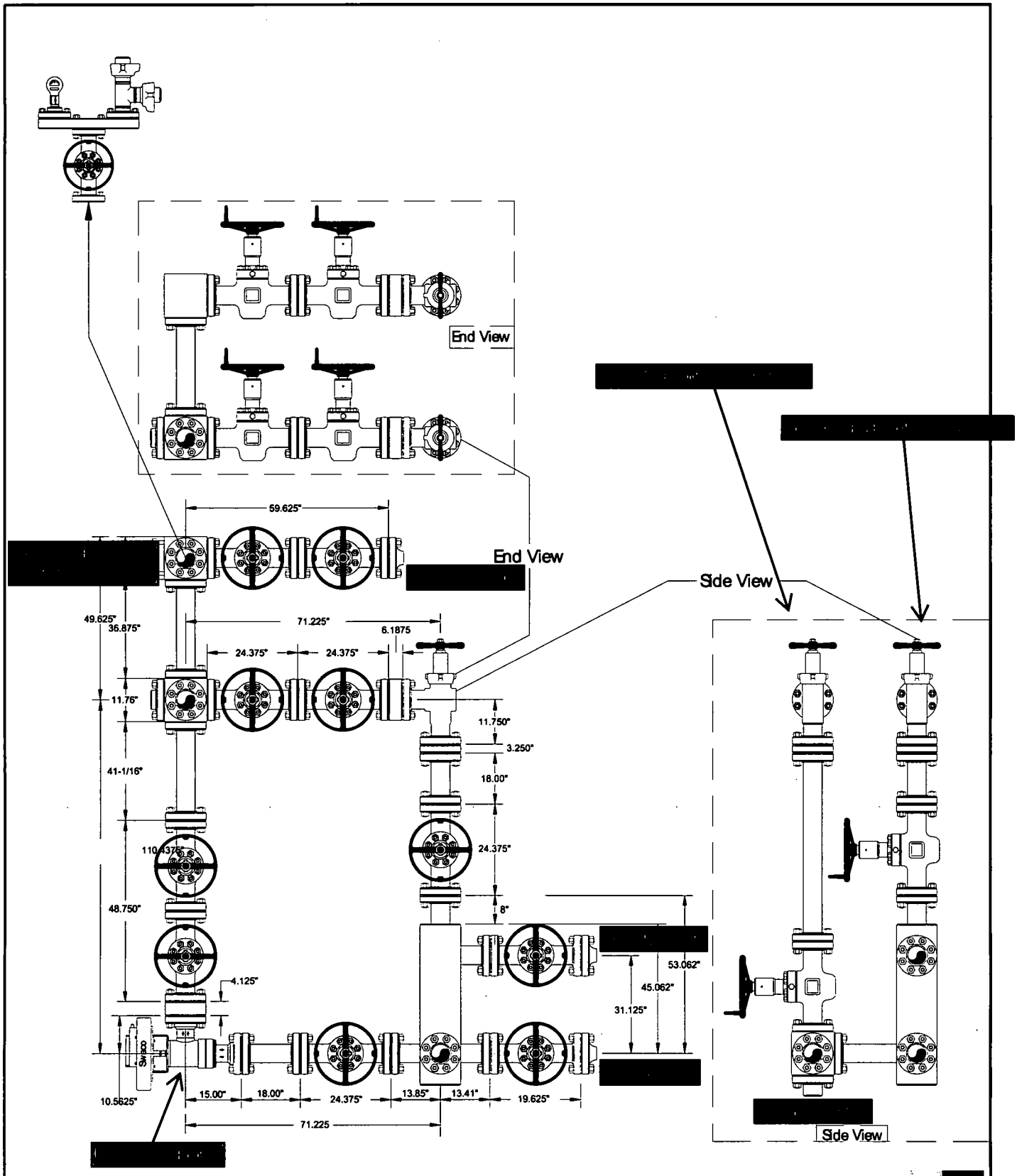
| Name: | Date: | Working Pressure: | |
|---|---|---|---|
| Mike Potts | 6-23-2010 | 10M | J-5132-E |

# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



# 10M BOPE & Closed Loop Equipment Schematic





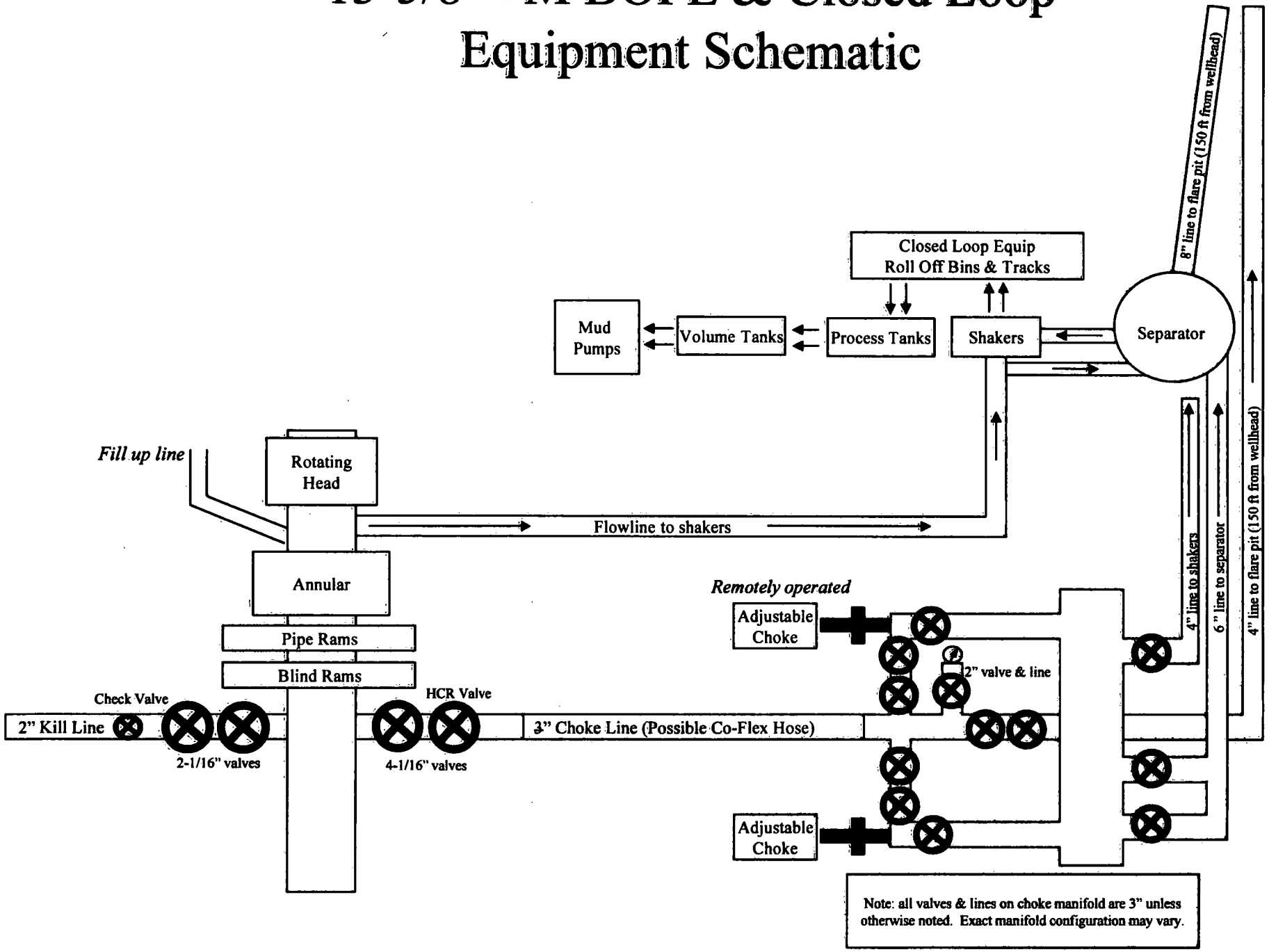

# Helmerich & Payne

Flex 3 Rig w/ 3 Chokes

devon

| Name: | Mike Potts | Date: | 6-23-2010 | Working Pressure: | 10M | J-5132-E |
|---|---|---|---|---|---|---|

# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

| Intermediate Casing Burst Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Pressure Test | Formation Pore Pressure | Max mud weight of next hole-section plus Test psi |
| Drill Ahead | Formation Pore Pressure | Max mud weight of next hole section |
| Fracture @ Shoe | Formation Pore Pressure | Dry gas |

| Intermediate Casing Collapse Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Full Evacuation | Water gradient in cement, mud above TOC | None |
| Cementing | Wet cement weight | Water (8.33ppg) |

| Intermediate Casing Tension Design | |
|---|---|
| **Load Case** | **Assumptions** |
| Overpull | 100kips |
| Runing in hole | 2 ft/s |
| Service Loads | N/A |

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

| Production Casing Burst Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Pressure Test | Formation Pore Pressure | Fluid in hole (water or produced water) + test psi |
| Tubing Leak | Formation Pore Pressure | Packer @ KOP, leak below surface 8.6 ppg packer fluid |
| Stimulation | Formation Pore Pressure | Max frac pressure with heaviest frac fluid |

| Production Casing Collapse Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Full Evacuation | Water gradient in cement, mud above TOC. | None |
| Cementing | Wet cement weight | Water (8.33ppg) |

| Production Casing Tension Design | |
|---|---|
| **Load Case** | **Assumptions** |
| Overpull | 100kips |
| Runing in hole | 2 ft/s |
| Service Loads | N/A |

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

| Production Casing Burst Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Pressure Test | Formation Pore Pressure | Fluid in hole (water or produced water) + test psi |
| Tubing Leak | Formation Pore Pressure | Packer @ KOP, leak below surface 8.6 ppg packer fluid |
| Stimulation | Formation Pore Pressure | Max frac pressure with heaviest frac fluid |

| Production Casing Collapse Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Full Evacuation | Water gradient in cement, mud above TOC. | None |
| Cementing | Wet cement weight | Water (8.33ppg) |

| Production Casing Tension Design | |
|---|---|
| **Load Case** | **Assumptions** |
| Overpull | 100kips |
| Runing in hole | 2 ft/s |
| Service Loads | N/A |

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

| Surface Casing Burst Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Pressure Test | Formation Pore Pressure | Max mud weight of next hole-section plus Test psi |
| Drill Ahead | Formation Pore Pressure | Max mud weight of next hole section |
| Displace to Gas | Formation Pore Pressure | Dry gas from next casing point |

| Surface Casing Collapse Design | | |
|---|---|---|
| **Load Case** | **External Pressure** | **Internal Pressure** |
| Full Evacuation | Water gradient in cement, mud above TOC | None |
| Cementing | Wet cement weight | Water (8.33ppg) |

| Surface Casing Tension Design | |
|---|---|
| **Load Case** | **Assumptions** |
| Overpull | 100kips |
| Runing in hole | 3 ft/s |
| Service Loads | N/A |

devon

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

# Hydrogen Sulfide ($H_2S$) Contingency Plan

## For

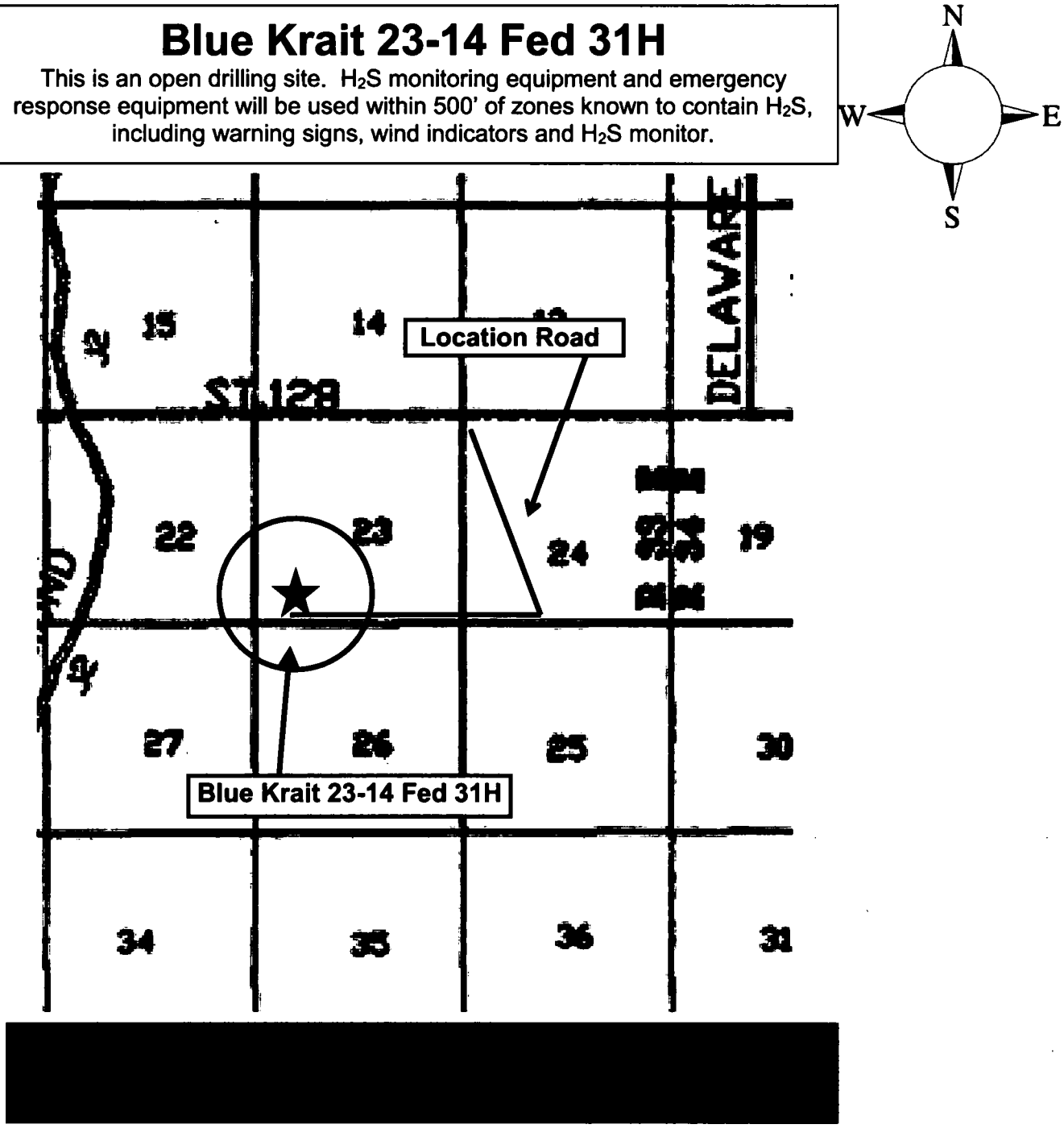
## Blue Krait 23-14 Fed 31H

Sec-23 T-24S R-33E
245' FSL & 980' FWL
LAT. = 32.196523' N (NAD83)
LONG = 103.548475' W

Lea County NM

# Blue Krait 23-14 Fed 31H

This is an open drilling site. $H_2S$ monitoring equipment and emergency response equipment will be used within 500' of zones known to contain $H_2S$, including warning signs, wind indicators and $H_2S$ monitor.




**Escape**

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

**Assumed 100 ppm ROE = 3000'**

**100 ppm $H_2S$ concentration shall trigger activation of this plan.**

**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 response**
- **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 $SO_2$**

| Common Name | Chemical Formula | Specific Gravity | Threshold Limit | Hazardous Limit | Lethal Concentration |
|---|---|---|---|---|---|
| Hydrogen Sulfide | $H_2S$ | 1.189 Air = 1 | 10 ppm | 100 ppm/hr | 600 ppm |
| Sulfur Dioxide | $SO_2$ | 2.21 Air = 1 | 2 ppm | N/A | 1000 ppm |

## Contacting Authorities

Devon Energy Corp. personnel must liaison 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. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with

the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

## Hydrogen Sulfide Drilling Operation Plan

## I. HYDROGEN SULFIDE ($H_2S$) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide ($H_2S$)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of $H_2S$ detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of $H_2S$ metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the $H_2S$ Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable $H_2S$ zone (within 3 days or 500 feet) and weekly $H_2S$ and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific $H_2S$ Drilling Operations Plan and the Public Protection Plan.

## II. HYDROGEN SULFIDE TRAINING

Note: All $H_2S$ safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain $H_2S$.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **$H_2S$ detection and monitoring equipment:**

   Portable $H_2S$ monitors positioned on location for best coverage and response. These units have warning lights which activate when $H_2S$ levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - **Bell nipple**
   - **Rig floor**
   - **Cellar**
   - **Possum Belly/Shale shaker**
   - **Choke manifold**

   **Visual warning systems:**

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

   The mud program has been designed to minimize the volume of $H_2S$ circulated to surface. Proper mud weight, safe drilling practices and the use of $H_2S$ scavengers will minimize hazards when penetrating $H_2S$ bearing zones.

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be $H_2S$ trim.

   B. All elastomers used for packing and seals shall be $H_2S$ trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

7. **Well testing:**

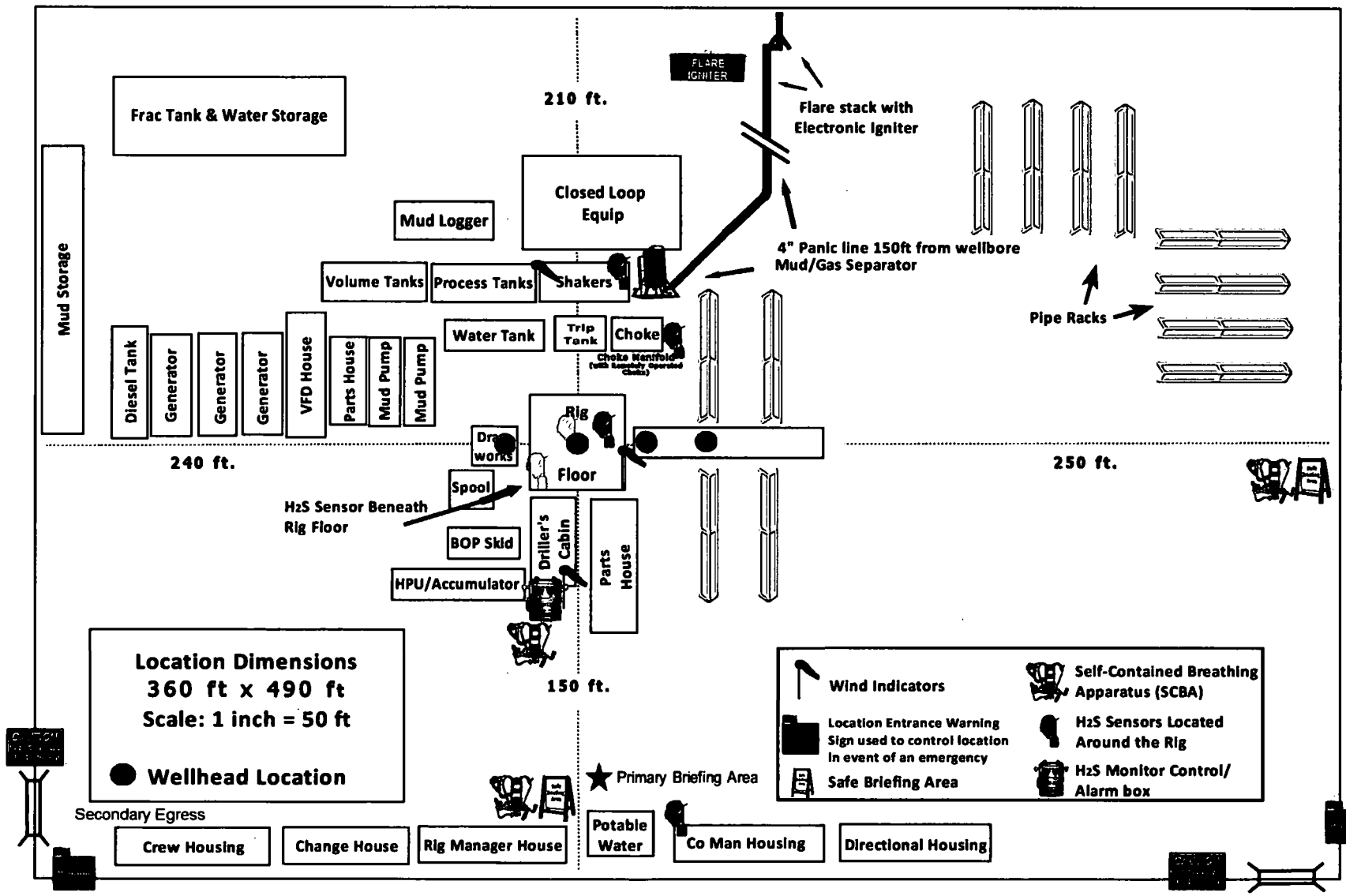
   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an $H_2S$ environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

| Devon Energy Corp. Company Call List | | |
|---|---|---|
| Drilling Supervisor – Basin – Mark Kramer | | 405-823-4796 |
| | | |
| EHS Professional – Laura Wright | | 405-439-8129 |
| | | |
| **Agency Call List** | | |
| | | |
| **Lea County (575)** | **Hobbs** | |
| | Lea County Communication Authority | 393-3981 |
| | State Police | 392-5588 |
| | City Police | 397-9265 |
| | Sheriff's Office | 393-2515 |
| | **Ambulance** | **911** |
| | Fire Department | 397-9308 |
| | LEPC (Local Emergency Planning Committee) | 393-2870 |
| | NMOCD | 393-6161 |
| | US Bureau of Land Management | 393-3612 |
| | | |
| **Eddy County (575)** | **Carlsbad** | |
| | State Police | 885-3137 |
| | City Police | 885-2111 |
| | Sheriff's Office | 887-7551 |
| | **Ambulance** | **911** |
| | Fire Department | 885-3125 |
| | LEPC (Local Emergency Planning Committee) | 887-3798 |
| | US Bureau of Land Management | 887-6544 |
| | NM Emergency Response Commission (Santa Fe) | (505) 476-9600 |
| | 24 HR | (505) 827-9126 |
| | National Emergency Response Center | (800) 424-8802 |
| | National Pollution Control Center: Direct | (703) 872-6000 |
| | For Oil Spills | (800) 280-7118 |
| | **Emergency Services** | |
| | Wild Well Control | (281) 784-4700 |
| | Cudd Pressure Control (915) 699-0139 | (915) 563-3356 |
| | Halliburton | (575) 746-2757 |
| | B. J. Services | (575) 746-3569 |
| ***Give GPS position:*** | Native Air – Emergency Helicopter – Hobbs | (575) 392-6429 |
| | Flight For Life - Lubbock, TX | (806) 743-9911 |
| | Aerocare - Lubbock, TX | (806) 747-8923 |
| | Med Flight Air Amb - Albuquerque, NM | (575) 842-4433 |
| | Lifeguard Air Med Svc. Albuquerque, NM | (800) 222-1222 |
| | Poison Control (24/7) | (575) 272-3115 |
| | Oil & Gas Pipeline 24 Hour Service | (800) 364-4366 |
| | NOAA – Website - www.nhc.noaa.gov | |
| | | |

Prepared in conjunction with
Dave Small SHARP communications and consulting

# Devon Energy - Well Pad
# Rig Location Layout
# Safety Equipment Location



# Blue Krait 23-14 Fed 31H

## 1. Geologic Formations

| | | | |
|---|---|---|---|
| TVD of target | 12525 | Pilot hole depth | N/A |
| MD at TD: | 22472 | Deepest expected fresh water: | |

**Basin**

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|---|---|---|---|
| Rustler | 1101 | | |
| Top of Salt | 1622 | | |
| Base of Salt | 5048 | | |
| Delaware | 5267 | | |
| Lower Brushy Canyon | 9010 | | |
| 1st BSPG Lime | 9196 | | |
| Leonard A | 9274 | | |
| Leonard B | 9617 | | |
| Leonard C | 9895 | | |
| 1st BSPG Sand | 10200 | | |
| 2nd BSPG Lime | 10447 | | |
| 2nd BSPG Sand | 10860 | | |
| 2BSSS Target Top | 11127 | | |
| 2BSSS Target Base | 11211 | | |
| 3rd BSPG Lime | 11360 | | |
| 3BSSS | 11940 | | |
| WLFMP | 12350 | | |
| WLFMP 100 | 12505 | | |
| WLFMP 120 | 12640 | | |
| | | | |
| | | | |

*H2S, water flows, loss of circulation, abnormal pressures, etc.

## 2. Casing Program (Primary Design)

| Hole Size | Casing Interval | | Csg. Size | Wt (PPF) | Grade | Conn | Min SF Collapse | Min SF Burst | Min SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | | |
| 14.75" | 0 | 1350 | 10.75" | 40.5 | J-55 | STC | 1.125 | 1.25 | 1.6 |
| 9.875" | 0 | 11965 TVD | 7.625" | 29.7 | P110 | BTC | 1.125 | 1.25 | 1.6 |
| 6.75" | 0 | TD | 5.5" | 20 | P110 | Vam SG | 1.125 | 1.25 | 1.6 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1.00 | 1.6 Dry<br>1.8 Wet |

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Int casing shoe will be selected based on drilling data / gamma, setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.

## Casing Program (Alternate Design)

| Hole Size | Casing Interval | | Csg. Size | Wt. (PPF) | Grade | Conn | Min SF Collapse | Min SF Burst | Min SF Tension |
|---|---|---|---|---|---|---|---|---|---|
| | From | To | | | | | | | |
| 17.5" | 0 | Same as above | 13.375" | 48 | H-40 | STC | 1.125 | 1.25 | 1.6 |
| 10.625" | 0 | Same as above | 8.625" | 32 | P110EC | BTC | 1.125 | 1.25 | 1.6 |
| 7.875" | 0 | TD | 5.5" | 17 | P110 | BTC | 1.125 | 1.25 | 1.6 |
| | | | | BLM Minimum Safety Factor | | | 1.125 | 1.00 | 1.6 Dry<br>1.8 Wet |

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Int 1 casing shoe will be selected based on drilling data / gamma, setting depth with be revised accordingly if needed.
- Option to drill change intermediate 1 hole size to 9.625, (8.625" connection will change from BTC to TLW)
- Option to run 8.625" TLW connection for intermediate 1
- A variance is requested to wave the centralizer requirement for the Intermediate casing and production casing.
- Variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing. No losses are expected in subsequent hole section.
- 8-5/8" Intermediate casing will be kept fluid filled to 100%.

| | 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? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary. | |
| | |
| 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? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

**3. Cementing Program (Primary Design)**

| Casing | # Sks | TOC | Wt. (lb/gal) | Yld (ft3/sack) | Slurry Description |
|---|---|---|---|---|---|
| Surface | 864 | Surf | 13.2 | 1.33 | Lead: Class C Cement + additives |
| Int 1 | 1160 | Surf | 9 | 1.85 | Lead: Class C Cement + additives |
| | 847 | 4000' above shoe | 13.2 | 1.33 | Tail: Class H / C + additives |
| Int 1 Two Stage w DV @ ~4500 | 580 | Surf | 9 | 1.85 | 1st stage Lead: Class C Cement + additives |
| | 55 | 500' above shoe | 13.2 | 1.33 | 1st stage Tail: Class H / C + additives |
| | 600 | Surf | 9 | 1.85 | 2st stage Lead: Class C Cement + additives |
| | 55 | 500' above DV | 13.2 | 1.33 | 2st stage Tail: Class H / C + additives |
| Int 1 Intermediate Squeeze | As Needed | Surf | 13.2 | 1.33 | Squeeze Lead: Class C Cement + additives |
| | 1160 | Surf | 9 | 1.85 | Lead: Class C Cement + additives |
| | 847 | 4000' above shoe | 13.2 | 1.33 | Tail: Class H / C + additives |
| Production | 769 | 500' tieback | 13.2 | 1.33 | Lead: Class H / C + additives |

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

| Casing String | TOC | % Excess |
|---|---|---|
| Surface | 0' | 50% |
| Intermediate 1 | 0' | 30% |
| Intermediate 1 (Two Stage) | 0' | 25% |
| Prod | 200' Tie-Back to intermediate | 10% |

**Cementing Program (Alternate Design)**

| Casing | # Sks | TOC | Wt. (lb/gal) | Yld (ft3/sack) | Slurry Description |
|---|---|---|---|---|---|
| Surface | 1098 | Surf | 13.2 | 1.33 | Lead: Class C Cement + additives |
| Int 1 | 1313 | Surf | 9 | 1.85 | Lead: Class C Cement + additives |
| | 831 | 4000' above shoe | 13.2 | 1.33 | Tail: Class H / C + additives |
| Int 1 Two Stage w DV @ ~4500 | 650 | Surf | 9 | 1.85 | 1st stage Lead: Class C Cement + additives |
| | 55 | 500' above shoe | 13.2 | 1.33 | 1st stage Tail: Class H / C + additives |
| | 670 | Surf | 9 | 1.85 | 2st stage Lead: Class C Cement + additives |
| | 55 | 500' above DV | 13.2 | 1.33 | 2st stage Tail: Class H / C + additives |
| Int 1 Intermediate Squeeze | As Needed | Surf | 13.2 | 1.33 | Squeeze Lead: Class C Cement + additives |
| | 1313 | Surf | 9 | 1.85 | Lead: Class C Cement + additives |
| | 831 | 4000' above shoe | 13.2 | 1.33 | Tail: Class H / C + additives |
| Production | 1397 | 500' tieback | 13.2 | 1.33 | Lead: Class H / C + additives |

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

| Casing String | TOC | % Excess |
|---|---|---|
| Surface | 0' | 50% |
| Intermediate 1 | 0' | 30% |
| Intermediate 1 (Two Stage) | 0' | 25% |
| Prod | 200' Tie-Back to intermediate | 10% |

**4. Pressure Control Equipment (Three String Design)**

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Type | ✓ | Tested to: |
|---|---|---|---|---|---|
| Int 1 | 13-5/8" | 5M | Annular | X | 50% of rated working pressure |
| | | | Blind Ram | X | 5M |
| | | | Pipe Ram | | |
| | | | Double Ram | X | |
| | | | Other* | | |
| Production | 13-5/8" | 10M | Annular (5M) | X | 100% of rated working pressure |
| | | | Blind Ram | X | 10M |
| | | | Pipe Ram | | |
| | | | Double Ram | X | |
| | | | Other * | | |
| | | | Annular | | |
| | | | Blind Ram | | |
| | | | Pipe Ram | | |
| | | | Double Ram | | |
| | | | Other * | | |
| N | A variance is requested for the use of a diverter on the surface casing. See attached for schematic. | | | | |

Devon requests a variance to run a 5M annular on a 10M BOP system. See separately attached variance request and support documents in AFMSS.

## 5. Mud Program (3 String Design)

| Section | Type | Weight (ppg) | Vis | Water Loss |
|---|---|---|---|---|
| Surface | FW Gel | 8.5 - 9 | 28-34 | N/C |
| Intermediate | DBE / Cut Brine | 9 - 10 | 28-34 | N/C |
| Production | OBM | 10-10.5 | 28-34 | 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? If yes, explain |
| | Coring? If yes, explain |

| Additional logs planned | | Interval |
|---|---|---|
| | Resistivity | Int. shoe to KOP |
| | Density | Int. shoe to KOP |
| X | CBL | Production casing |
| X | Mud log | Intermediate shoe to TD |
| | PEX | |

## 7. Drilling Conditions

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

| 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. | |
|---|---|
| N | H2S is present |
| Y | H2S Plan attached |

**8. Other facets of operation**

Is this a walking operation? Potentially

1. If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2. The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3. The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1. Spudder rig will move in and drill surface hole.
    a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

_x_ Directional Plan

___ Other, describe

# WCDSC Permian NM

**Lea County (NAD83 New Mexico East)**
**Sec 23-T24S-R33E**
**Blue Krait 23-14 Fed 31H**

**Wellbore #1**

**Plan: Permit Plan 1**

# Standard Planning Report - Geographic

**10 January, 2019**

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

| **Project** | Lea County (NAD83 New Mexico East) | | |
|---|---|---|---|
| **Map System:** | US State Plane 1983 | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | North American Datum 1983 | | |
| **Map Zone:** | New Mexico Eastern Zone | | |

| **Site** | Sec 23-T24S-R33E | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 446,417.68 usft | **Latitude:** | 32.224862 |
| **From:** | Map | **Easting:** | 783,057.71 usft | **Longitude:** | -103.551658 |
| **Position Uncertainty:** | 0.00 ft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.42 ° |

| **Well** | Blue Krait 23-14 Fed 31H | | | | |
|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 ft | **Northing:** | 436,115.47 usft | **Latitude:** | 32.196523 |
| | **+E/-W** | 0.00 ft | **Easting:** | 784,117.18 usft | **Longitude:** | -103.548475 |
| **Position Uncertainty** | | 0.50 ft | **Wellhead Elevation:** | | **Ground Level:** | 3,555.50 ft |

| **Wellbore** | Wellbore #1 | | | |
|---|---|---|---|---|
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | IGRF2015 | 12/26/2018 | 6.78 | 60.02 | 47,766.36985103 |

| **Design** | Permit Plan 1 | | | |
|---|---|---|---|---|
| **Audit Notes:** | | | | |
| **Version:** | | **Phase:** | PROTOTYPE | **Tie On Depth:** | 0.00 |
| **Vertical Section:** | **Depth From (TVD) (ft)** | **+N/-S (ft)** | **+E/-W (ft)** | **Direction (°)** |
| | 0.00 | 0.00 | 0.00 | 359.83 |

**Plan Survey Tool Program** **Date** 1/10/2019

| | Depth From (ft) | Depth To (ft) | Survey (Wellbore) | Tool Name | Remarks |
|---|---|---|---|---|---|
| 1 | 0.00 | 22,472.92 | Permit Plan 1 (Wellbore #1) | MWD+HDGM<br>OWSG MWD + HDGM | |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,500.00 | 0.00 | 0.00 | 2,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,759.91 | 3.25 | 0.00 | 2,759.77 | 7.37 | 0.00 | 1.25 | 1.25 | 0.00 | 0.00 | |
| 4,286.12 | 3.25 | 0.00 | 4,283.53 | 93.86 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 4,502.71 | 0.00 | 0.00 | 4,500.00 | 100.00 | 0.00 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 11,954.75 | 0.00 | 0.00 | 11,952.04 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 12,373.09 | 42.01 | 7.86 | 12,333.89 | 245.24 | 20.06 | 10.04 | 10.04 | 0.00 | 7.86 | |
| 12,856.36 | 90.00 | 359.57 | 12,525.00 | 672.94 | 41.67 | 10.04 | 9.93 | -1.72 | -11.10 | |
| 22,472.92 | 90.00 | 359.57 | 12,525.00 | 10,289.23 | -30.50 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - Blue Krait 23- |

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,100.00 | 0.00 | 0.00 | 2,100.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,200.00 | 0.00 | 0.00 | 2,200.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,300.00 | 0.00 | 0.00 | 2,300.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,400.00 | 0.00 | 0.00 | 2,400.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,500.00 | 0.00 | 0.00 | 2,500.00 | 0.00 | 0.00 | 436,115.47 | 784,117.18 | 32.196523 | -103.548475 |
| 2,600.00 | 1.25 | 0.00 | 2,599.99 | 1.09 | 0.00 | 436,116.56 | 784,117.18 | 32.196526 | -103.548475 |
| 2,700.00 | 2.50 | 0.00 | 2,699.94 | 4.36 | 0.00 | 436,119.83 | 784,117.18 | 32.196535 | -103.548475 |
| 2,759.91 | 3.25 | 0.00 | 2,759.77 | 7.37 | 0.00 | 436,122.84 | 784,117.18 | 32.196543 | -103.548475 |
| 2,800.00 | 3.25 | 0.00 | 2,799.80 | 9.64 | 0.00 | 436,125.11 | 784,117.18 | 32.196550 | -103.548475 |
| 2,900.00 | 3.25 | 0.00 | 2,899.64 | 15.31 | 0.00 | 436,130.78 | 784,117.18 | 32.196565 | -103.548475 |
| 3,000.00 | 3.25 | 0.00 | 2,999.47 | 20.97 | 0.00 | 436,136.44 | 784,117.18 | 32.196581 | -103.548475 |
| 3,100.00 | 3.25 | 0.00 | 3,099.31 | 26.64 | 0.00 | 436,142.11 | 784,117.18 | 32.196596 | -103.548475 |
| 3,200.00 | 3.25 | 0.00 | 3,199.15 | 32.31 | 0.00 | 436,147.78 | 784,117.18 | 32.196612 | -103.548474 |
| 3,300.00 | 3.25 | 0.00 | 3,298.99 | 37.98 | 0.00 | 436,153.44 | 784,117.18 | 32.196627 | -103.548474 |
| 3,400.00 | 3.25 | 0.00 | 3,398.83 | 43.64 | 0.00 | 436,159.11 | 784,117.18 | 32.196643 | -103.548474 |
| 3,500.00 | 3.25 | 0.00 | 3,498.67 | 49.31 | 0.00 | 436,164.78 | 784,117.18 | 32.196659 | -103.548474 |
| 3,600.00 | 3.25 | 0.00 | 3,598.51 | 54.98 | 0.00 | 436,170.45 | 784,117.18 | 32.196674 | -103.548474 |
| 3,700.00 | 3.25 | 0.00 | 3,698.35 | 60.64 | 0.00 | 436,176.11 | 784,117.18 | 32.196690 | -103.548474 |
| 3,800.00 | 3.25 | 0.00 | 3,798.19 | 66.31 | 0.00 | 436,181.78 | 784,117.18 | 32.196705 | -103.548474 |
| 3,900.00 | 3.25 | 0.00 | 3,898.03 | 71.98 | 0.00 | 436,187.45 | 784,117.18 | 32.196721 | -103.548473 |
| 4,000.00 | 3.25 | 0.00 | 3,997.87 | 77.65 | 0.00 | 436,193.12 | 784,117.18 | 32.196737 | -103.548473 |
| 4,100.00 | 3.25 | 0.00 | 4,097.71 | 83.31 | 0.00 | 436,198.78 | 784,117.18 | 32.196752 | -103.548473 |
| 4,200.00 | 3.25 | 0.00 | 4,197.55 | 88.98 | 0.00 | 436,204.45 | 784,117.18 | 32.196768 | -103.548473 |
| 4,286.12 | 3.25 | 0.00 | 4,283.53 | 93.86 | 0.00 | 436,209.33 | 784,117.18 | 32.196781 | -103.548473 |
| 4,300.00 | 3.04 | 0.00 | 4,297.39 | 94.62 | 0.00 | 436,210.09 | 784,117.18 | 32.196783 | -103.548473 |
| 4,400.00 | 1.54 | 0.00 | 4,397.30 | 98.62 | 0.00 | 436,214.09 | 784,117.18 | 32.196794 | -103.548473 |
| 4,500.00 | 0.04 | 0.00 | 4,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 4,502.71 | 0.00 | 0.00 | 4,500.00 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 4,600.00 | 0.00 | 0.00 | 4,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 4,700.00 | 0.00 | 0.00 | 4,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 4,800.00 | 0.00 | 0.00 | 4,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 4,900.00 | 0.00 | 0.00 | 4,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,000.00 | 0.00 | 0.00 | 4,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,100.00 | 0.00 | 0.00 | 5,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 5,200.00 | 0.00 | 0.00 | 5,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,300.00 | 0.00 | 0.00 | 5,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,400.00 | 0.00 | 0.00 | 5,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,500.00 | 0.00 | 0.00 | 5,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,600.00 | 0.00 | 0.00 | 5,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,700.00 | 0.00 | 0.00 | 5,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,800.00 | 0.00 | 0.00 | 5,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 5,900.00 | 0.00 | 0.00 | 5,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,000.00 | 0.00 | 0.00 | 5,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,100.00 | 0.00 | 0.00 | 6,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,200.00 | 0.00 | 0.00 | 6,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,300.00 | 0.00 | 0.00 | 6,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,400.00 | 0.00 | 0.00 | 6,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,500.00 | 0.00 | 0.00 | 6,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,600.00 | 0.00 | 0.00 | 6,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,700.00 | 0.00 | 0.00 | 6,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,800.00 | 0.00 | 0.00 | 6,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 6,900.00 | 0.00 | 0.00 | 6,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,000.00 | 0.00 | 0.00 | 6,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,100.00 | 0.00 | 0.00 | 7,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,200.00 | 0.00 | 0.00 | 7,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,300.00 | 0.00 | 0.00 | 7,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,400.00 | 0.00 | 0.00 | 7,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,500.00 | 0.00 | 0.00 | 7,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,600.00 | 0.00 | 0.00 | 7,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,700.00 | 0.00 | 0.00 | 7,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,800.00 | 0.00 | 0.00 | 7,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 7,900.00 | 0.00 | 0.00 | 7,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,000.00 | 0.00 | 0.00 | 7,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,100.00 | 0.00 | 0.00 | 8,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,200.00 | 0.00 | 0.00 | 8,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,300.00 | 0.00 | 0.00 | 8,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,400.00 | 0.00 | 0.00 | 8,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,500.00 | 0.00 | 0.00 | 8,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,600.00 | 0.00 | 0.00 | 8,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,700.00 | 0.00 | 0.00 | 8,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,800.00 | 0.00 | 0.00 | 8,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 8,900.00 | 0.00 | 0.00 | 8,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,000.00 | 0.00 | 0.00 | 8,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,100.00 | 0.00 | 0.00 | 9,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,200.00 | 0.00 | 0.00 | 9,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,300.00 | 0.00 | 0.00 | 9,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,400.00 | 0.00 | 0.00 | 9,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,500.00 | 0.00 | 0.00 | 9,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,600.00 | 0.00 | 0.00 | 9,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,700.00 | 0.00 | 0.00 | 9,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,800.00 | 0.00 | 0.00 | 9,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 9,900.00 | 0.00 | 0.00 | 9,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,000.00 | 0.00 | 0.00 | 9,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,100.00 | 0.00 | 0.00 | 10,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,200.00 | 0.00 | 0.00 | 10,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,300.00 | 0.00 | 0.00 | 10,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,400.00 | 0.00 | 0.00 | 10,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,500.00 | 0.00 | 0.00 | 10,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,600.00 | 0.00 | 0.00 | 10,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 10,700.00 | 0.00 | 0.00 | 10,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,800.00 | 0.00 | 0.00 | 10,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 10,900.00 | 0.00 | 0.00 | 10,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,000.00 | 0.00 | 0.00 | 10,997.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,100.00 | 0.00 | 0.00 | 11,097.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,200.00 | 0.00 | 0.00 | 11,197.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,300.00 | 0.00 | 0.00 | 11,297.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,400.00 | 0.00 | 0.00 | 11,397.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,500.00 | 0.00 | 0.00 | 11,497.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,600.00 | 0.00 | 0.00 | 11,597.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,700.00 | 0.00 | 0.00 | 11,697.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,800.00 | 0.00 | 0.00 | 11,797.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,900.00 | 0.00 | 0.00 | 11,897.29 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| 11,954.75 | 0.00 | 0.00 | 11,952.04 | 100.00 | 0.00 | 436,215.47 | 784,117.18 | 32.196798 | -103.548473 |
| **KOP & FTP @ 11954' MD, 345' FSL, 980' FWL** | | | | | | | | | |
| 12,000.00 | 4.54 | 7.86 | 11,997.24 | 101.78 | 0.25 | 436,217.25 | 784,117.42 | 32.196803 | -103.548472 |
| 12,100.00 | 14.59 | 7.86 | 12,095.73 | 118.22 | 2.52 | 436,233.69 | 784,119.69 | 32.196848 | -103.548464 |
| 12,200.00 | 24.63 | 7.86 | 12,189.81 | 151.41 | 7.10 | 436,266.88 | 784,124.28 | 32.196939 | -103.548449 |
| 12,300.00 | 34.67 | 7.86 | 12,276.61 | 200.36 | 13.86 | 436,315.83 | 784,131.04 | 32.197074 | -103.548426 |
| 12,373.09 | 42.01 | 7.86 | 12,333.89 | 245.24 | 20.06 | 436,360.71 | 784,137.23 | 32.197197 | -103.548405 |
| 12,400.00 | 44.66 | 7.12 | 12,353.47 | 263.55 | 22.46 | 436,379.02 | 784,139.64 | 32.197247 | -103.548396 |
| 12,500.00 | 54.56 | 4.87 | 12,418.19 | 339.21 | 30.30 | 436,454.67 | 784,147.48 | 32.197455 | -103.548369 |
| 12,600.00 | 64.49 | 3.12 | 12,468.84 | 425.07 | 36.24 | 436,540.54 | 784,153.41 | 32.197691 | -103.548348 |
| 12,700.00 | 74.43 | 1.64 | 12,503.89 | 518.51 | 40.09 | 436,633.98 | 784,157.26 | 32.197947 | -103.548333 |
| 12,800.00 | 84.39 | 0.30 | 12,522.24 | 616.67 | 41.73 | 436,732.14 | 784,158.91 | 32.198217 | -103.548326 |
| 12,856.36 | 90.00 | 359.57 | 12,525.00 | 672.94 | 41.67 | 436,788.41 | 784,158.85 | 32.198372 | -103.548325 |
| 12,900.00 | 90.00 | 359.57 | 12,525.00 | 716.58 | 41.34 | 436,832.05 | 784,158.52 | 32.198492 | -103.548325 |
| 13,000.00 | 90.00 | 359.57 | 12,525.00 | 816.58 | 40.59 | 436,932.04 | 784,157.77 | 32.198767 | -103.548325 |
| 13,100.00 | 90.00 | 359.57 | 12,525.00 | 916.57 | 39.84 | 437,032.04 | 784,157.02 | 32.199042 | -103.548325 |
| 13,200.00 | 90.00 | 359.57 | 12,525.00 | 1,016.57 | 39.09 | 437,132.04 | 784,156.27 | 32.199316 | -103.548325 |
| 13,300.00 | 90.00 | 359.57 | 12,525.00 | 1,116.57 | 38.34 | 437,232.04 | 784,155.52 | 32.199591 | -103.548325 |
| 13,400.00 | 90.00 | 359.57 | 12,525.00 | 1,216.57 | 37.59 | 437,332.03 | 784,154.77 | 32.199866 | -103.548325 |
| 13,500.00 | 90.00 | 359.57 | 12,525.00 | 1,316.56 | 36.84 | 437,432.03 | 784,154.02 | 32.200141 | -103.548325 |
| 13,600.00 | 90.00 | 359.57 | 12,525.00 | 1,416.56 | 36.09 | 437,532.03 | 784,153.27 | 32.200416 | -103.548325 |
| 13,700.00 | 90.00 | 359.57 | 12,525.00 | 1,516.56 | 35.34 | 437,632.02 | 784,152.52 | 32.200691 | -103.548325 |
| 13,800.00 | 90.00 | 359.57 | 12,525.00 | 1,616.55 | 34.59 | 437,732.02 | 784,151.77 | 32.200966 | -103.548325 |
| 13,900.00 | 90.00 | 359.57 | 12,525.00 | 1,716.55 | 33.84 | 437,832.02 | 784,151.02 | 32.201241 | -103.548325 |
| 14,000.00 | 90.00 | 359.57 | 12,525.00 | 1,816.55 | 33.09 | 437,932.01 | 784,150.26 | 32.201515 | -103.548325 |
| 14,100.00 | 90.00 | 359.57 | 12,525.00 | 1,916.55 | 32.34 | 438,032.01 | 784,149.51 | 32.201790 | -103.548325 |
| 14,200.00 | 90.00 | 359.57 | 12,525.00 | 2,016.54 | 31.59 | 438,132.01 | 784,148.76 | 32.202065 | -103.548325 |
| 14,300.00 | 90.00 | 359.57 | 12,525.00 | 2,116.54 | 30.84 | 438,232.01 | 784,148.01 | 32.202340 | -103.548326 |
| 14,400.00 | 90.00 | 359.57 | 12,525.00 | 2,216.54 | 30.09 | 438,332.00 | 784,147.26 | 32.202615 | -103.548326 |
| 14,500.00 | 90.00 | 359.57 | 12,525.00 | 2,316.53 | 29.33 | 438,432.00 | 784,146.51 | 32.202890 | -103.548326 |
| 14,600.00 | 90.00 | 359.57 | 12,525.00 | 2,416.53 | 28.58 | 438,532.00 | 784,145.76 | 32.203165 | -103.548326 |
| 14,700.00 | 90.00 | 359.57 | 12,525.00 | 2,516.53 | 27.83 | 438,631.99 | 784,145.01 | 32.203440 | -103.548326 |
| 14,800.00 | 90.00 | 359.57 | 12,525.00 | 2,616.53 | 27.08 | 438,731.99 | 784,144.26 | 32.203714 | -103.548326 |
| 14,900.00 | 90.00 | 359.57 | 12,525.00 | 2,716.52 | 26.33 | 438,831.99 | 784,143.51 | 32.203989 | -103.548326 |
| 15,000.00 | 90.00 | 359.57 | 12,525.00 | 2,816.52 | 25.58 | 438,931.98 | 784,142.76 | 32.204264 | -103.548326 |
| 15,100.00 | 90.00 | 359.57 | 12,525.00 | 2,916.52 | 24.83 | 439,031.98 | 784,142.01 | 32.204539 | -103.548326 |
| 15,200.00 | 90.00 | 359.57 | 12,525.00 | 3,016.51 | 24.08 | 439,131.98 | 784,141.26 | 32.204814 | -103.548326 |
| 15,300.00 | 90.00 | 359.57 | 12,525.00 | 3,116.51 | 23.33 | 439,231.98 | 784,140.51 | 32.205089 | -103.548326 |
| 15,400.00 | 90.00 | 359.57 | 12,525.00 | 3,216.51 | 22.58 | 439,331.97 | 784,139.76 | 32.205364 | -103.548326 |
| 15,500.00 | 90.00 | 359.57 | 12,525.00 | 3,316.51 | 21.83 | 439,431.97 | 784,139.01 | 32.205639 | -103.548326 |
| 15,600.00 | 90.00 | 359.57 | 12,525.00 | 3,416.50 | 21.08 | 439,531.97 | 784,138.26 | 32.205913 | -103.548326 |

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 15,700.00 | 90.00 | 359.57 | 12,525.00 | 3,516.50 | 20.33 | 439,631.96 | 784,137.51 | 32.206188 | -103.548326 |
| 15,800.00 | 90.00 | 359.57 | 12,525.00 | 3,616.50 | 19.58 | 439,731.96 | 784,136.76 | 32.206463 | -103.548327 |
| 15,900.00 | 90.00 | 359.57 | 12,525.00 | 3,716.49 | 18.83 | 439,831.96 | 784,136.01 | 32.206738 | -103.548327 |
| 16,000.00 | 90.00 | 359.57 | 12,525.00 | 3,816.49 | 18.08 | 439,931.95 | 784,135.25 | 32.207013 | -103.548327 |
| 16,100.00 | 90.00 | 359.57 | 12,525.00 | 3,916.49 | 17.33 | 440,031.95 | 784,134.50 | 32.207288 | -103.548327 |
| 16,200.00 | 90.00 | 359.57 | 12,525.00 | 4,016.49 | 16.58 | 440,131.95 | 784,133.75 | 32.207563 | -103.548327 |
| 16,300.00 | 90.00 | 359.57 | 12,525.00 | 4,116.48 | 15.83 | 440,231.95 | 784,133.00 | 32.207838 | -103.548327 |
| 16,400.00 | 90.00 | 359.57 | 12,525.00 | 4,216.48 | 15.08 | 440,331.94 | 784,132.25 | 32.208112 | -103.548327 |
| 16,500.00 | 90.00 | 359.57 | 12,525.00 | 4,316.48 | 14.33 | 440,431.94 | 784,131.50 | 32.208387 | -103.548327 |
| 16,600.00 | 90.00 | 359.57 | 12,525.00 | 4,416.48 | 13.57 | 440,531.94 | 784,130.75 | 32.208662 | -103.548327 |
| 16,700.00 | 90.00 | 359.57 | 12,525.00 | 4,516.47 | 12.82 | 440,631.93 | 784,130.00 | 32.208937 | -103.548327 |
| 16,800.00 | 90.00 | 359.57 | 12,525.00 | 4,616.47 | 12.07 | 440,731.93 | 784,129.25 | 32.209212 | -103.548327 |
| 16,900.00 | 90.00 | 359.57 | 12,525.00 | 4,716.47 | 11.32 | 440,831.93 | 784,128.50 | 32.209487 | -103.548327 |
| 17,000.00 | 90.00 | 359.57 | 12,525.00 | 4,816.46 | 10.57 | 440,931.92 | 784,127.75 | 32.209762 | -103.548327 |
| 17,100.00 | 90.00 | 359.57 | 12,525.00 | 4,916.46 | 9.82 | 441,031.92 | 784,127.00 | 32.210037 | -103.548327 |
| 17,119.00 | 90.00 | 359.57 | 12,525.00 | 4,935.46 | 9.68 | 441,050.92 | 784,126.86 | 32.210089 | -103.548327 |
| **Cross Section @ 17119' MD, 0' FSL, 1026' FWL** | | | | | | | | | |
| 17,200.00 | 90.00 | 359.57 | 12,525.00 | 5,016.46 | 9.07 | 441,131.92 | 784,126.25 | 32.210311 | -103.548327 |
| 17,300.00 | 90.00 | 359.57 | 12,525.00 | 5,116.46 | 8.32 | 441,231.91 | 784,125.50 | 32.210586 | -103.548328 |
| 17,400.00 | 90.00 | 359.57 | 12,525.00 | 5,216.45 | 7.57 | 441,331.91 | 784,124.75 | 32.210861 | -103.548328 |
| 17,500.00 | 90.00 | 359.57 | 12,525.00 | 5,316.45 | 6.82 | 441,431.91 | 784,124.00 | 32.211136 | -103.548328 |
| 17,600.00 | 90.00 | 359.57 | 12,525.00 | 5,416.45 | 6.07 | 441,531.91 | 784,123.25 | 32.211411 | -103.548328 |
| 17,700.00 | 90.00 | 359.57 | 12,525.00 | 5,516.44 | 5.32 | 441,631.90 | 784,122.50 | 32.211686 | -103.548328 |
| 17,800.00 | 90.00 | 359.57 | 12,525.00 | 5,616.44 | 4.57 | 441,731.90 | 784,121.75 | 32.211961 | -103.548328 |
| 17,900.00 | 90.00 | 359.57 | 12,525.00 | 5,716.44 | 3.82 | 441,831.90 | 784,121.00 | 32.212235 | -103.548328 |
| 18,000.00 | 90.00 | 359.57 | 12,525.00 | 5,816.44 | 3.07 | 441,931.89 | 784,120.25 | 32.212510 | -103.548328 |
| 18,100.00 | 90.00 | 359.57 | 12,525.00 | 5,916.43 | 2.32 | 442,031.89 | 784,119.49 | 32.212785 | -103.548328 |
| 18,200.00 | 90.00 | 359.57 | 12,525.00 | 6,016.43 | 1.57 | 442,131.89 | 784,118.74 | 32.213060 | -103.548328 |
| 18,300.00 | 90.00 | 359.57 | 12,525.00 | 6,116.43 | 0.82 | 442,231.88 | 784,117.99 | 32.213335 | -103.548328 |
| 18,400.00 | 90.00 | 359.57 | 12,525.00 | 6,216.42 | 0.07 | 442,331.88 | 784,117.24 | 32.213610 | -103.548328 |
| 18,500.00 | 90.00 | 359.57 | 12,525.00 | 6,316.42 | -0.68 | 442,431.88 | 784,116.49 | 32.213885 | -103.548328 |
| 18,600.00 | 90.00 | 359.57 | 12,525.00 | 6,416.42 | -1.44 | 442,531.88 | 784,115.74 | 32.214160 | -103.548328 |
| 18,700.00 | 90.00 | 359.57 | 12,525.00 | 6,516.42 | -2.19 | 442,631.87 | 784,114.99 | 32.214434 | -103.548328 |
| 18,800.00 | 90.00 | 359.57 | 12,525.00 | 6,616.41 | -2.94 | 442,731.87 | 784,114.24 | 32.214709 | -103.548328 |
| 18,900.00 | 90.00 | 359.57 | 12,525.00 | 6,716.41 | -3.69 | 442,831.87 | 784,113.49 | 32.214984 | -103.548329 |
| 19,000.00 | 90.00 | 359.57 | 12,525.00 | 6,816.41 | -4.44 | 442,931.86 | 784,112.74 | 32.215259 | -103.548329 |
| 19,100.00 | 90.00 | 359.57 | 12,525.00 | 6,916.40 | -5.19 | 443,031.86 | 784,111.99 | 32.215534 | -103.548329 |
| 19,200.00 | 90.00 | 359.57 | 12,525.00 | 7,016.40 | -5.94 | 443,131.86 | 784,111.24 | 32.215809 | -103.548329 |
| 19,300.00 | 90.00 | 359.57 | 12,525.00 | 7,116.40 | -6.69 | 443,231.85 | 784,110.49 | 32.216084 | -103.548329 |
| 19,400.00 | 90.00 | 359.57 | 12,525.00 | 7,216.40 | -7.44 | 443,331.85 | 784,109.74 | 32.216359 | -103.548329 |
| 19,500.00 | 90.00 | 359.57 | 12,525.00 | 7,316.39 | -8.19 | 443,431.85 | 784,108.99 | 32.216633 | -103.548329 |
| 19,600.00 | 90.00 | 359.57 | 12,525.00 | 7,416.39 | -8.94 | 443,531.85 | 784,108.24 | 32.216908 | -103.548329 |
| 19,700.00 | 90.00 | 359.57 | 12,525.00 | 7,516.39 | -9.69 | 443,631.84 | 784,107.49 | 32.217183 | -103.548329 |
| 19,800.00 | 90.00 | 359.57 | 12,525.00 | 7,616.39 | -10.44 | 443,731.84 | 784,106.74 | 32.217458 | -103.548329 |
| 19,900.00 | 90.00 | 359.57 | 12,525.00 | 7,716.38 | -11.19 | 443,831.84 | 784,105.99 | 32.217733 | -103.548329 |
| 20,000.00 | 90.00 | 359.57 | 12,525.00 | 7,816.38 | -11.94 | 443,931.83 | 784,105.24 | 32.218008 | -103.548329 |
| 20,100.00 | 90.00 | 359.57 | 12,525.00 | 7,916.38 | -12.69 | 444,031.83 | 784,104.49 | 32.218283 | -103.548329 |
| 20,200.00 | 90.00 | 359.57 | 12,525.00 | 8,016.37 | -13.44 | 444,131.83 | 784,103.73 | 32.218558 | -103.548329 |
| 20,300.00 | 90.00 | 359.57 | 12,525.00 | 8,116.37 | -14.19 | 444,231.82 | 784,102.98 | 32.218832 | -103.548329 |
| 20,400.00 | 90.00 | 359.57 | 12,525.00 | 8,216.37 | -14.94 | 444,331.82 | 784,102.23 | 32.219107 | -103.548330 |
| 20,500.00 | 90.00 | 359.57 | 12,525.00 | 8,316.37 | -15.69 | 444,431.82 | 784,101.48 | 32.219382 | -103.548330 |
| 20,600.00 | 90.00 | 359.57 | 12,525.00 | 8,416.36 | -16.44 | 444,531.82 | 784,100.73 | 32.219657 | -103.548330 |
| 20,700.00 | 90.00 | 359.57 | 12,525.00 | 8,516.36 | -17.20 | 444,631.81 | 784,099.98 | 32.219932 | -103.548330 |
| 20,800.00 | 90.00 | 359.57 | 12,525.00 | 8,616.36 | -17.95 | 444,731.81 | 784,099.23 | 32.220207 | -103.548330 |

| | | | |
|---|---|---|---|
| **Database:** | EDM r5000.141_Prod US | **Local Co-ordinate Reference:** | Well Blue Krait 23-14 Fed 31H |
| **Company:** | WCDSC Permian NM | **TVD Reference:** | RKB @ 3580.50ft |
| **Project:** | Lea County (NAD83 New Mexico East) | **MD Reference:** | RKB @ 3580.50ft |
| **Site:** | Sec 23-T24S-R33E | **North Reference:** | Grid |
| **Well:** | Blue Krait 23-14 Fed 31H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Permit Plan 1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| 20,900.00 | 90.00 | 359.57 | 12,525.00 | 8,716.35 | -18.70 | 444,831.81 | 784,098.48 | 32.220482 | -103.548330 |
| 21,000.00 | 90.00 | 359.57 | 12,525.00 | 8,816.35 | -19.45 | 444,931.80 | 784,097.73 | 32.220757 | -103.548330 |
| 21,100.00 | 90.00 | 359.57 | 12,525.00 | 8,916.35 | -20.20 | 445,031.80 | 784,096.98 | 32.221031 | -103.548330 |
| 21,200.00 | 90.00 | 359.57 | 12,525.00 | 9,016.35 | -20.95 | 445,131.80 | 784,096.23 | 32.221306 | -103.548330 |
| 21,300.00 | 90.00 | 359.57 | 12,525.00 | 9,116.34 | -21.70 | 445,231.79 | 784,095.48 | 32.221581 | -103.548330 |
| 21,400.00 | 90.00 | 359.57 | 12,525.00 | 9,216.34 | -22.45 | 445,331.79 | 784,094.73 | 32.221856 | -103.548330 |
| 21,500.00 | 90.00 | 359.57 | 12,525.00 | 9,316.34 | -23.20 | 445,431.79 | 784,093.98 | 32.222131 | -103.548330 |
| 21,600.00 | 90.00 | 359.57 | 12,525.00 | 9,416.33 | -23.95 | 445,531.79 | 784,093.23 | 32.222406 | -103.548330 |
| 21,700.00 | 90.00 | 359.57 | 12,525.00 | 9,516.33 | -24.70 | 445,631.78 | 784,092.48 | 32.222681 | -103.548330 |
| 21,800.00 | 90.00 | 359.57 | 12,525.00 | 9,616.33 | -25.45 | 445,731.78 | 784,091.73 | 32.222955 | -103.548330 |
| 21,900.00 | 90.00 | 359.57 | 12,525.00 | 9,716.33 | -26.20 | 445,831.78 | 784,090.98 | 32.223230 | -103.548330 |
| 22,000.00 | 90.00 | 359.57 | 12,525.00 | 9,816.32 | -26.95 | 445,931.77 | 784,090.23 | 32.223505 | -103.548331 |
| 22,100.00 | 90.00 | 359.57 | 12,525.00 | 9,916.32 | -27.70 | 446,031.77 | 784,089.48 | 32.223780 | -103.548331 |
| 22,200.00 | 90.00 | 359.57 | 12,525.00 | 10,016.32 | -28.45 | 446,131.77 | 784,088.73 | 32.224055 | -103.548331 |
| 22,300.00 | 90.00 | 359.57 | 12,525.00 | 10,116.31 | -29.20 | 446,231.76 | 784,087.97 | 32.224330 | -103.548331 |
| 22,392.91 | 90.00 | 359.57 | 12,525.00 | 10,209.22 | -29.90 | 446,324.67 | 784,087.28 | 32.224585 | -103.548331 |
| **LTP @ 22392' MD, 100' FNL, 1026' FWL** | | | | | | | | | |
| 22,400.00 | 90.00 | 359.57 | 12,525.00 | 10,216.31 | -29.95 | 446,331.76 | 784,087.22 | 32.224605 | -103.548331 |
| 22,472.91 | 90.00 | 359.57 | 12,525.00 | 10,289.22 | -30.50 | 446,404.67 | 784,086.68 | 32.224805 | -103.548331 |
| **PBHL; 20' FNL, 1026' FWL** | | | | | | | | | |
| 22,472.92 | 90.00 | 359.57 | 12,525.00 | 10,289.23 | -30.50 | 446,404.68 | 784,086.68 | 32.224805 | -103.548331 |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| PBHL - Blue Krait 23-14 | 0.00 | 0.00 | 0.00 | 10,289.22 | -33.29 | 446,404.67 | 784,083.89 | 32.224805 | -103.548340 |
| - plan misses target center by 10289.27ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) | | | | | | | | | |
| - Point | | | | | | | | | |

**Plan Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 11,954.75 | 11,952.04 | 100.00 | 0.00 | KOP & FTP @ 11954' MD, 345' FSL, 980' FWL |
| 17,119.00 | 12,525.00 | 4,935.46 | 9.68 | Cross Section @ 17119' MD, 0' FSL, 1026' FWL |
| 22,392.91 | 12,525.00 | 10,209.22 | -29.90 | LTP @ 22392' MD, 100' FNL, 1026' FWL |
| 22,472.91 | 12,525.00 | 10,289.22 | -30.50 | PBHL; 20' FNL, 1026' FWL |

# Devon Energy

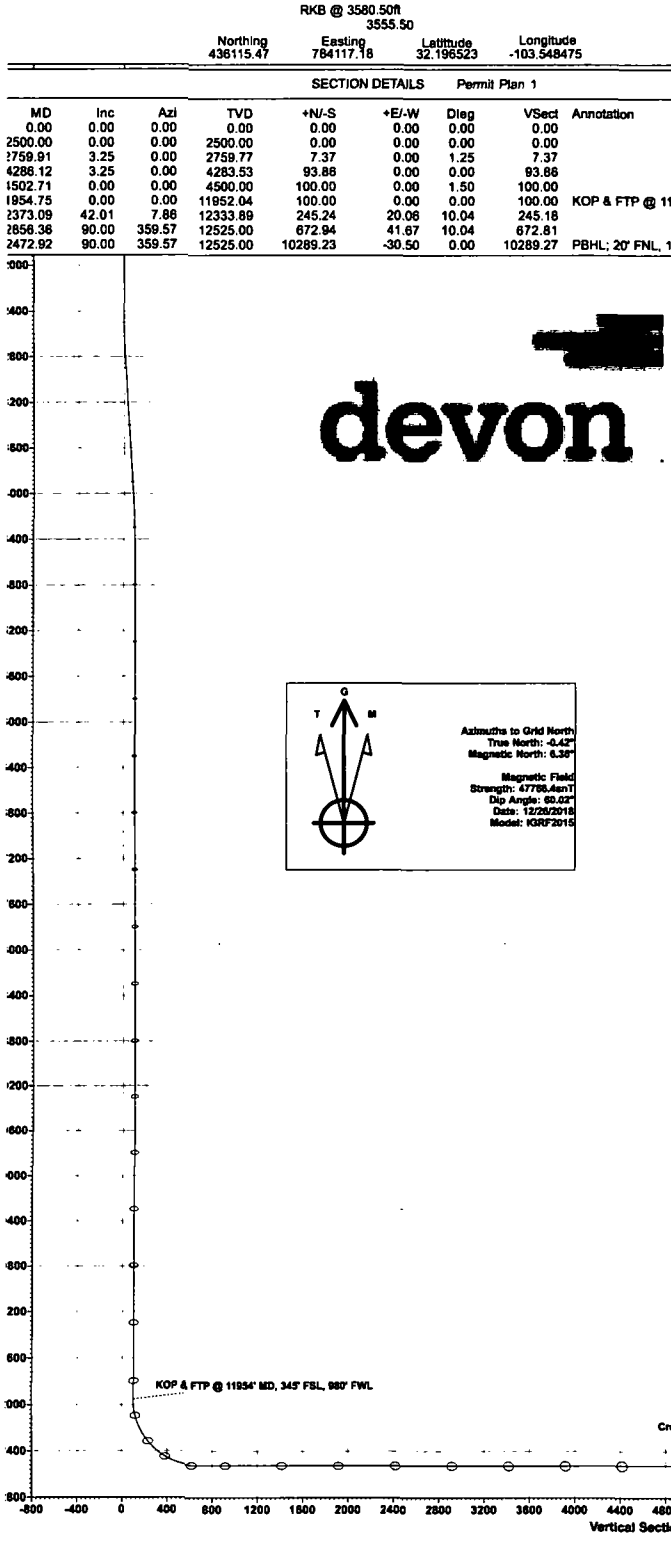
WELL DETAILS: Blue Krait 23-14 Fed 31H

RKB @ 3580.50ft
3555.50

| Northing | Easting | Latitude | Longitude |
|---|---|---|---|
| 436115.47 | 784117.18 | 32.196523 | -103.548475 |

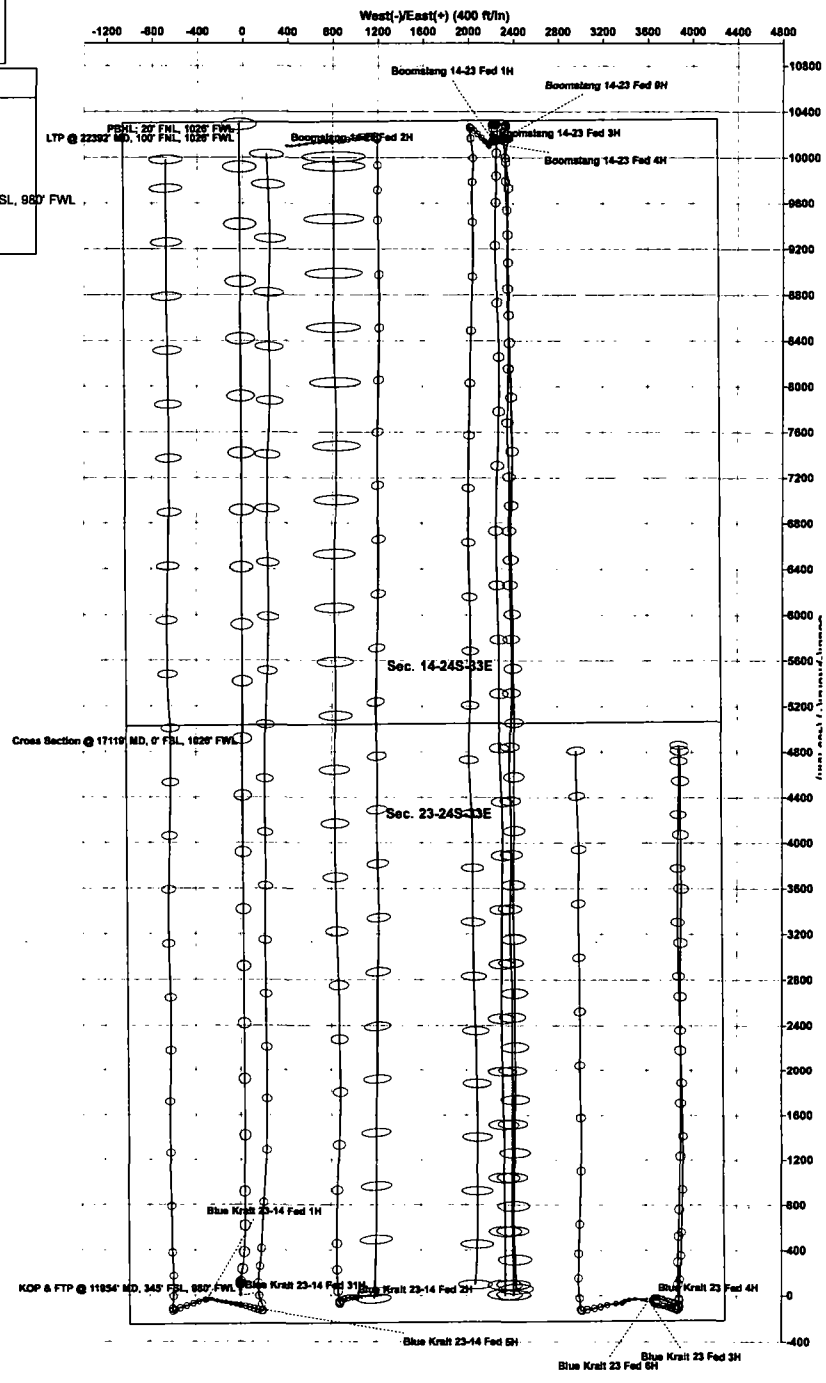
SECTION DETAILS Permit Plan 1

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | VSect | Annotation |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2500.00 | 0.00 | 0.00 | 2500.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2759.91 | 3.25 | 0.00 | 2759.77 | 7.37 | 0.00 | 1.25 | 7.37 | |
| 4286.12 | 3.25 | 0.00 | 4283.53 | 93.86 | 0.00 | 0.00 | 93.86 | |
| 4502.71 | 0.00 | 0.00 | 4500.00 | 100.00 | 0.00 | 1.50 | 100.00 | |
| 11954.75 | 0.00 | 0.00 | 11952.04 | 100.00 | 0.00 | 0.00 | 100.00 | KOP & FTP @ 11954' MD, 345' FSL, 980' FWL |
| 12373.09 | 42.01 | 7.86 | 12333.89 | 245.24 | 20.06 | 10.04 | 245.18 | |
| 12856.36 | 90.00 | 359.57 | 12525.00 | 672.94 | 41.67 | 10.04 | 672.81 | |
| 22472.92 | 90.00 | 359.57 | 12525.00 | 10289.23 | -30.50 | 0.00 | 10289.27 | PBHL; 20' FNL, 1026' FWL |



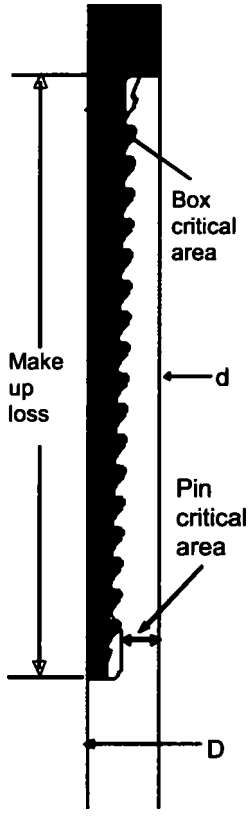






| Metal One Corp. | FLUSHMAX-III | Page | 44-O |
|---|---|---|---|
| *Metal One* | **Connection Data Sheet** | Date | 25-Jan-17 |
| | | | |
| | | Rev. | N - 1 |

**FLUSHMAX-III**




| | Imperial | | S.I. | |
|---|---|---|---|---|
| **Pipe Body** | | | | |
| Pipe OD ( D ) | 7 5/8 | in | 193.68 | mm |
| Actual weight | 29.04 | | 43.21 | kg/m |
| Pipe ID ( d ) | 6.875 | in | 174.63 | mm |
| Drift Dia. | 6.750 | in | 171.45 | mm |

| | | | | |
|---|---|---|---|---|
| **Connection** | | | | |
| PIN ID | 6.875 | in | 174.63 | mm |
| Thread Taper | 1 / 16 ( 3/4" per ft ) | | | |

**Performance Properties for Pipe Body**

| | | | | |
|---|---|---|---|---|
| M.I.Y.P. | 9,470 | psi | 65.31 | MPa |

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body

**Performance Properties for Connection**

| | |
|---|---|
| Min. Compression Yield | 563 kips ( 60% of S.M.Y.S. ) |
| External Pressure | 100% of Collapse Strength |

**Recommended Torque**

| | | | | |
|---|---|---|---|---|
| Opti. | 17,200 | ft-lb | 23,300 | N-m |
| Operational Max. | 23,600 | ft-lb | 32,000 | N-m |

Note : Operational Max. torque can be applied for high torque application

# **CASING PERFORMANCE** Data Sheet

vallourec

| O.D. | PE LB/FT | T&C LB/FT | GRADE |
|---|---|---|---|
| 8.625 | 31.13 | 32.00 | P110EC |

## Grade - Material Properties

| | | |
|---|---|---|
| Minimum Yield Strength: | 125 | ksi |
| Maximum Yield Strength: | 140 | ksi |
| Minimum Tensile Strength: | 135 | ksi |

## Pipe Body Data (PE)

### Geometry

| | | |
|---|---|---|
| Nominal ID: | 7.921 | inch |
| Wall: | 0.352 | inch |
| Min. Wall % (API = 87.5%): | 87.5 | % |
| API Drift: | 7.796 | inch |
| Special Drift*: | 7.875 | inch |

### Performance

| | | |
|---|---|---|
| Pipe Body Yield Strength: | 1,144 | kips |
| Collapse Resistance: | 3,470 | psi |
| Internal Yield Pressure (*API Historical*): | 8,930 | psi |

## API Connection Data

| | | |
|---|---|---|
| SC Internal Pressure: | 8,930 | psi |
| SC Joint Strength: | 793 | kips |
| LC Internal Pressure: | 8,930 | psi |
| LC Joint Strength: | 887 | kips |
| BC Internal Pressure: | 8,930 | psi |
| BC Joint Strength: | 1,121 | kips |

## SC Torque (ft-lbs)

| minimum: | optimum: | maximum: |
|---|---|---|
| 5,950 | 7,933 | 9,916 |

## LC Torque (ft-lbs)

| minimum: | optimum: | maximum: |
|---|---|---|
| 6,651 | 8,868 | 11,085 |

*Special drift must be ordered or API drift will be used for actual drifting of product.

**If above API connections do not suit your needs, VAM® premium connections are available up to 100% of pipe body ratings.

# U. S. Steel Tubular Products

1/8/2019 12:38:52 PM

## 13.375" 48.00lbs/ft (0.330" Wall) H40

| MECHANICAL PROPERTIES | Pipe | BTC | LTC | STC | |
|---|---|---|---|---|---|
| Minimum Yield Strength | 40,000 | -- | -- | -- | psi |
| Maximum Yield Strength | 80,000 | -- | -- | -- | psi |
| Minimum Tensile Strength | 60,000 | -- | -- | -- | psi |
| **DIMENSIONS** | **Pipe** | **BTC** | **LTC** | **STC** | |
| Outside Diameter | 13.375 | -- | -- | 14.375 | in. |
| Wall Thickness | 0.330 | -- | -- | -- | in. |
| Inside Diameter | 12.715 | -- | -- | 12.715 | in. |
| Standard Drift | 12.559 | 12.559 | -- | 12.559 | in. |
| Alternate Drift | -- | -- | -- | -- | in. |
| Nominal Linear Weight, T&C | 48.00 | -- | -- | -- | lbs/ft |
| Plain End Weight | 46.02 | -- | -- | -- | lbs/ft |
| **PERFORMANCE** | **Pipe** | **BTC** | **LTC** | **STC** | |
| Minimum Collapse Pressure | 740 | 740 | -- | 740 | psi |
| Minimum Internal Yield Pressure | 1,730 | 1,730 | -- | 1,730 | psi |
| Minimum Pipe Body Yield Strength | 541 | -- | -- | -- | 1,000 lbs |
| Joint Strength | -- | -- | -- | 322 | 1,000 lbs |
| Reference Length | -- | -- | -- | 4,473 | ft |
| **MAKE-UP DATA** | **Pipe** | **BTC** | **LTC** | **STC** | |
| Make-Up Loss | -- | -- | -- | 3.50 | in. |
| Minimum Make-Up Torque | -- | -- | -- | 2,420 | ft-lbs |
| Maximum Make-Up Torque | -- | -- | -- | 4,030 | ft-lbs |



U. S. Steel Tubular Products
460 Wildwood Forest Drive, Suite 300S
Spring, Texas 77380

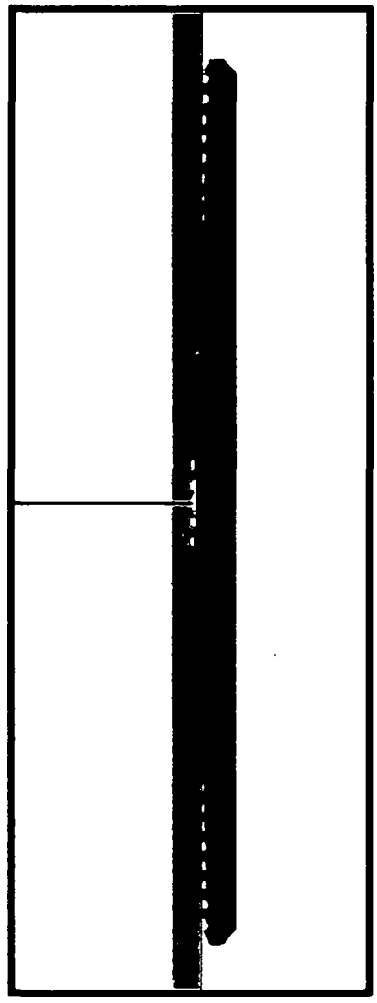
1-877-893-9461
connections@uss.com
www.usstubular.com

## Technical Specifications

| Connection Type: | Size(O.D.): | Weight (Wall): | Grade: |
|---|---|---|---|
| DWC/C Casing | 5-1/2 in | 17.00 lb/ft (0.304 in) | P-110RY |
| standard | | | |

| | |
|---|---|
| | **Material** |
| P-110RY | Grade |
| 110,000 | Minimum Yield Strength (psi) |
| 125,000 | Minimum Ultimate Strength (psi) |
| | **Pipe Dimensions** |
| 5.500 | Nominal Pipe Body O.D. (in) |
| 4.892 | Nominal Pipe Body I.D.(in) |
| 0.304 | Nominal Wall Thickness (in) |
| 17.00 | Nominal Weight (lbs/ft) |
| 16.89 | Plain End Weight (lbs/ft) |
| 4.962 | Nominal Pipe Body Area (sq in) |
| | **Pipe Body Performance Properties** |
| 546,000 | Minimum Pipe Body Yield Strength (lbs) |
| 7,480 | Minimum Collapse Pressure (psi) |
| 10,640 | Minimum Internal Yield Pressure (psi) |
| 9,700 | Hydrostatic Test Pressure (psi) |
| | **Connection Dimensions** |
| 6.050 | Connection O.D. (in) |
| 4.892 | Connection I.D. (in) |
| 4.767 | Connection Drift Diameter (in) |
| 4.13 | Make-up Loss (in) |
| 4.962 | Critical Area (sq in) |
| 100.0 | Joint Efficiency (%) |
| | **Connection Performance Properties** |
| 546,000 | Joint Strength (lbs) |
| 22,940 | Reference String Length (ft) 1.4 Design Factor |
| 568,000 | API Joint Strength (lbs) |
| 546,000 | Compression Rating (lbs) |
| 7,480 | API Collapse Pressure Rating (psi) |
| 10,640 | API Internal Pressure Resistance (psi) |
| 91.7 | Maximum Uniaxial Bend Rating [degrees/100 ft] |
| | **Appoximated Field End Torque Values** |
| 12,000 | Minimum Final Torque (ft-lbs) |
| 13,800 | Maximum Final Torque (ft-lbs) |
| 15,500 | Connection Yield Torque (ft-lbs) |

VAM-USA
4424 W. Sam Houston Pkwy. Suite 150
Houston, TX 77041
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com



**For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).**



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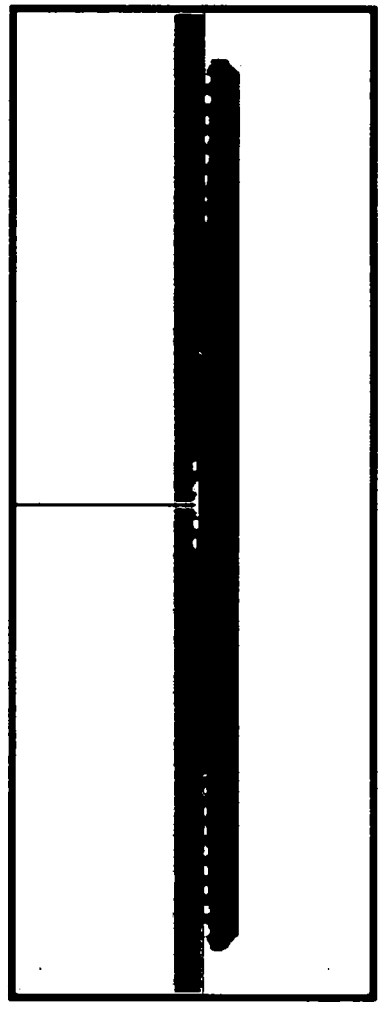
**DWC Connection Data Notes:**

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.





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A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 10M will be installed and tested, with 5M annular being tested to 100% of rated working pressure.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 10,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

# Devon Energy
## APD VARIANCE DATA

**OPERATOR NAME:** Devon Energy

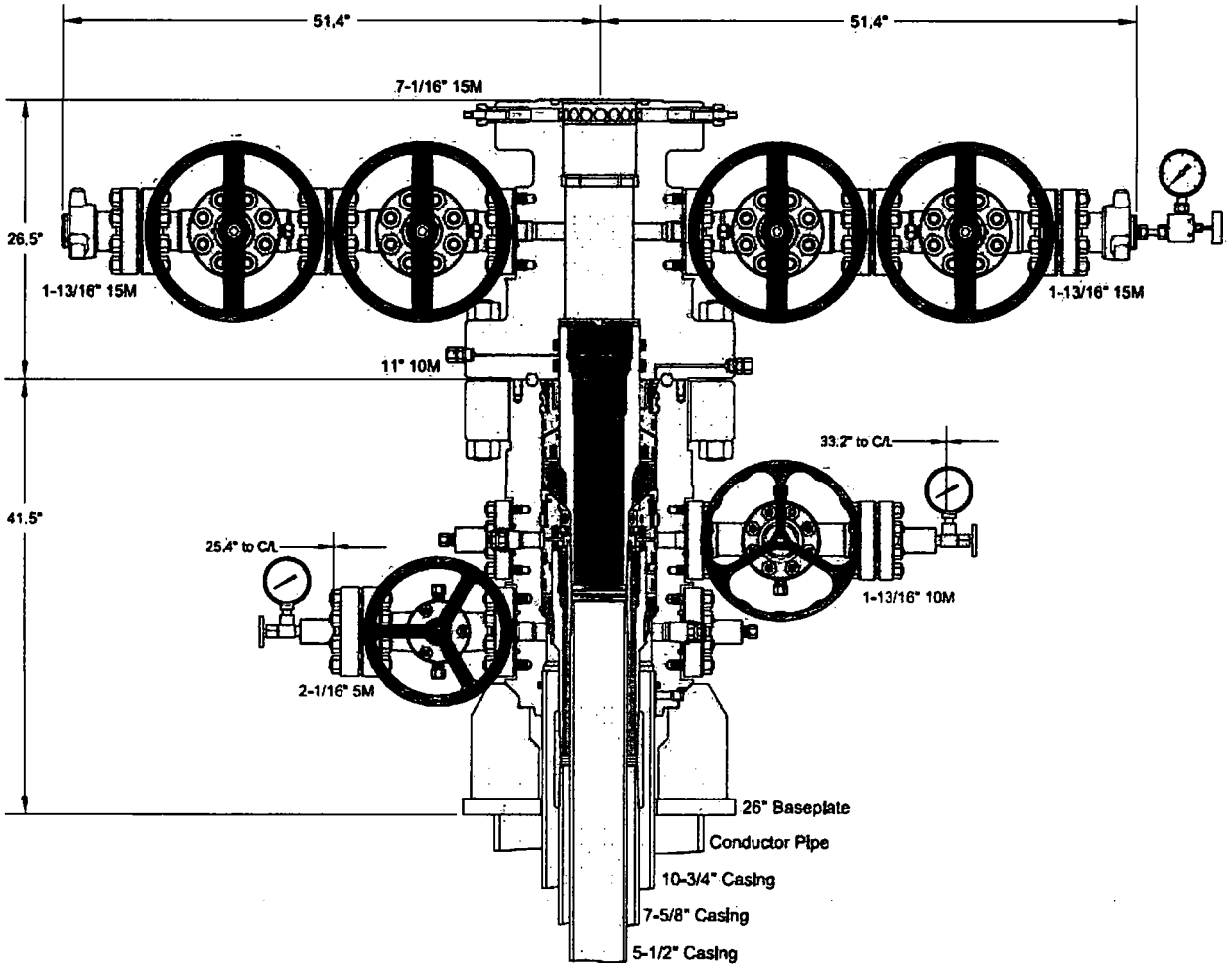
**1. SUMMARY OF Variance:**

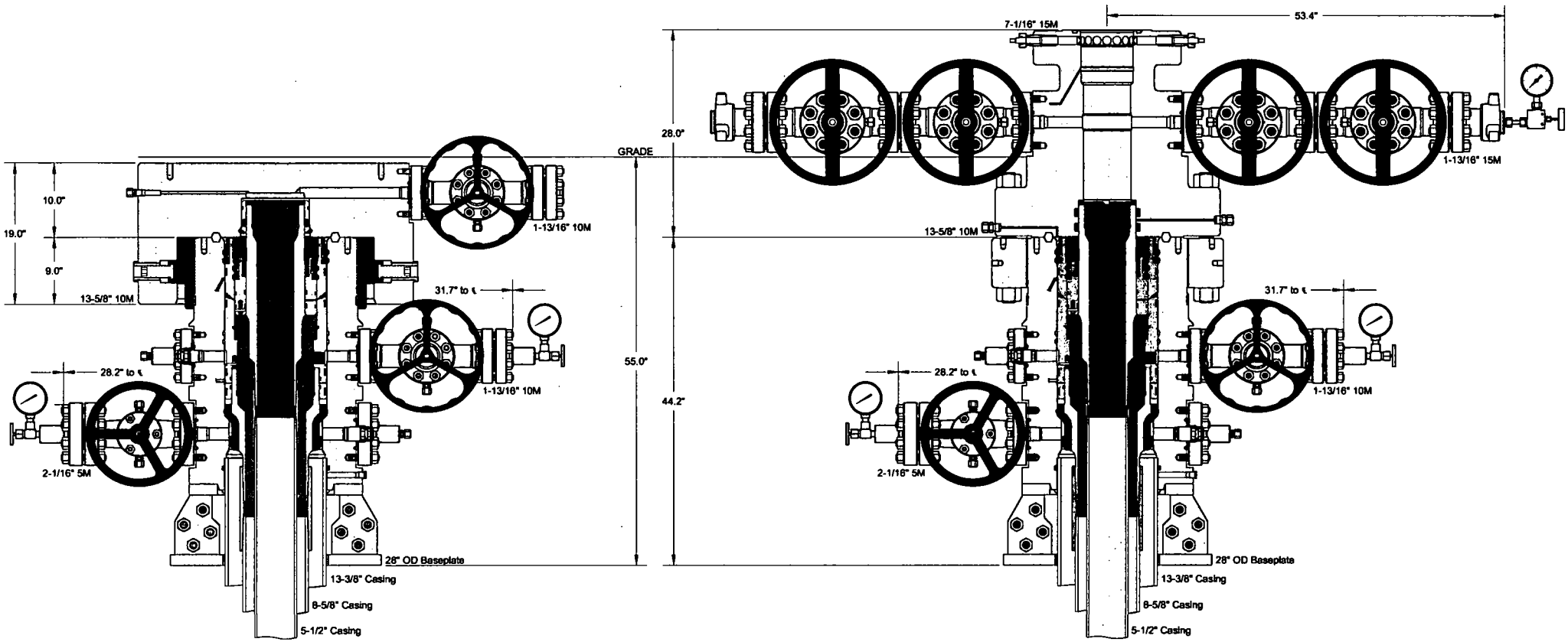
Devon Energy respectfully requests approval for the following additions to the drilling plan:

1. Potential utilization of a spudder rig to pre-set surface casing.

**2. Description of Operations**

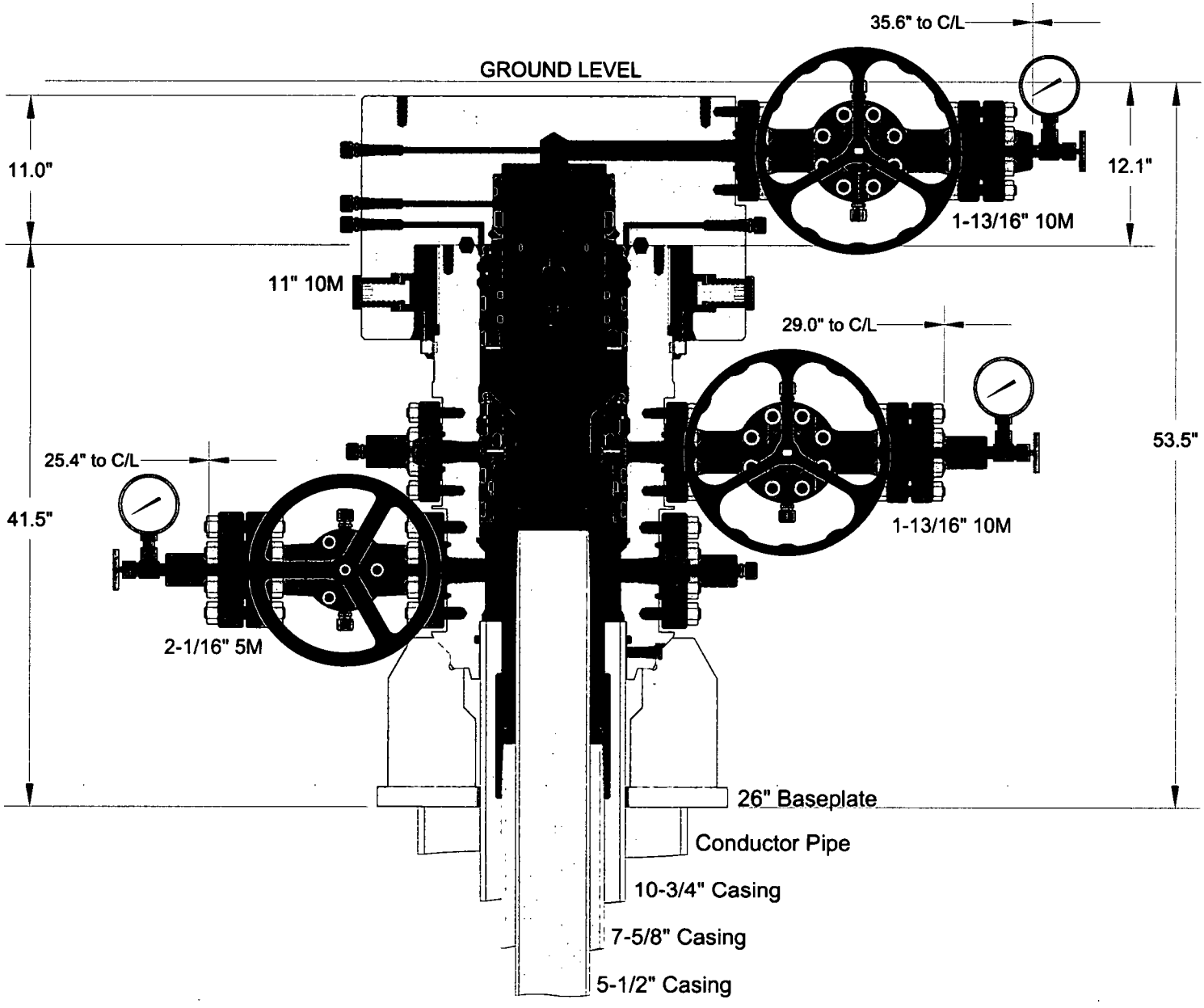
1. A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
    a. After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. Rig will utilize fresh water based mud to drill surface hole to TD.
2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
3. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
5. Drilling operation will be performed with the big rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
6. Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.


51.4"
51.4"
7-1/16" 15M
26.5"
1-13/16" 15M
1-13/16" 15M
11" 10M
41.5"
33.2" to C/L
25.4" to C/L
1-13/16" 10M
2-1/16" 5M
26" Baseplate
Conductor Pipe
10-3/4" Casing
7-5/8" Casing
5-1/2" Casing






| CACTUS WELLHEAD LLC | DEVON ENERGY CORPORATION | | |
|---|---|---|---|
| 13-3/8" x 8-5/8" x 5-1/2" 5M MBU-3T Wellhead System<br>With 8-5/8" & 5-1/2" Pin Down Rotating Mandrel Hangers<br>And 13-5/8" 10M x 7-1/16" 15M CTH-P-DBLHPS Tubing Head | DRAWN | DLE | 10MAY18 |
| | APPRV | | |
| | DRAWING NO. | ODE0002309 | |






# CACTUS WELLHEAD LLC

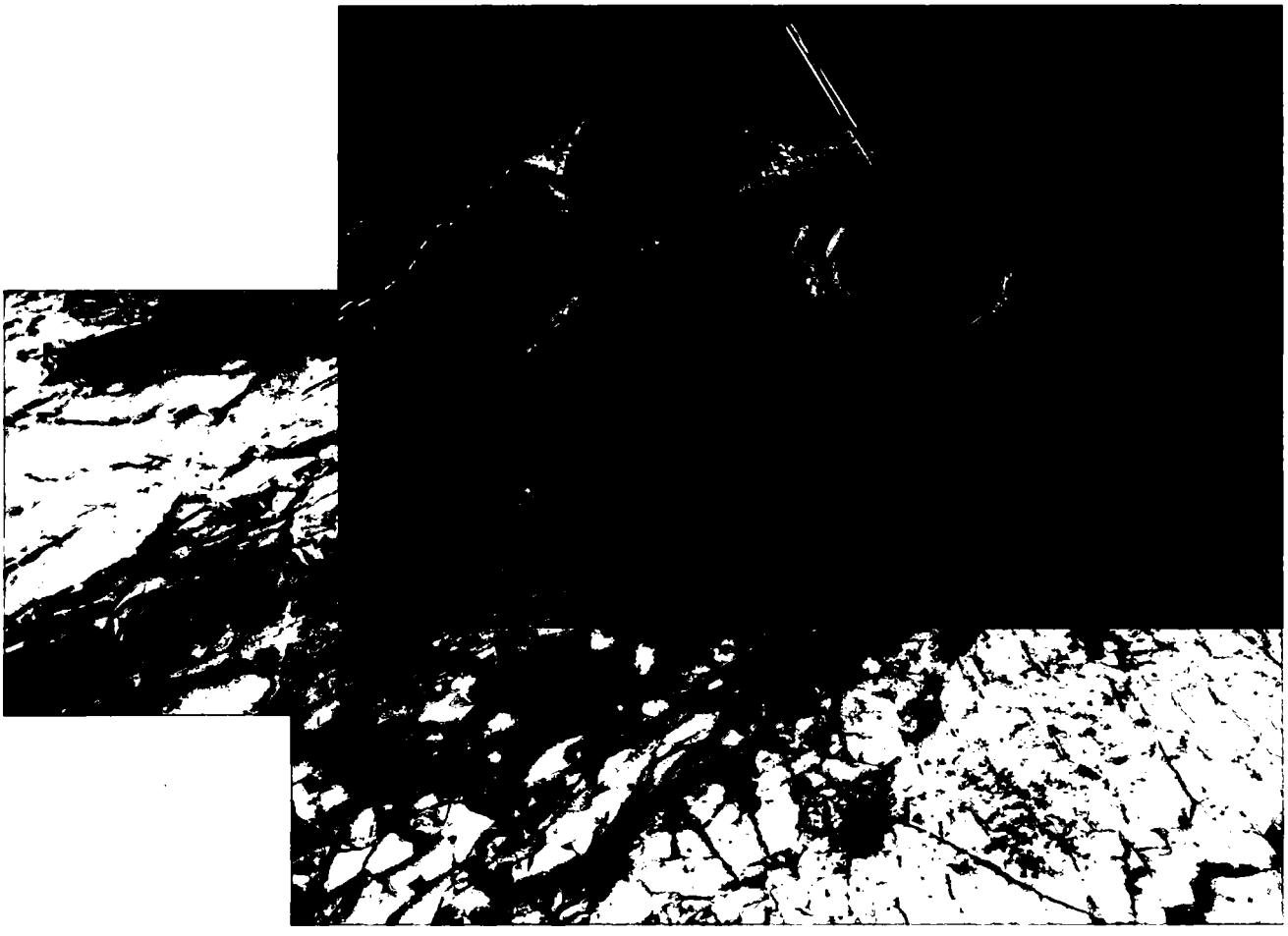
DEVON ENERGY CORPORATION

16" x 11-7/8" x 7-5/8" MBU-T Wellhead Assembly
With 7-5/8" & 5-1/2" Pin Bottom Mandrel Casing Hangers
And 11" 10M MBU-T-HPS-F TA Cap

| | | |
|---|---|---|
| DRAWN | DLE | 29NOV17 |
| APPRV | | |
| DRAWING NO. | OKE0001764 | |

devon

Commitment Runs Deep



# Design Plan
# Operation and Maintenance Plan
# Closure Plan

SENM - Closed Loop Systems
June 2010

## I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

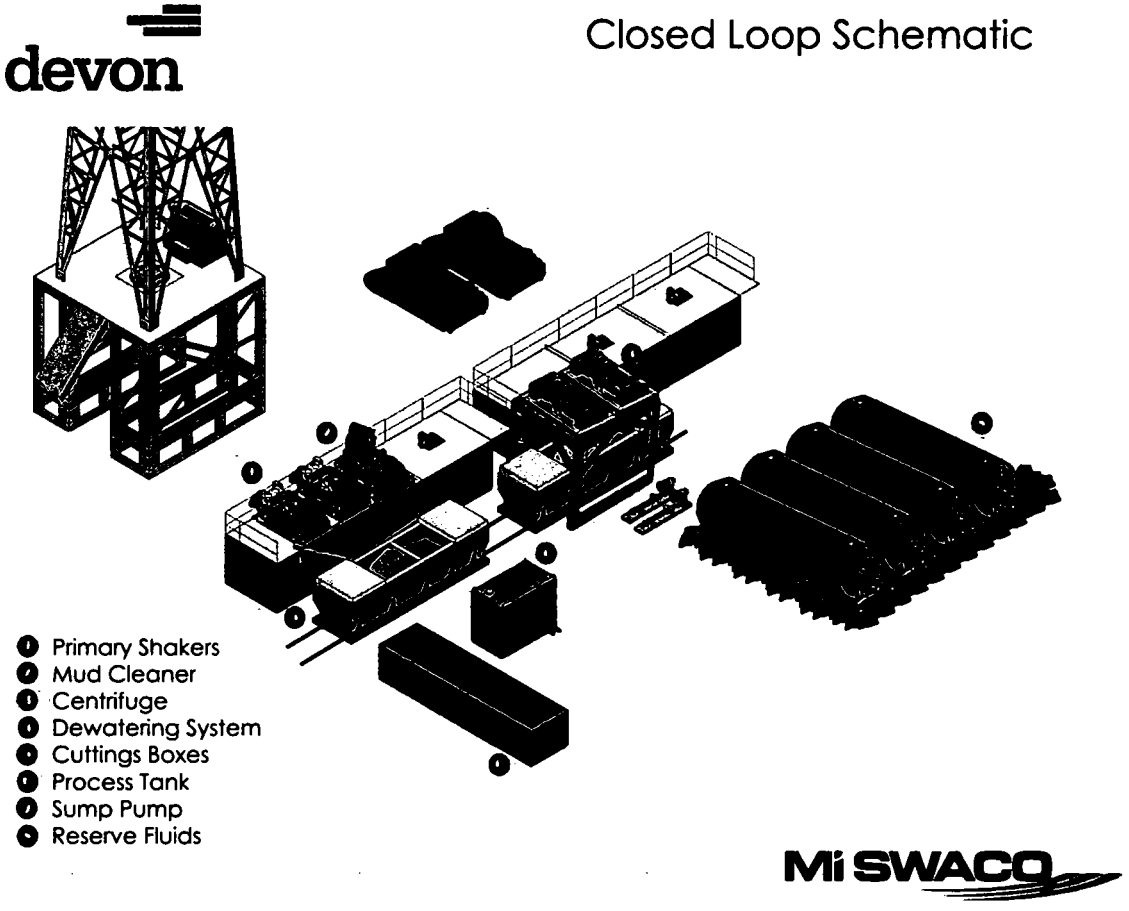
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

## II. Operations and Maintenance Plan

*Primary Shakers:* The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

*Mud Cleaner:* The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.




*Centrifuges:* The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

*Dewatering System:* The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

*Cuttings Boxes:* Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank:* (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

*Sump and Sump Pump:* The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

*Reserve Fluids (Tank Farm):* A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

## III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

# U. S. Steel Tubular Products

## 10.75 40.5/0.35 J55

1/18/2017 9:30:29 AM

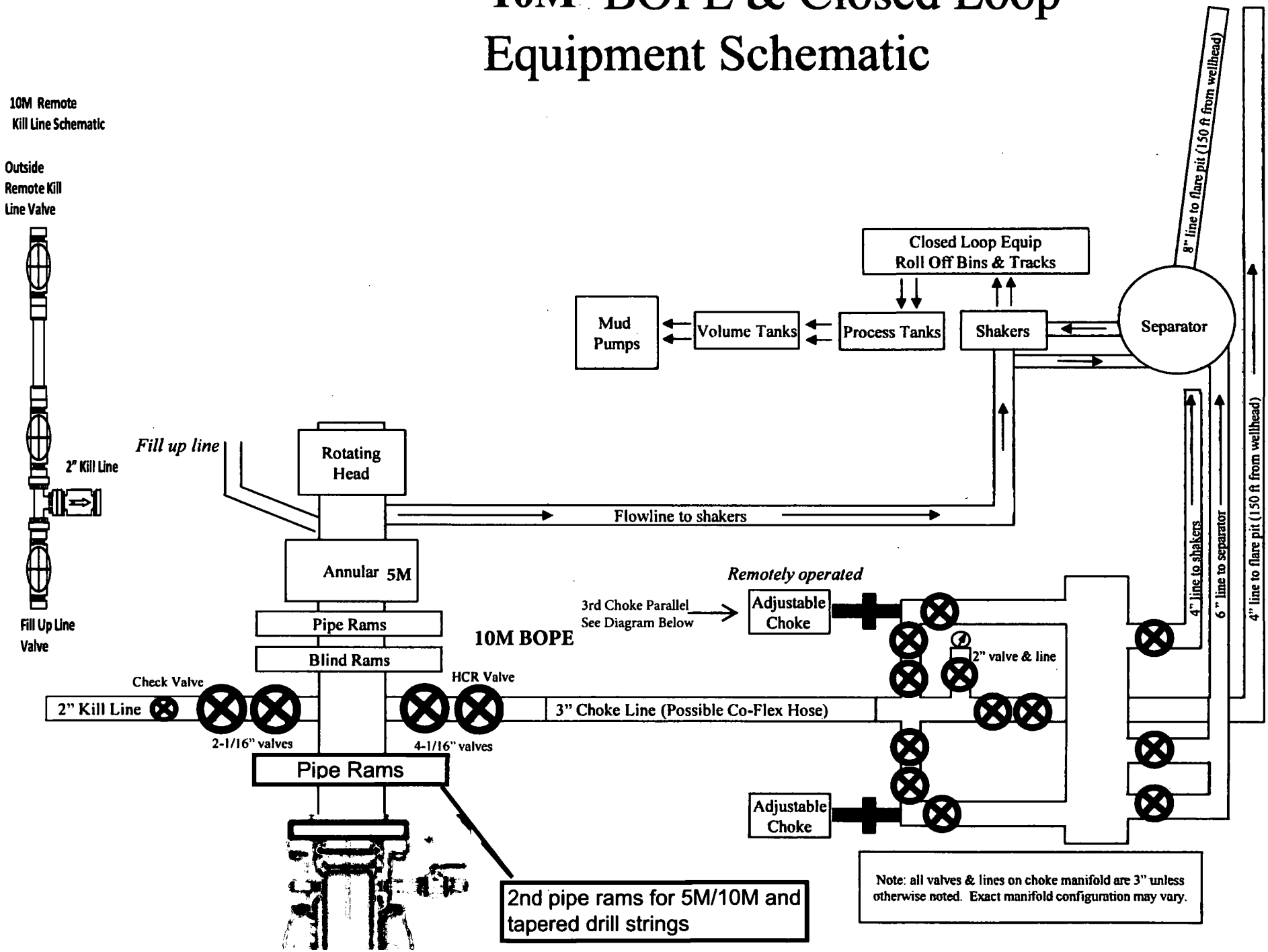
| MECHANICAL PROPERTIES | Pipe | BTC | LTC | STC | |
|---|---|---|---|---|---|
| Minimum Yield Strength | 55,000 | -- | -- | -- | psi |
| Maximum Yield Strength | 80,000 | -- | -- | -- | psi |
| Minimum Tensile Strength | 75,000 | -- | -- | -- | psi |
| **DIMENSIONS** | **Pipe** | **BTC** | **LTC** | **STC** | |
| Outside Diameter | 10.750 | 11.750 | -- | 11.750 | in. |
| Wall Thickness | 0.350 | -- | -- | -- | in. |
| Inside Diameter | 10.050 | 10.050 | -- | 10.050 | in. |
| Standard Drift | 9.894 | 9.894 | -- | 9.894 | in. |
| Alternate Drift | -- | -- | -- | -- | in. |
| Nominal Linear Weight, T&C | 40.50 | -- | -- | -- | lbs/ft |
| Plain End Weight | 38.91 | -- | -- | -- | lbs/ft |
| **PERFORMANCE** | **Pipe** | **BTC** | **LTC** | **STC** | |
| Minimum Collapse Pressure | 1,580 | 1,580 | -- | 1,580 | psi |
| Minimum Internal Yield Pressure | 3,130 | 3,130 | -- | 3,130 | psi |
| Minimum Pipe Body Yield Strength | 629,000 | -- | -- | -- | lbs |
| Joint Strength | -- | 700 | -- | 420 | lbs |
| Reference Length | -- | 11,522 | -- | 6,915 | ft |
| | | | | | |
| Make-Up Loss | -- | 4.81 | -- | 3.50 | in. |
| Minimum Make-Up Torque | -- | -- | -- | 3,150 | ft-lbs |
| Maximum Make-Up Torque | -- | -- | -- | 5,250 | ft-lbs |

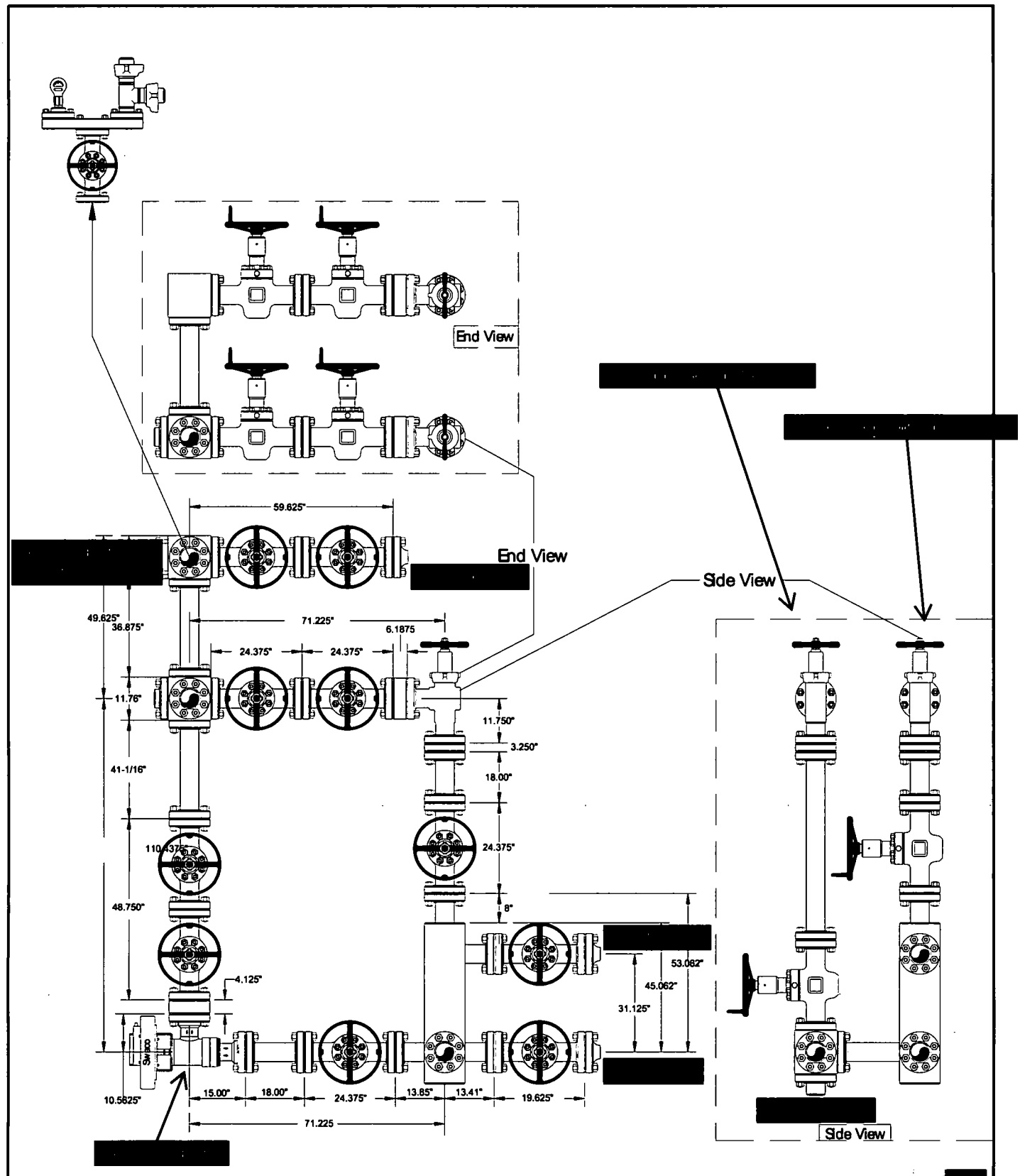


U. S. Steel Tubular Products
10343 Sam Houston Park Dr., #120
Houston, TX 77064

1-877-893-9461
connections@uss.com
www.usstubular.com

# 10M BOPE & Closed Loop Equipment Schematic






## Helmerich & Payne

Flex 3 Rig w/ 3 Chokes

devon

| Name: Mike Potts | Date: 6-23-2010 | Working Pressure: 10M | J-5132-E |
|---|---|---|---|

## Devon Energy Annular Preventer Summary

### 1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

6-3/4" Production hole section, 10M requirement

| Component | OD | Preventer | RWP |
|---|---|---|---|
| Drillpipe | 4.5" | Fixed lower 4.5"<br>Upper 4.5-7" VBR | 10M |
| HWDP | 4.5" | Fixed lower 4.5"<br>Upper 4.5-7" VBR | 10M |
| Drill collars and MWD tools | 4.75" | Upper 4.5-7" VBR | 10M |
| Mud Motor | 4.75" | Upper 4.5-7" VBR | 10M |
| Production casing | 5.5" | Upper 4.5-7" VBR | 10M |
| ALL | 0-13-5/8" | Annular | 5M |
| Open-hole | - | Blind Rams | 10M |

VBR = Variable Bore Ram. Compatible range listed in chart.

### 2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may chose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

<u>General Procedure While Drilling</u>

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

## Devon Energy Annular Preventer Summary

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

## Devon Energy Annular Preventer Summary

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
    a. Perform flowcheck, if flowing:
    b. Sound alarm (alert crew)
    c. Stab full opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper pipe ram.
    e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. Stab crossover and full opening safety valve and close
    c. Space out drill string with upset just beneath the compatible pipe ram.
    d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
    c. If impossible to pick up high enough to pull the string clear of the stack:
    d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
    e. Space out drill string with tooljoint just beneath the upper pipe ram.
    f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    g. Confirm shut-in
    h. Notify toolpusher/company representative
    i. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    j. Regroup and identify forward plan

Continental CONTITECH

**Fluid Technology**

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly It is good practice to use lifting & safety equipment but not mandatory

Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com

RIG 212

PHOENIX

QUALITY DOCUMENT

PHOENIX RUBBER INDUSTRIAL LTD.

6728 Szeged, Budapesti út 10. Hungary • H-6701 Szeged, P. O. Box 152
Phone: (3662) 566-737 • Fax: (3662) 566-738

SALES & MARKETING: H-1092 Budapest, Ráday u. 42-44. Hungary • H-1440 Budapest, P. O. Box 26
Phone: (361) 456-4200 · Fax: (361) 217-2972, 456-4273 · www.taurusemerge.hu

| QUALITY CONTROL INSPECTION AND TEST CERTIFICATE | | | | | CERT. N°: 552 |
|---|---|---|---|---|---|
| PURCHASER: Phoenix Beattie Co. | | | | | P.O. N°: 1519FA-871 |
| PHOENIX RUBBER order N°: 170466 | | HOSE TYPE: 3" ID | | Choke and Kill Hose | |
| HOSE SERIAL N°: 34128 | | NOMINAL / ACTUAL LENGTH: | | 11,43 m | |
| W.P. 68,96 MPa | 10000 psi | T.P. 103,4 MPa | 15000 psi | Duration: 60 | min. |

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS

| Type | Serial N° | Quality | Heat N° |
|---|---|---|---|
| 3" coupling with 4 1/16" Flange end | 720 719 | AISI 4130 AISI 4130 | C7626 47357 |
| | | | |
| | | | |

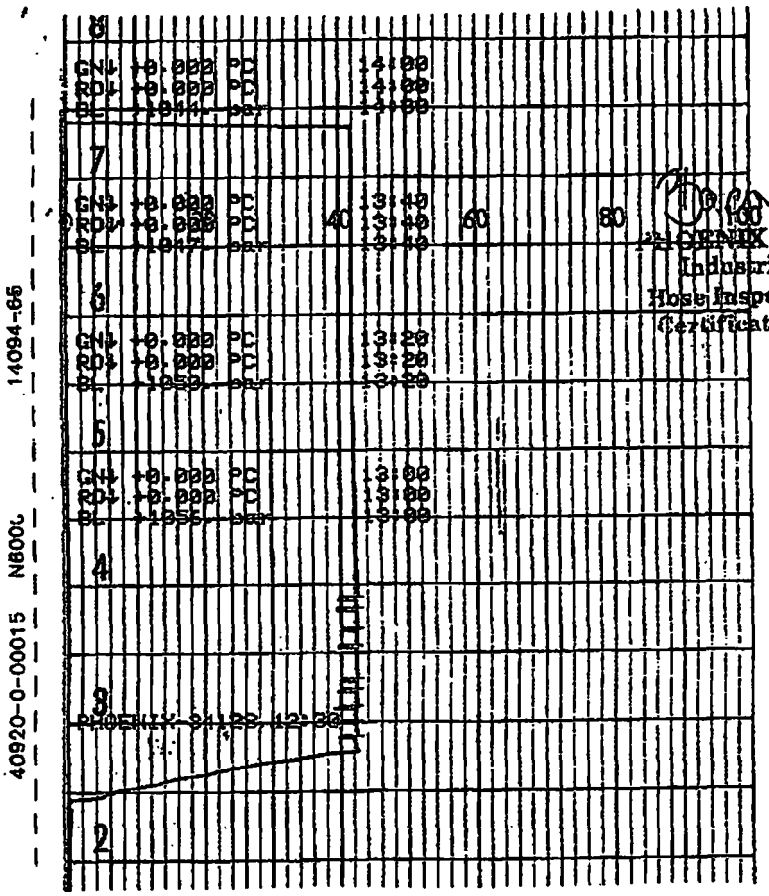
API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

| Date: | Inspector | Quality Control |
|---|---|---|
| 29. April. 2002. | | PHOENIX RUBBER Industrial Ltd. Hose Inspection and Test Dept. |

CERTIFIED TRUE COPY
PHOENIX RUBBER Q.C.




PHOENIX RUBBER
Industrial Ltd.
Hose Inspection and
Certification Dept.

VERIFIED TRUE CO:
PHOENIX RUBBER C.C.

**APD ID:** 10400038419 **Submission Date:** 01/28/2019

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

[redacted]

Show Final Text

## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

Blue_Krait_23_14_Fed_31H_Access_Rd_20190124120328.pdf

**Existing Road Purpose:** ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

### ROW ID(s)

**ID:**

**Do the existing roads need to be improved?** YES

**Existing Road Improvement Description:** Improve road to accommodate Drilling and Completion operations.

**Existing Road Improvement Attachment:**

## Section 2 - New or Reconstructed Access Roads

**Will new roads be needed?** YES

**New Road Map:**

BLUE_KRAIT_23_CTB_2_20190124103724.PDF
BLUE_KRAIT_23_WP_5_20190124103726.PDF

**New road type:** LOCAL

**Length:** 2450 Feet **Width (ft.):** 30

**Max slope (%):** 6 **Max grade (%):** 4

**Army Corp of Engineers (ACOE) permit required?** NO

**ACOE Permit Number(s):**

**New road travel width:** 14

**New road access erosion control:** Water Drainage Ditch

**New road access plan or profile prepared?** YES

**New road access plan attachment:**

New_Access_Rd_Doc_20190124104028.pdf

**Access road engineering design?** YES

**Access road engineering design attachment:**

New_Access_Rd_Doc_20190124104041.pdf

**Turnout?** N

**Access surfacing type:** OTHER

**Access topsoil source:** ONSITE

**Access surfacing type description:** caliche

**Access onsite topsoil source depth:** 6

**Offsite topsoil source description:**

**Onsite topsoil removal process:** See attached Interim reclamation diagram.

**Access other construction information:**

**Access miscellaneous information:**

**Number of access turnouts:** **Access turnout map:**

## Drainage Control

**New road drainage crossing:** OTHER

**Drainage Control comments:** Water Drainage Ditch

**Road Drainage Control Structures (DCS) description:** N/A

**Road Drainage Control Structures (DCS) attachment:**

## Access Additional Attachments

## Section 3 - Location of Existing Wells

**Existing Wells Map?** YES

**Attach Well map:**

OneMileBuffer_20190124120406.pdf

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

**Submit or defer a Proposed Production Facilities plan?** SUBMIT

**Production Facilities description:** 5 ATTACHMENTS - WELLPAD PLAT, CTB PLAT, FLOWLINE PLAT, WELLPAD ELECTRIC PLAT, GAS BATTERY CONNECT PLAT. OTHER CONNECTS HANDLED BY THIRD PARTY
**Production Facilities map:**

BLUE_KRAIT_23_CTB_2_20190124104239.PDF
BLUE_KRAIT_23_WP_5_20190124104240.PDF
BLUE_KRAIT_23_CTB_2_ELE_20190124104237.pdf
BLUE_KRAIT_23_WP_5_TO_CTB_2_FL_20190124104241.pdf

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

BLUE_KRAIT_23_CTB_2_BATCON_20190128075813.pdf

## Section 5 - Location and Types of Water Supply

### Water Source Table

**Water source type:** RECYCLED

**Water source use type:** STIMULATION

**Source latitude:** **Source longitude:**

**Source datum:**

**Water source permit type:** OTHER

**Water source transport method:** PIPELINE

**Source land ownership:** FEDERAL

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 500000 **Source volume (acre-feet):** 64.44655

**Source volume (gal):** 21000000

---

**Water source and transportation map:**

BLUE_KRAIT_23_14_FED_WP_5_WATER_MAP_20190124104407.PDF

**Water source comments:** The attached Water Transfer Map is a proposal only and the final route and documentation will be provided by a Devon contractor prior to installation. When available Devon will always follow existing disturbance.
**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:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**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

**Using any construction materials:** YES

**Construction Materials description:** Dirt fill and caliche will be used to construct well pad. See attached map.

**Construction Materials source location attachment:**

Blue_Krait_23_CTB_2_Caliche_Map_20190128075858.pdf
Blue_Krait_23_WP_5_Caliche_Map_20190128075859.pdf

## Section 7 - Methods for Handling Waste

**Waste type:** COMPLETIONS/STIMULATION

**Waste content description:** Flow back water during completion operations.

**Amount of waste:** 3000 barrels

**Waste disposal frequency :** One Time Only

**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:** Various disposal locations in Lea and Eddy counties.

**Waste type:** PRODUCED WATER

**Waste content description:** Average produced BWPD over the first year of production.

**Amount of waste:** 2500 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Produced water will primarily be disposed of at commercial disposals connected to the Devon water system.

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**Waste type:** FLOWBACK

**Waste content description:** Average produced BWPD over the flowback period (first 30 days of production).

**Amount of waste:** 6900 barrels

**Waste disposal frequency :** Daily

**Safe containment description:** N/A

**Safe containmant attachment:**

**Waste disposal type:** OFF-LEASE INJECTION **Disposal location ownership:** COMMERCIAL

**Disposal type description:**

**Disposal location description:** Produced water will primarily be disposed of at commercial disposals connected to the Devon water system.

**Waste type:** DRILLING

**Waste content description:** Water Based and Oil Based Cuttings

**Amount of waste:** 1769 barrels

**Waste disposal frequency :** Daily

**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:** All cuttings will disposed of at R360, Sundance, or equivalent.

## 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

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**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:**

Blue_Krait_23_14_Fed_31H_Well_Layout_20190124120437.pdf

**Comments:**

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** New Surface Disturbance **Multiple Well Pad Name:** BLUE KRAIT 23 FED WELLPAD

**Multiple Well Pad Number:** 5

**Recontouring attachment:**

Blue_Krait_23_14_Fed_31H_Interim_Recl_20190124120502.pdf

**Drainage/Erosion control construction:** All areas disturbed shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.

**Drainage/Erosion control reclamation:** Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season.

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**Well pad proposed disturbance (acres):** 6.887
**Road proposed disturbance (acres):** 1.687
**Powerline proposed disturbance (acres):** 0.899
**Pipeline proposed disturbance (acres):** 0.481
**Other proposed disturbance (acres):** 0
**Total proposed disturbance:** 9.954

**Well pad interim reclamation (acres):** 5.385
**Road interim reclamation (acres):** 0
**Powerline interim reclamation (acres):** 0
**Pipeline interim reclamation (acres):** 0
**Other interim reclamation (acres):** 0
**Total interim reclamation:** 5.385

**Well pad long term disturbance (acres):** 1.502
**Road long term disturbance (acres):** 1.687
**Powerline long term disturbance (acres):** 0.899
**Pipeline long term disturbance (acres):** 0.481
**Other long term disturbance (acres):** 0
**Total long term disturbance:** 4.569

**Disturbance Comments:**

**Reconstruction method:** Operator will use Best Management Practices"BMP" to mechanically recontour to obtain the desired outcome.
**Topsoil redistribution:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
**Soil treatment:** Topsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
**Existing Vegetation at the well pad:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** Shinnery, yucca, grasses and mesquite.

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

## 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 | |
|---|---|
| **Seed Type** | **Pounds/Acre** |

**Total pounds/Acre:**

**Seed reclamation attachment:**

## Operator Contact/Responsible Official Contact Info

**First Name:** Blake **Last Name:** Richardson

**Phone:** (405)552-6556 **Email:** blake.richardson@dvn.com

**Seedbed prep:**

**Seed BMP:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** Maintain weeds on an as need basis.

**Weed treatment plan attachment:**

**Monitoring plan description:** Monitor as needed.

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Disturbance type:** NEW ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

**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:**

**Other Local Office:**

**USFS Region:**

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

**Disturbance type:** EXISTING ACCESS ROAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

**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:**

**Other Local Office:**

**USFS Region:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

**Disturbance type:** PIPELINE

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

**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:**

**Other Local Office:**

**USFS Region:**

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

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT,PRIVATE OWNERSHIP

**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:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

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

## Section 12 - Other Information

**Right of Way needed?** YES **Use APD as ROW?** YES

**ROW Type(s):** 281001 ROW - ROADS,288100 ROW – O&G Pipeline,FLPMA (Powerline),Other

## ROW Applications

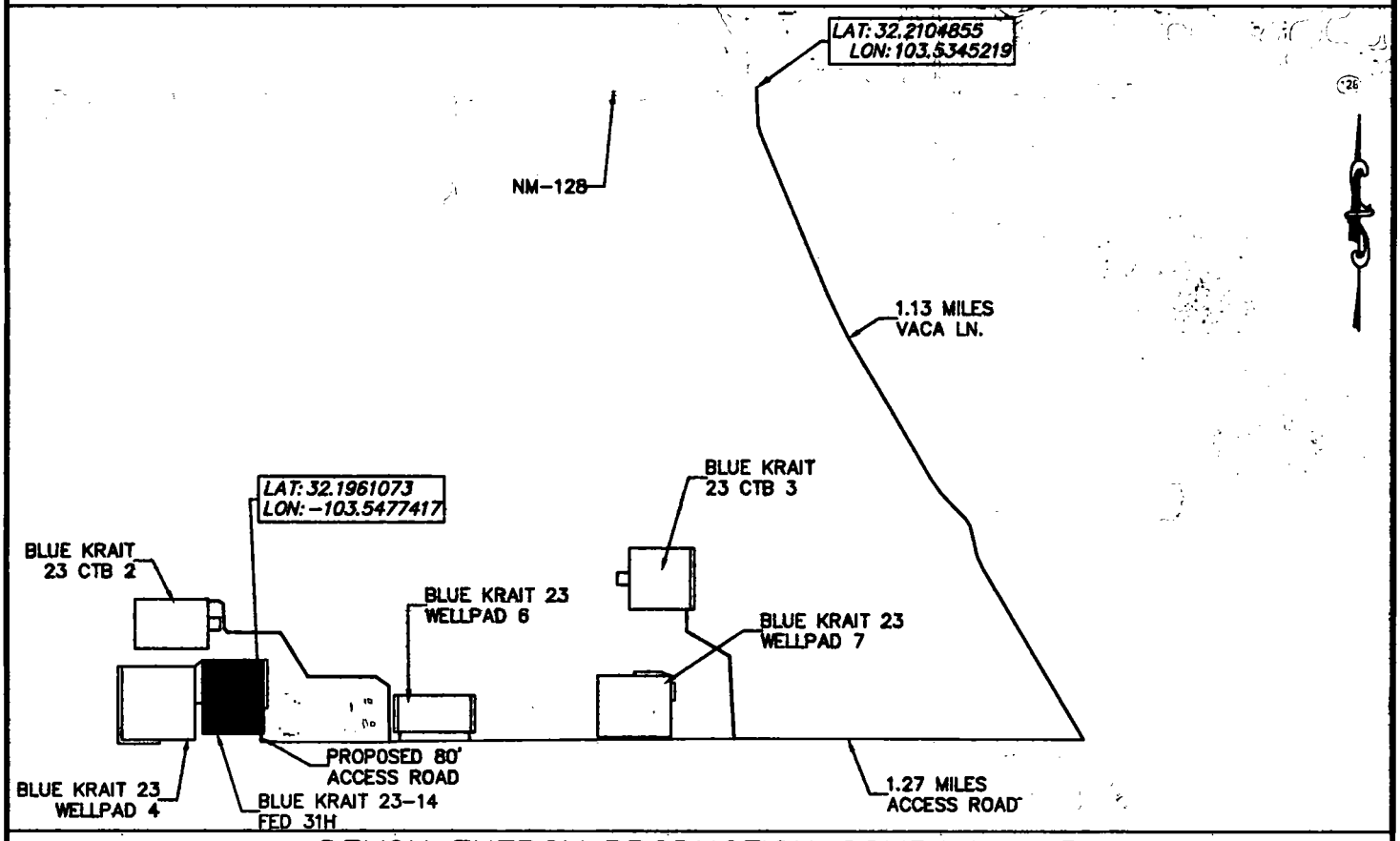
**SUPO Additional Information:** See Section 4 for 14 Facility & Infrastructure Plats. See C-102 for grading plats.

**Use a previously conducted onsite?** YES

**Previous Onsite information:** 8/14/2018

## Other SUPO Attachment

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP



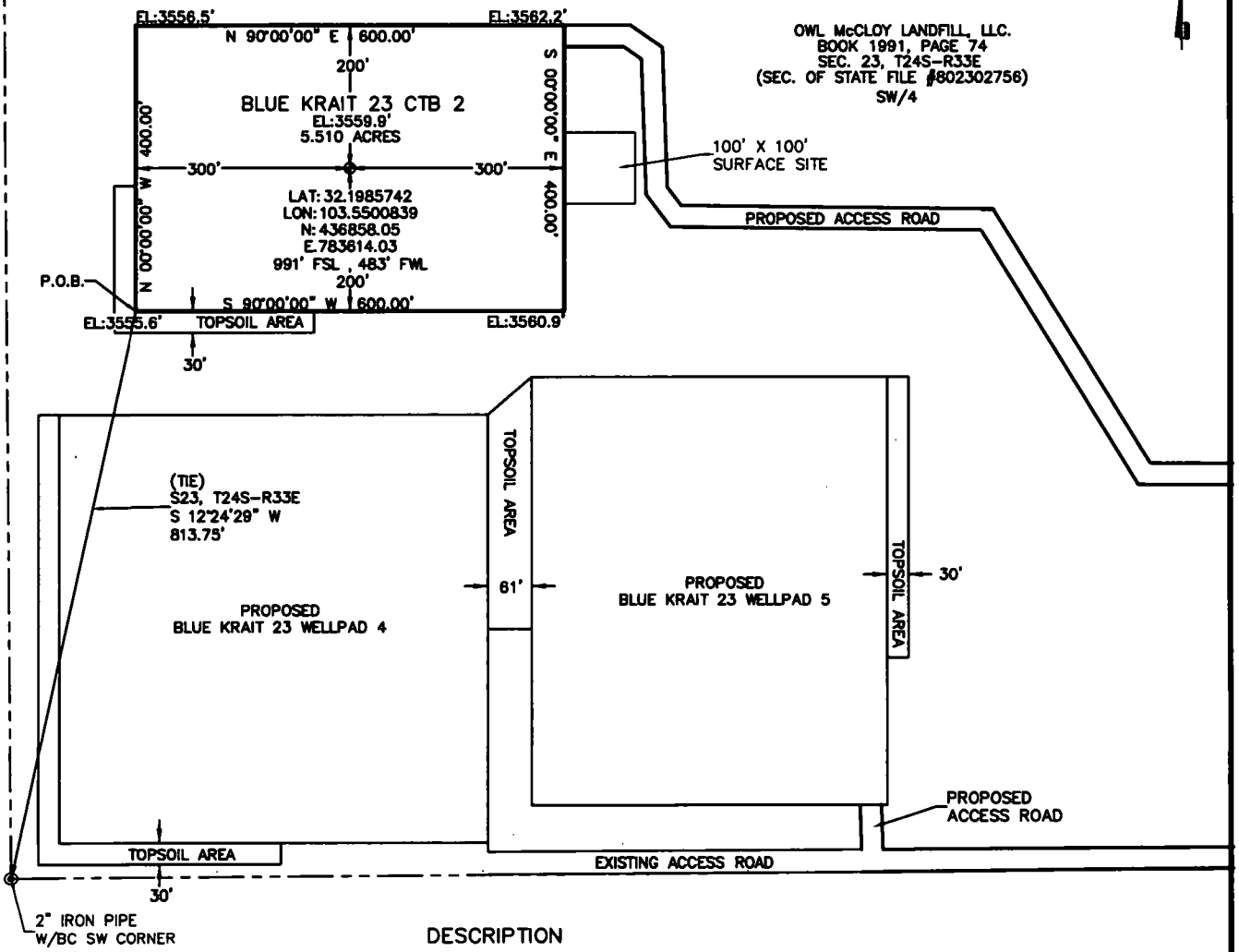

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

| | | |
|---|---|---|
| HORIZON ROW LLC | | Drawn for: devon |
| DEVON ENERGY PRODUCTION CO., L.P. | | |
| Drawn by: CHRIS MAAS | Date: 11/28/2018 | |

# BLUE KRAIT 23 CTB 2

## DEVON ENERGY PRODUCTION COMPANY, L.P.
## IN THE SOUTHWEST QUARTER (SW/4)
## SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
## LEA COUNTY, NEW MEXICO
## SHEET 1 OF 6




## DESCRIPTION

BEING A SURFACE SITE EASEMENT LYING IN THE SOUTHWEST QUARTER (SW/4) OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHWEST CORNER OF SAID SITE EASEMENT, WHERE A 2" IRON PIPE W/BC FOR THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M. BEARS S 12°24'29" W, A DISTANCE 813.75';

THENCE N 00°00'00" W, A DISTANCE 400.00 FEET TO THE NORTHWEST CORNER OF THIS EASEMENT;
THENCE N 90°00'00" E, A DISTANCE 600.00 FEET TO THE NORTHEAST CORNER OF THIS EASEMENT;
THENCE S 00°00'00" E, A DISTANCE 400.00 FEET TO THE SOUTHEAST CORNER OF THIS EASEMENT;
THENCE S 90°00'00" W, A DISTANCE 600.00 FEET TO THE SOUTHWEST CORNER OF THIS EASEMENT,
TO THE POINT OF BEGINNING; CONTAINING 5.510 ACRES.

GENERAL NOTES:

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A CENTRAL TANK BATTERY.
2.) All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Horizonrow, LLC
Date Signed: 11-27-2018
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizonrow, LLC

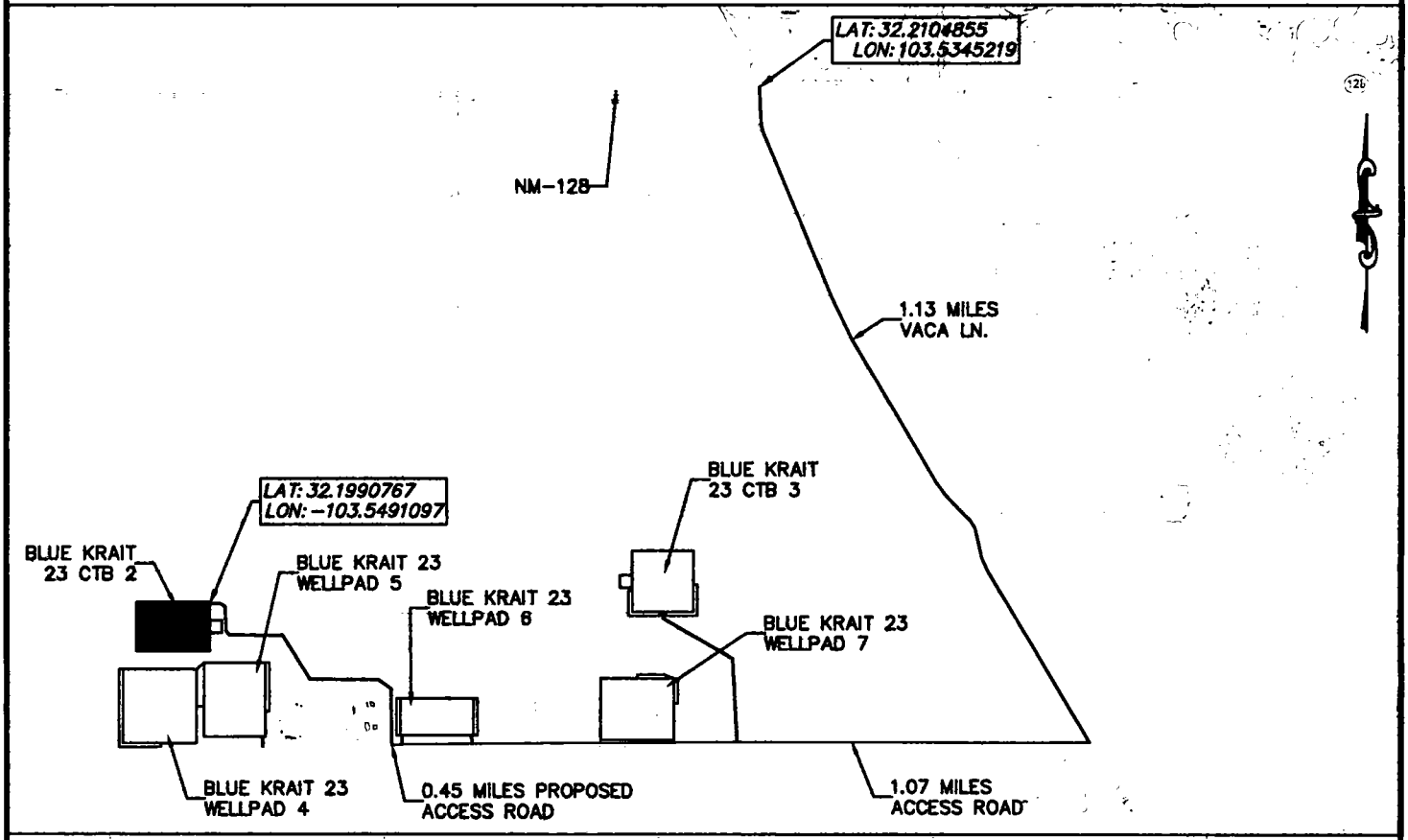
*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.07 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH AND WEST FOR 0.45 MILES TO THE NORTHEAST CORNER OF THE BLUE KRAIT 23 CTB 2.

0 250 500

| | | |
|---|---|---|
| HORIZON ROW LLC<br>Drawn for: devon | DEVON ENERGY PRODUCTION COMPANY, L.P.<br>BLUE KRAIT 23 CTB 2 | SITE NUMBER: AA000057052<br>WBS NUMBER: XX-129903.01.SLC<br>SCALE: 1" = 250' |
| Drawn by: CHRIS MAAS<br>Date: 11/13/2018 | SURVEY PLAT SHOWING A CTB ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC. | REVISIONS:<br>DATE OF SURVEY: 07/18/18 |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP




NOT TO SCALE

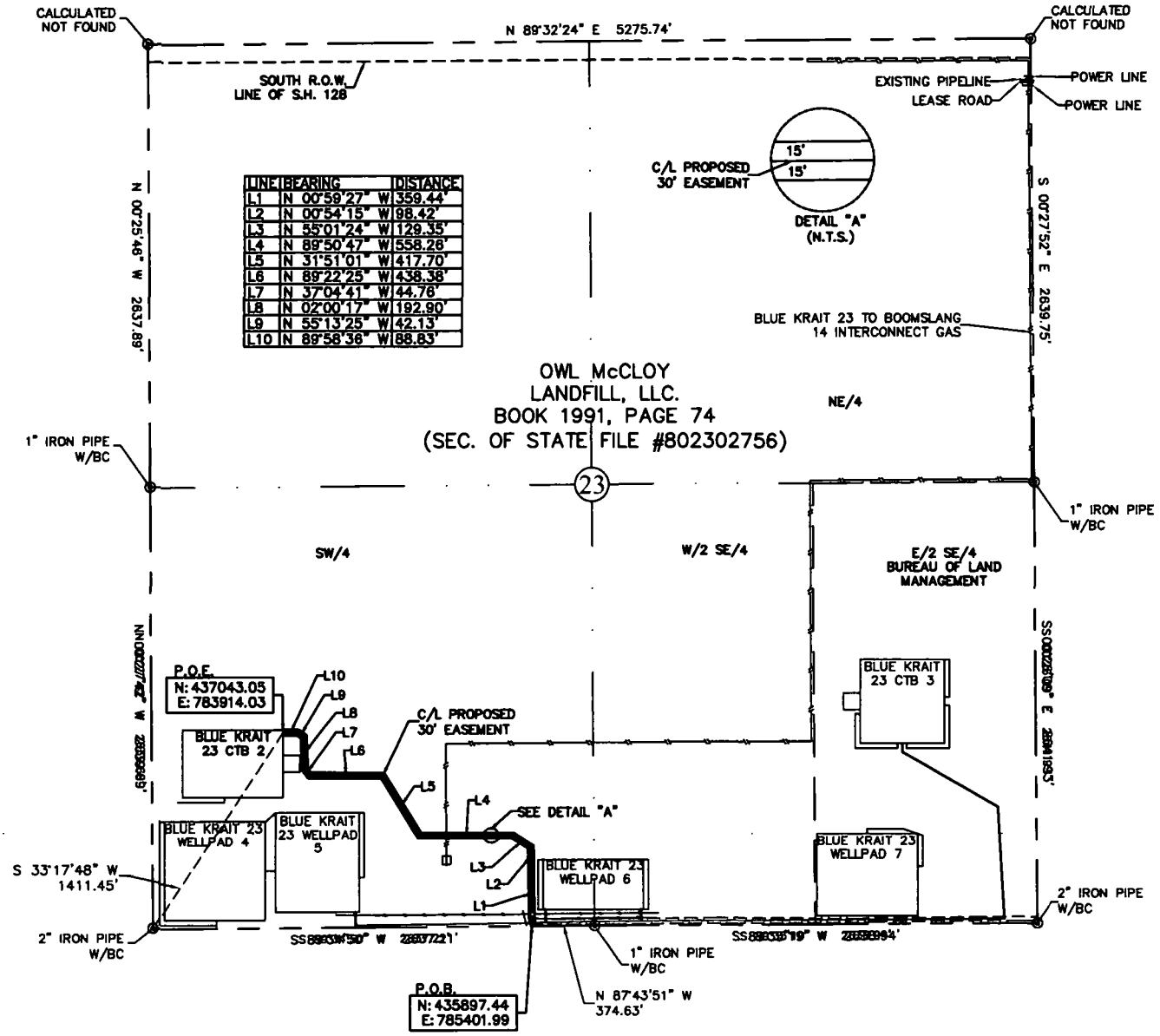
## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.07 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH AND WEST FOR 0.45 MILES TO THE NORTHEAST CORNER OF THE BLUE KRAIT 23 CTB 2.



| | | |
|---|---|---|
| HORIZON ROW LLC | | Drawn for: |
| DEVON ENERGY PRODUCTION CO., L.P. | | devon |
| Drawn by: CHRIS MAAS | Date: 11/13/2018 | |

# EXHIBIT "A"
## ACCESS ROAD PLAT
## SECTION 23, T24S–R33E, N.M.P.M.
## LEA COUNTY, NEW MEXICO




| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N 00°59'27" W | 359.44' |
| L2 | N 00°54'15" W | 98.42' |
| L3 | N 55°01'24" W | 129.35' |
| L4 | N 89°50'47" W | 558.26' |
| L5 | N 31°51'01" W | 417.70' |
| L6 | N 89°22'25" W | 438.38' |
| L7 | N 37°04'41" W | 44.76' |
| L8 | N 02°00'17" W | 192.90' |
| L9 | N 55°13'25" W | 42.13' |
| L10 | N 89°58'36" W | 88.83' |

30' EASEMENT AREA = 1.632 ACRE(S)
2370.17 FEET OR 143.65 RODS

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

0+00.0 P.O.B./EXISTING ACCESS ROAD
0+29.5 EXISTING PIPELINE
0+56.1 EXISTING PIPELINE
9+88.4 BLUE KRAIT 23 TO BOOMSLANG 14 INTERCONNECT GAS
23+70.2 P.O.E./BLUE KRAIT 23 CTB 2

0 1000 2000

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Date Signed: 11-27-2018
Hortzonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Hortzonrow, LLC

| | | | |
|---|---|---|---|
| HORIZON ROW LLC | DEVON ENERGY PRODUCTION COMPANY, L.P. | | LINE NUMBER: 7610114R |
| Drawn for: devon | BLUE KRAIT 23 CTB 2 ACCESS ROAD | | WBS NUMBER: XX-129903.01.SLC |
| | | | SCALE: 1" = 1000' |
| | PROPOSED 30' EASEMENT ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC SECTION 23, T24S–R33E, N.M.P.M. | | REVISIONS: |
| Drawn by: CHRIS MAAS | Date: 11/13/2018 | | DATE OF SURVEY: 8/20/18 |

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 87°43'51" W, a distance of 374.63' to the **Point of Beginning** of this easement having coordinates of Northing=435897.44 feet, Easting=785401.99 feet and continuing the following courses;

Thence N 00°59'27" W, a distance of 359.44' to an angle point;

Thence N 00°54'15" W, a distance of 98.42' to an angle point;

Thence N 55°01'24" W, a distance of 129.35' to an angle point;

Thence N 89°50'47" W, a distance of 558.26' to an angle point;

Thence N 31°51'01" W, a distance of 417.70' to an angle point;

Thence N 89°22'25" W, a distance of 438.38' to an angle point;

Thence N 37°04'41" W, a distance of 44.76' to an angle point;

Thence N 02°00'17" W, a distance of 192.90' to an angle point;

Thence N 55°13'25" W, a distance of 42.13' to an angle point;

Thence N 89°58'36" W, a distance of 88.83' to the **Point of Ending** having coordinates of Northing=437043.05 feet, Easting=783914.03 feet, from said point a 2" iron pipe w/BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 33°17'48" W a distance of 1411.45', covering **2370.17' or 143.65 rods** and having an area of **1.632 acres**.

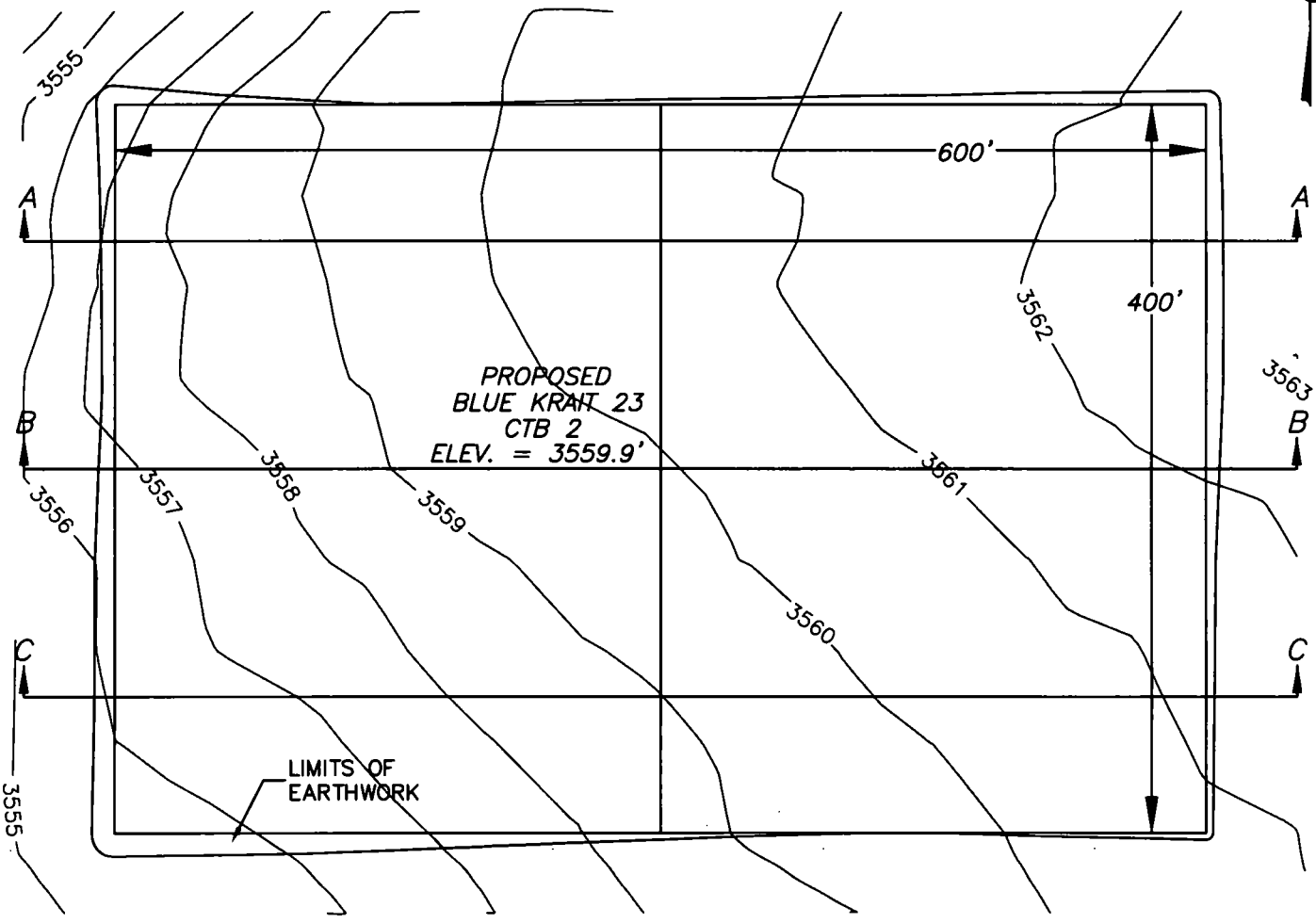
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 11/27/2018
Horizon Row, LLC
924 Richardson Dr., Jasper, TX
(903) 388-3045 75951
Employee of Horizon Row, LLC

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# PLAN VIEW




0 100 200

SHEET 5 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 CTB 2

| CUT | FILL | NET |
|---|---|---|
| 6,208 CY | 6,208 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

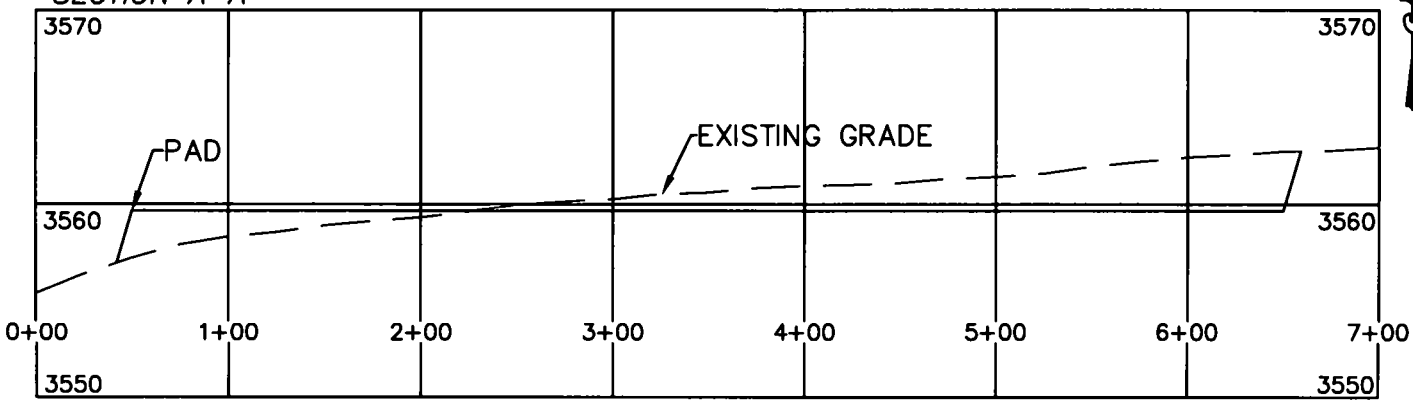
Drawn by: CHRIS MAAS

Date: 11/13/2018

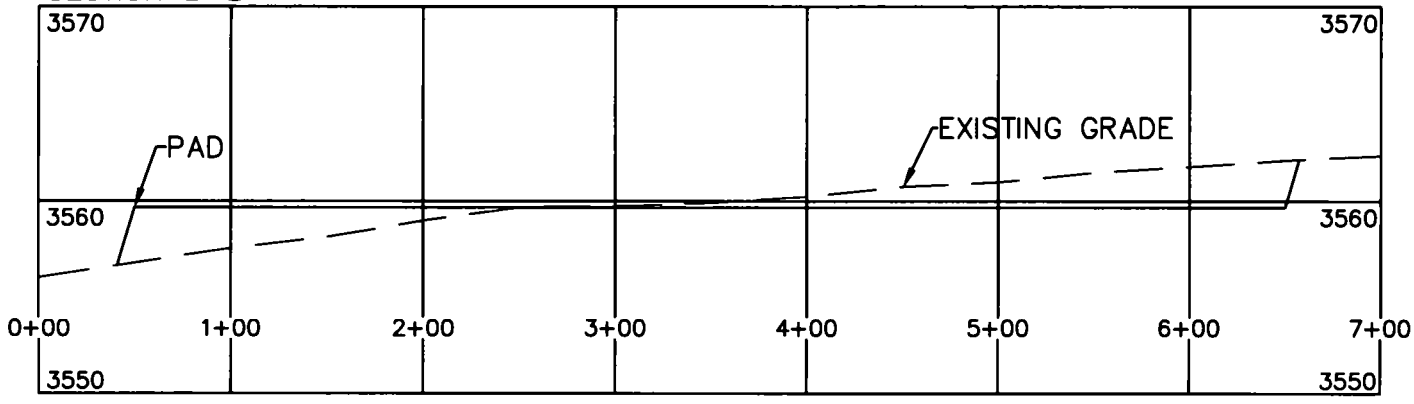
Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# CROSS SECTIONS

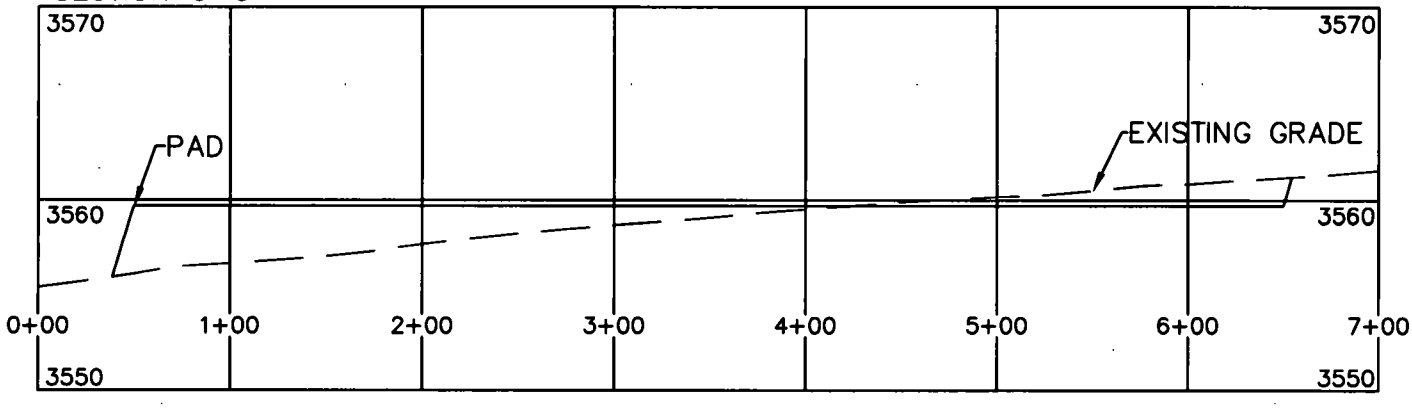
SECTION A–A




SECTION B–B




SECTION C–C




SCALE 1" = 100' HORIZONTAL
SCALE 1" = 10' VERTICAL

SHEET 6 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 CTB 2

| CUT | FILL | NET |
|---|---|---|
| 6,208 CY | 6,208 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

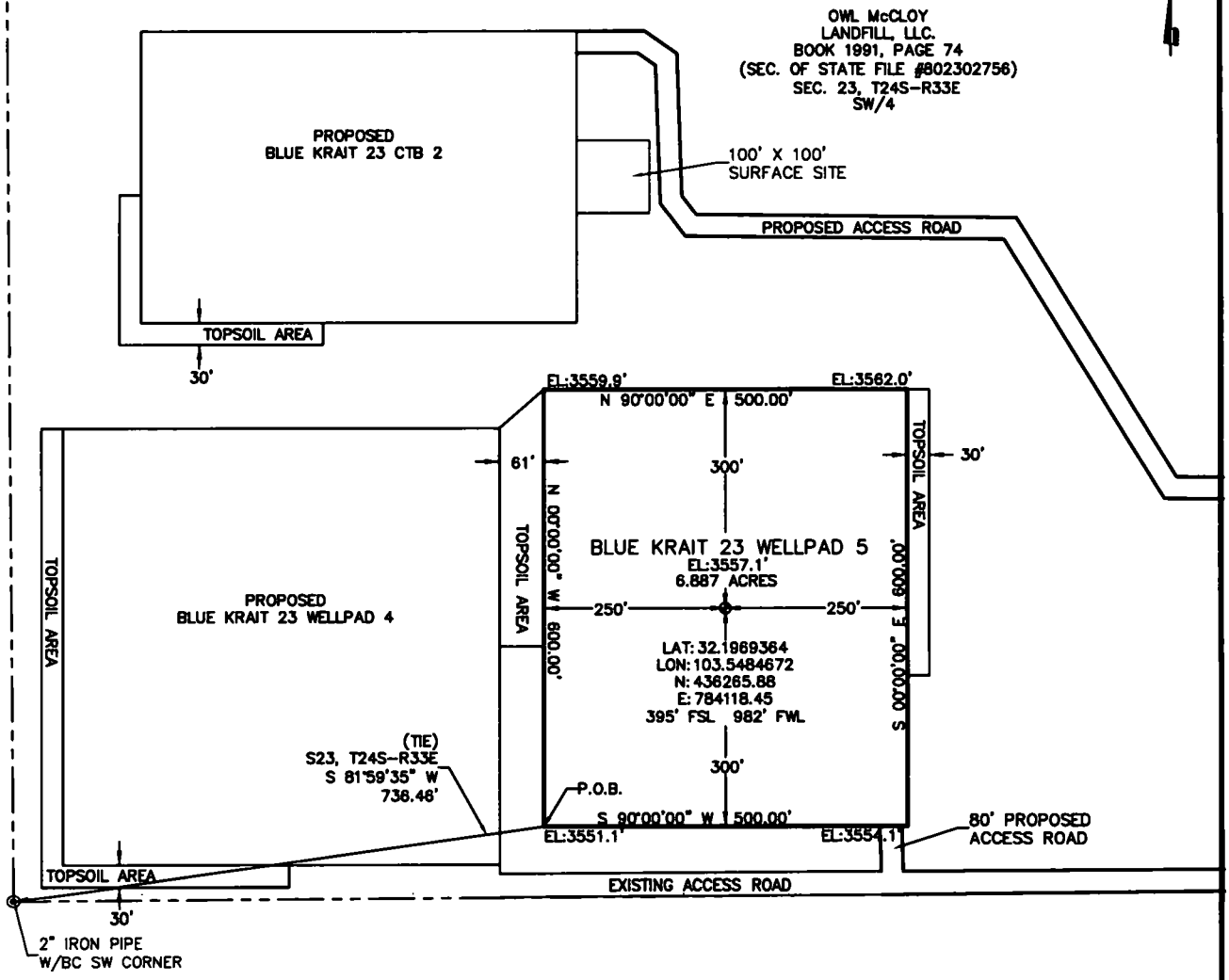
Date: 11/13/2018

Drawn for:

devon

# BLUE KRAIT 23 WELLPAD 5

## DEVON ENERGY PRODUCTION COMPANY, L.P.
## IN THE SOUTHWEST QUARTER (SW/4)
## SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
## LEA COUNTY, NEW MEXICO
## SHEET 1 OF 6




## DESCRIPTION

BEING A SURFACE SITE EASEMENT LYING IN THE SOUTHWEST QUARTER (SW/4) OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHWEST CORNER OF SAID SITE EASEMENT, WHERE A 2" IRON PIPE W/BC FOR THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M. BEARS S 81°59'35" W, A DISTANCE 736.46';

THENCE N 00°00'00" W, A DISTANCE 600.00 FEET TO THE NORTHWEST CORNER OF THIS EASEMENT;
THENCE N 90°00'00" E, A DISTANCE 500.00 FEET TO THE NORTHEAST CORNER OF THIS EASEMENT;
THENCE S 00°00'00" E, A DISTANCE 600.00 FEET TO THE SOUTHEAST CORNER OF THIS EASEMENT;
THENCE S 90°00'00" W, A DISTANCE 500.00 FEET TO THE SOUTHWEST CORNER OF THIS EASEMENT,
TO THE POINT OF BEGINNING; CONTAINING 6.887 ACRES.

GENERAL NOTES:

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A WELLPAD.
2.) All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404
Hartzonrow, LLC
Date Signed: 11-28-2018
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Hartzonrow, LLC

B. L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

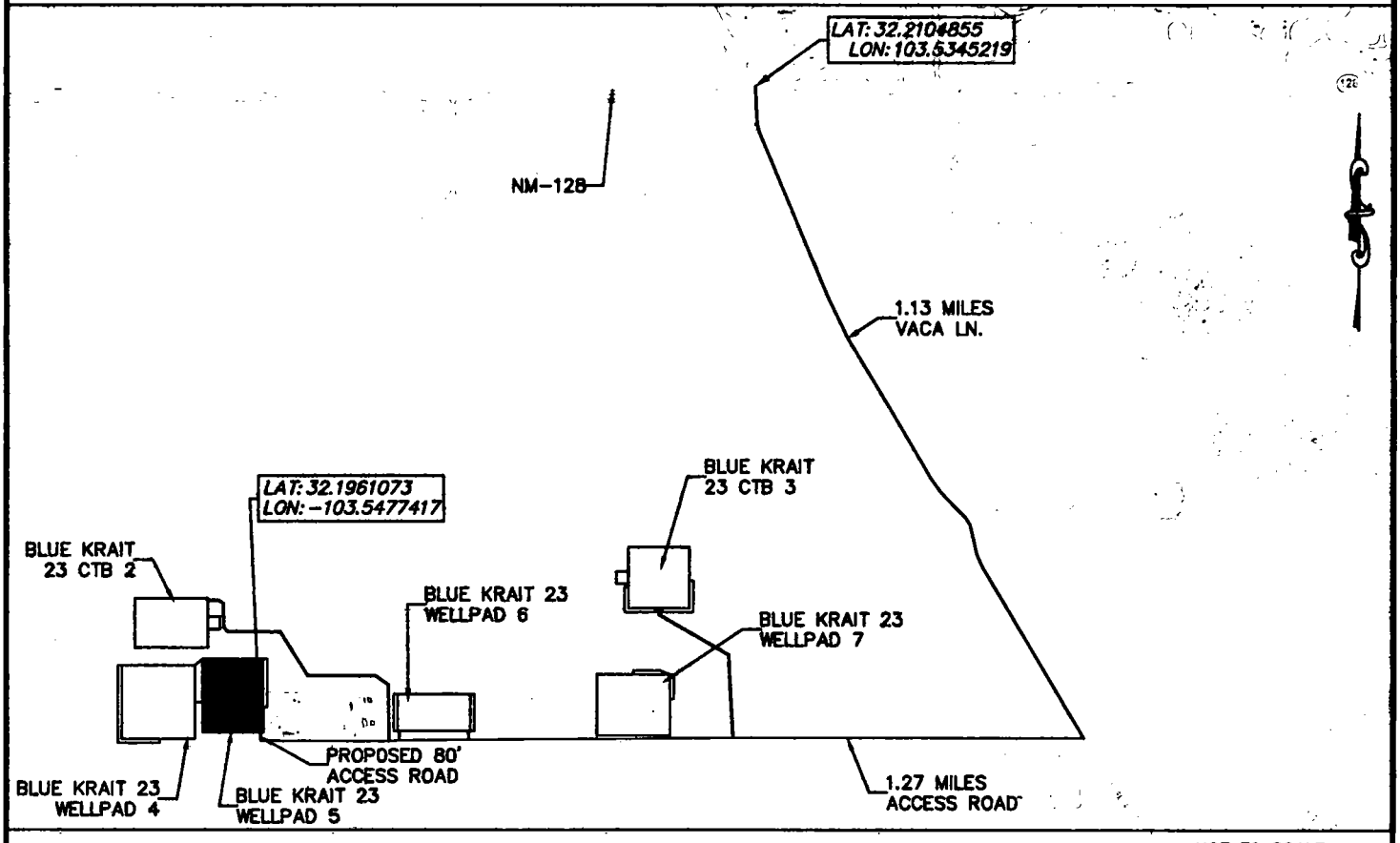
*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.

0 250 500

| | | | |
|---|---|---|---|
| *HORIZON ROW LLC* | DEVON ENERGY PRODUCTION COMPANY, L.P. | SITE NUMBER: AA000214615 | |
| Drawn for: devon | BLUE KRAIT 23 WELLPAD 5 | WBS NUMBER: XX-129903.01.SLC | |
| | SURVEY PLAT SHOWING A WELLPAD ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC. | SCALE: 1" = 250' | |
| | | REVISIONS: | |
| Drawn by: CHRIS MAAS | Date: 11/15/2018 | DATE OF SURVEY: 07/16/18 | |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP




NOT TO SCALE

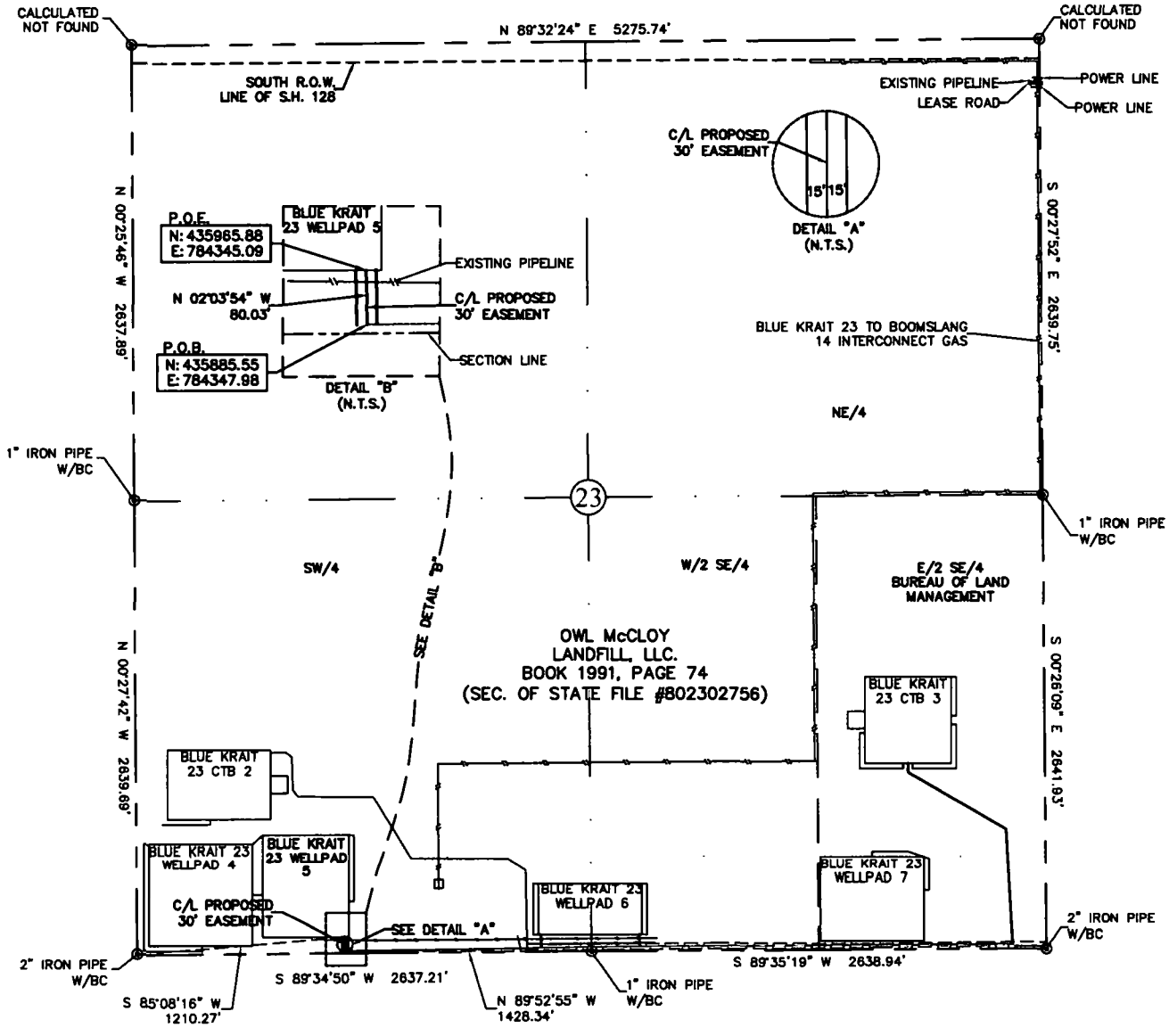
## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.



| | |
|---|---|
| HORIZON ROW LLC | Drawn for: devon |
| DEVON ENERGY PRODUCTION CO., L.P. | |
| Drawn by: CHRIS MAAS | Date: 11/15/2018 |

# EXHIBIT "A"
## ACCESS ROAD PLAT
## SECTION 23, T24S–R33E, N.M.P.M.
## LEA COUNTY, NEW MEXICO




30' EASEMENT AREA = 0.055 ACRE(S)
80.03 FEET OR 4.85 RODS

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

0+00.0 P.O.B./EXISTING ACCESS ROAD
0+62.9 EXISTING PIPELINE
0+80.3 P.O.E./BLUE KRAIT 23 WELLPAD 5

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to represent an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404
Date Signed: 11-28-2018
Hortzonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70837
Employee of Hortzonrow, LLC

0 1000 2000

| | | | |
|---|---|---|---|
| HORIZON ROW LLC | DEVON ENERGY PRODUCTION COMPANY, L.P. | | LINE NUMBER: 7810117R |
| Drawn for: devon | BLUE KRAIT 23 WELLPAD 5 ACCESS ROAD | | WBS NUMBER: XX-129903.01.SLC |
| | | | SCALE: 1" = 1000' |
| | PROPOSED 30' EASEMENT ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC SECTION 23, T24S–R33E, N.M.P.M. | | REVISIONS: |
| Drawn by: CHRIS MAAS | Date: 11/15/2018 | | DATE OF SURVEY: 8/20/18 |

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 Secretary of State file #802302756of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 89°52'55" W, a distance of 1428.34' to the **Point of Beginning** of this easement having coordinates of Northing= 435885.55 feet, Easting=784347.98 feet and continuing the following course;

Thence N 02°03'54" W, a distance of 80.03' to the **Point of Ending** having coordinates of Northing=435965.88 feet, Easting=784345.09 feet, from said point a 2" iron pipe w/BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 85°08'16" W a distance of 1210.27', covering **80.03' or 4.85 rods** and having an area of **0.055 acres**.

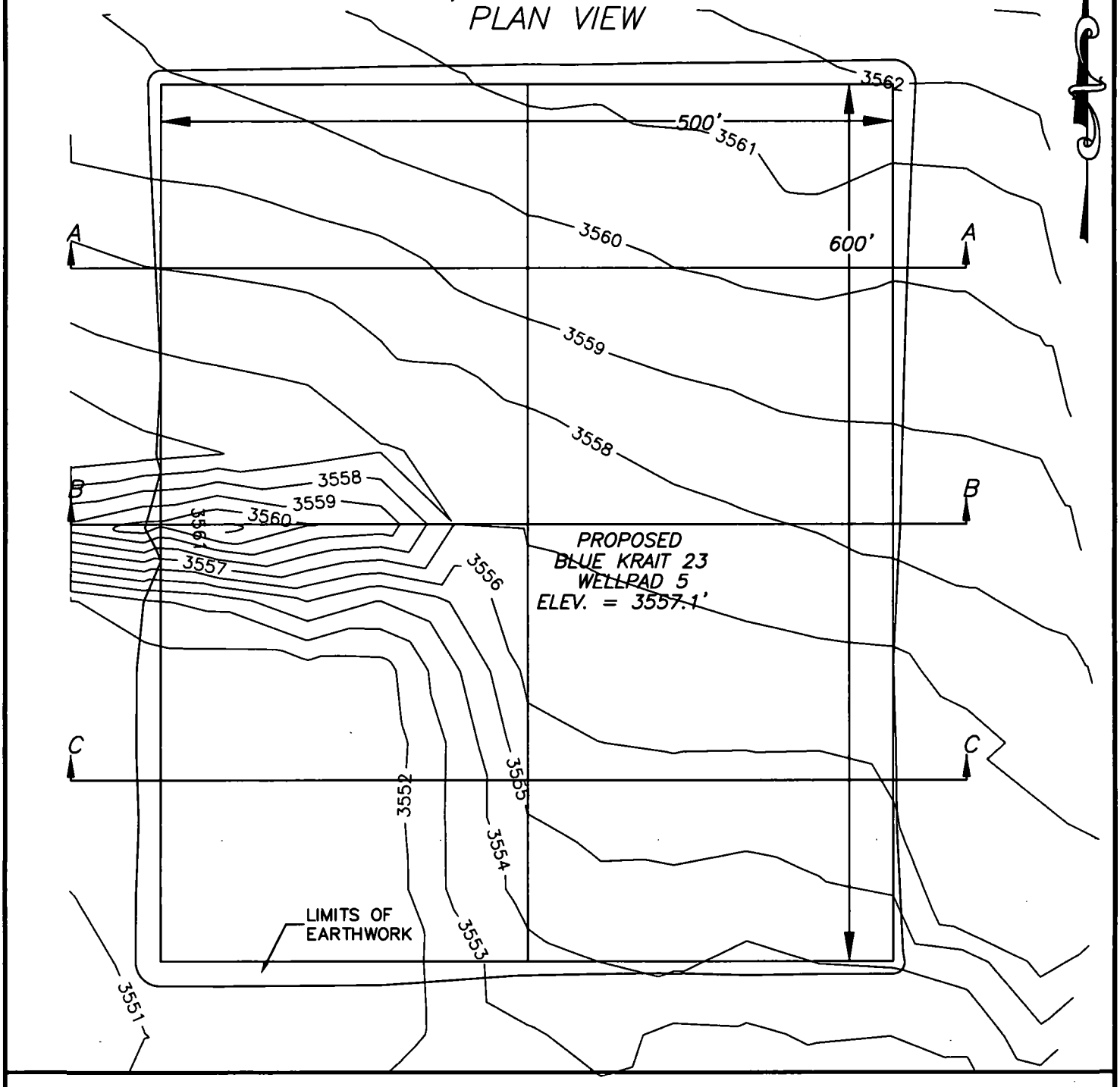
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 11/28/2018
Horizon Row, LLC
924 Richardson Dr., Jasper, TX
(903) 388-3045 75951
Employee of Horizon Row, LLC

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
## PLAN VIEW




0 100 200

SHEET 5 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

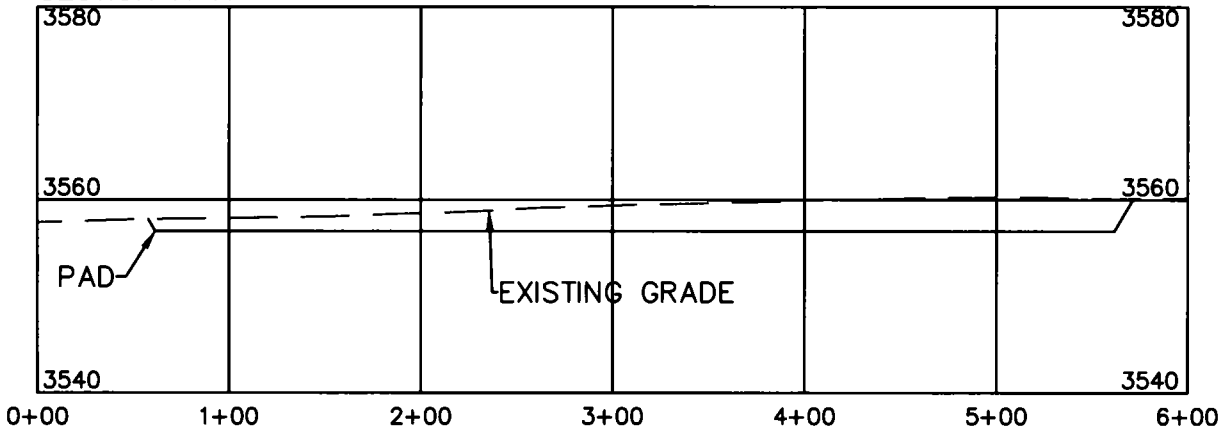
Drawn by: CHRIS MAAS

Date: 11/15/2018

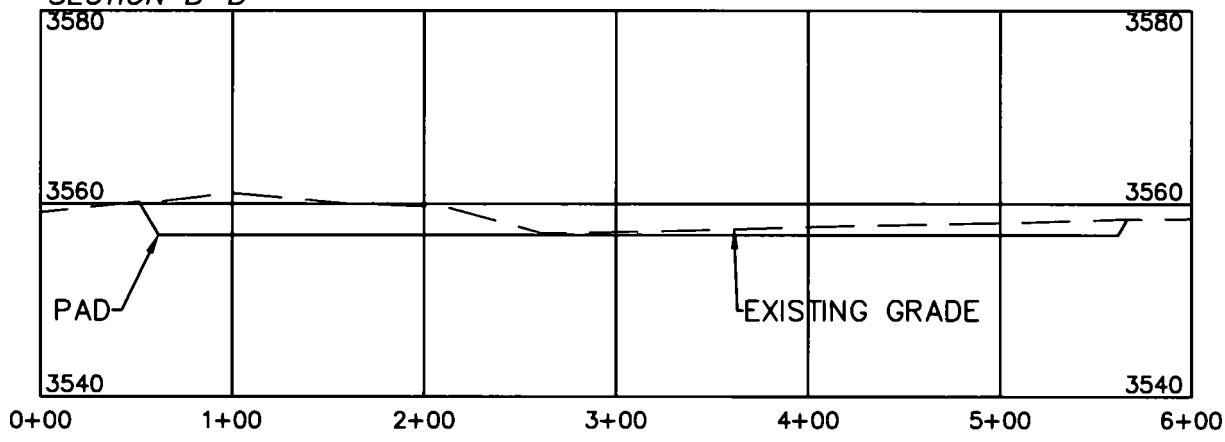
Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# CROSS SECTIONS

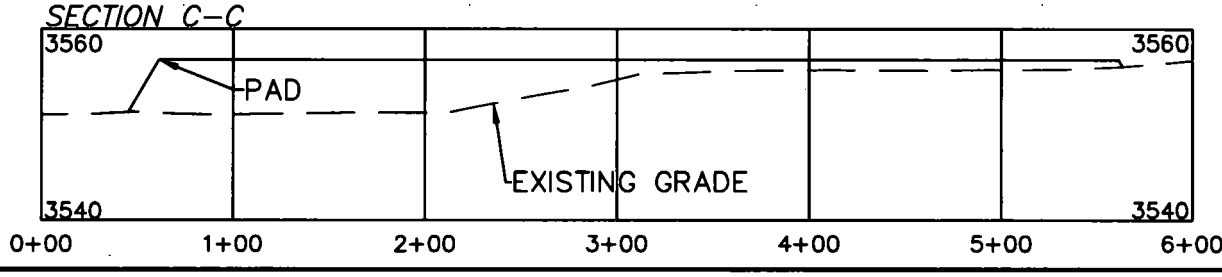
SECTION A–A




SECTION B–B




SECTION C–C




SCALE 1" = 100' HORIZONTAL
SCALE 1" = 20' VERTICAL

SHEET 6 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 11/15/2018

Drawn for:

devon

See attached Wellpad & CTB plat packet for new road plats

See attached Wellpad & CTB plat packet for new road plats

PLAT

One Mile Radius Map

# BLUE KRAIT 23-14 FED 31H
# WA017315320

devon

This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Devon makes no warranty,representation, or guarantee of any kind regarding this map.

USA Contiguous Equidistant Conic
Datum: North American 1983
Created by: FME Server
Map is current as of 1/21/2019

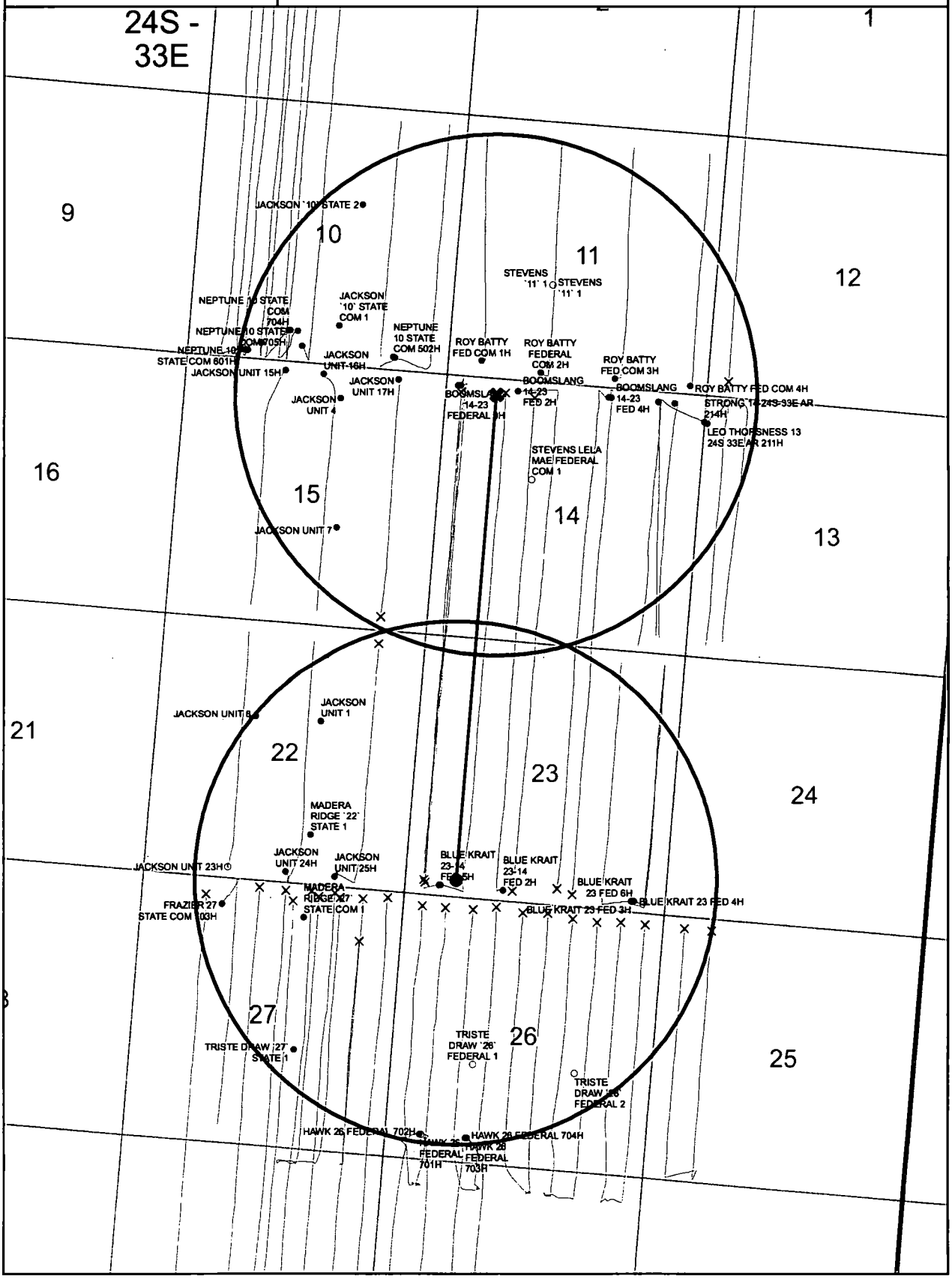
N

Miles
0 0.3
1 inch = 0.44 miles

**BLUE KRAIT 23-14 FED 5H**
**Nearest wellbore to SHL:** 120 ft.

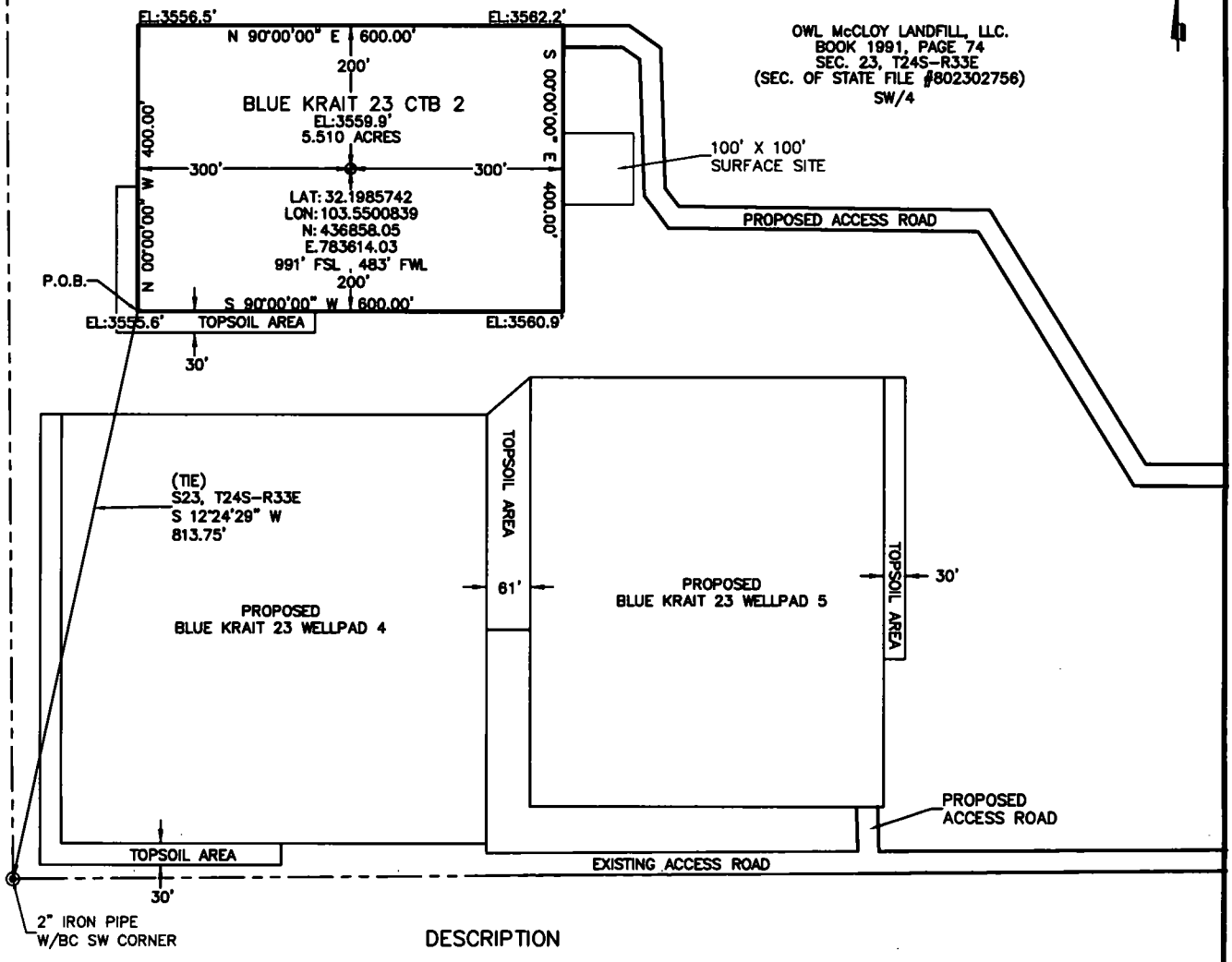
**BLUE KRAIT 23-14 FED 5H**
**Nearest wellbore to BHL:** 182 ft.

- ○ Unknown SHL
- • Active SHL
- ○ Inactive SHL
- × BHL



# BLUE KRAIT 23 CTB 2

## DEVON ENERGY PRODUCTION COMPANY, L.P.
## IN THE SOUTHWEST QUARTER (SW/4)
## SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
## LEA COUNTY, NEW MEXICO
## SHEET 1 OF 6




## DESCRIPTION

BEING A SURFACE SITE EASEMENT LYING IN THE SOUTHWEST QUARTER (SW/4) OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHWEST CORNER OF SAID SITE EASEMENT, WHERE A 2" IRON PIPE W/BC FOR THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M. BEARS S 12°24'29" W, A DISTANCE 813.75';

THENCE N 00°00'00" W, A DISTANCE 400.00 FEET TO THE NORTHWEST CORNER OF THIS EASEMENT;
THENCE N 90°00'00" E, A DISTANCE 600.00 FEET TO THE NORTHEAST CORNER OF THIS EASEMENT;
THENCE S 00°00'00" E, A DISTANCE 400.00 FEET TO THE SOUTHEAST CORNER OF THIS EASEMENT;
THENCE S 90°00'00" W, A DISTANCE 600.00 FEET TO THE SOUTHWEST CORNER OF THIS EASEMENT,
TO THE POINT OF BEGINNING; CONTAINING 5.510 ACRES.

GENERAL NOTES:

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A CENTRAL TANK BATTERY.
2.) All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404
Horizonrow, LLC
Date Signed: 11-27-2018
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizonrow, LLC

B. L. LAMAN NEW MEXICO 22404 PROFESSIONAL SURVEYOR

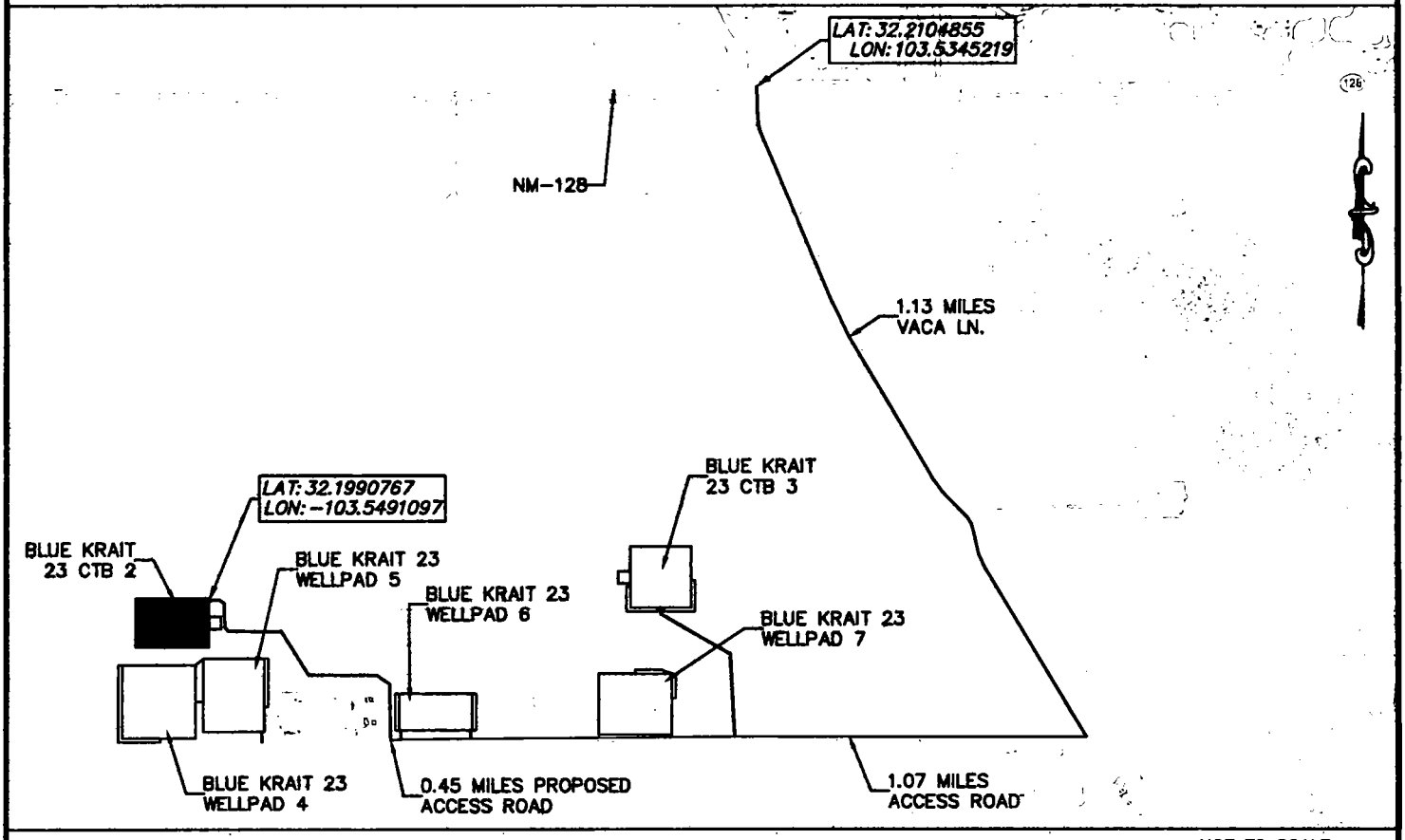
*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.07 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH AND WEST FOR 0.45 MILES TO THE NORTHEAST CORNER OF THE BLUE KRAIT 23 CTB 2.

0 250 500

| | | |
|---|---|---|
| HORIZON ROW LLC | DEVON ENERGY PRODUCTION COMPANY, L.P. | SITE NUMBER: AA0000570052 |
| Drawn for: devon | BLUE KRAIT 23 CTB 2 | WBS NUMBER: XX-129903.01.SLC |
| | SURVEY PLAT SHOWING A CTB ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC. | SCALE: 1" = 250' |
| | | REVISIONS: |
| Drawn by: CHRIS MAAS | Date: 11/13/2018 | DATE OF SURVEY: 07/16/18 |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP




NOT TO SCALE

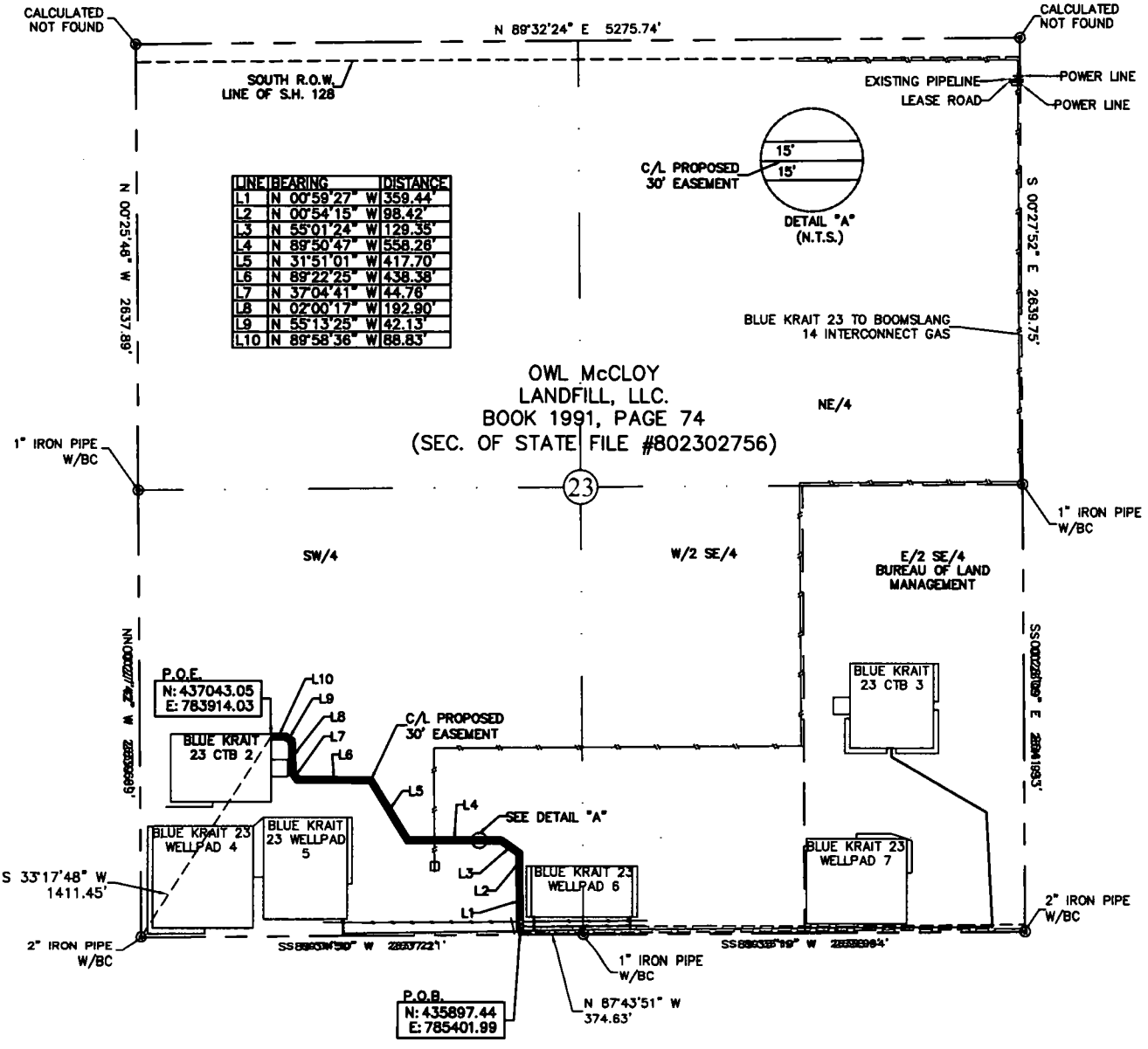
## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.07 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH AND WEST FOR 0.45 MILES TO THE NORTHEAST CORNER OF THE BLUE KRAIT 23 CTB 2.



| | | |
|---|---|---|
| HORIZON ROW LLC | | Drawn for: devon |
| DEVON ENERGY PRODUCTION CO., L.P. | | |
| Drawn by: CHRIS MAAS | Date: 11/13/2018 | |

# EXHIBIT "A"
## ACCESS ROAD PLAT
## SECTION 23, T24S–R33E, N.M.P.M.
## LEA COUNTY, NEW MEXICO




| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N 00°59'27" W | 359.44' |
| L2 | N 00°54'15" W | 98.42' |
| L3 | N 55°01'24" W | 129.35' |
| L4 | N 89°50'47" W | 556.26' |
| L5 | N 31°51'01" W | 417.70' |
| L6 | N 89°22'25" W | 438.38' |
| L7 | N 37°04'41" W | 44.76' |
| L8 | N 02°00'17" W | 192.90' |
| L9 | N 55°13'25" W | 42.13' |
| L10 | N 89°58'36" W | 88.83' |

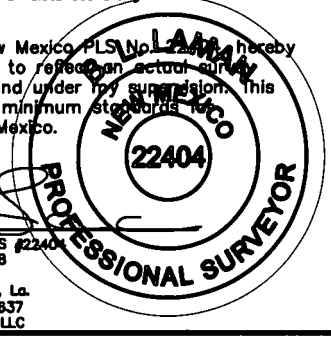
30' EASEMENT AREA = 1.632 ACRE(S)
2370.17 FEET OR 143.65 RODS

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

0+00.0 P.O.B./EXISTING ACCESS ROAD
0+29.5 EXISTING PIPELINE
0+56.1 EXISTING PIPELINE
9+88.4 BLUE KRAIT 23 TO BOOMSLANG 14 INTERCONNECT GAS
23+70.2 P.O.E./BLUE KRAIT 23 CTB 2

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.




B.L. Laman PLS #22404
Date Signed: 11-27-2018
Hortzonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Hortzonrow, LLC

0 1000 2000

| | | |
|---|---|---|
| HORIZON ROW LLC | DEVON ENERGY PRODUCTION COMPANY, L.P. | LINE NUMBER: 7610114R |
| Drawn for: devon | BLUE KRAIT 23 CTB 2 ACCESS ROAD | WBS NUMBER: XX-129903.01.SLC |
| | | SCALE: 1" = 1000' |
| Drawn by: CHRIS MAAS | Date: 11/13/2018 | REVISIONS: |
| | PROPOSED 30' EASEMENT ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC SECTION 23, T24S–R33E, N.M.P.M. | DATE OF SURVEY: 8/20/18 |

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 87°43'51" W, a distance of 374.63' to the **Point of Beginning** of this easement having coordinates of Northing=435897.44 feet, Easting=785401.99 feet and continuing the following courses;

Thence N 00°59'27" W, a distance of 359.44' to an angle point;

Thence N 00°54'15" W, a distance of 98.42' to an angle point;

Thence N 55°01'24" W, a distance of 129.35' to an angle point;

Thence N 89°50'47" W, a distance of 558.26' to an angle point;

Thence N 31°51'01" W, a distance of 417.70' to an angle point;

Thence N 89°22'25" W, a distance of 438.38' to an angle point;

Thence N 37°04'41" W, a distance of 44.76' to an angle point;

Thence N 02°00'17" W, a distance of 192.90' to an angle point;

Thence N 55°13'25" W, a distance of 42.13' to an angle point;

Thence N 89°58'36" W, a distance of 88.83' to the **Point of Ending** having coordinates of Northing=437043.05 feet, Easting=783914.03 feet, from said point a 2" iron pipe w/BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 33°17'48" W a distance of 1411.45', covering **2370.17' or 143.65 rods** and having an area of **1.632 acres**.

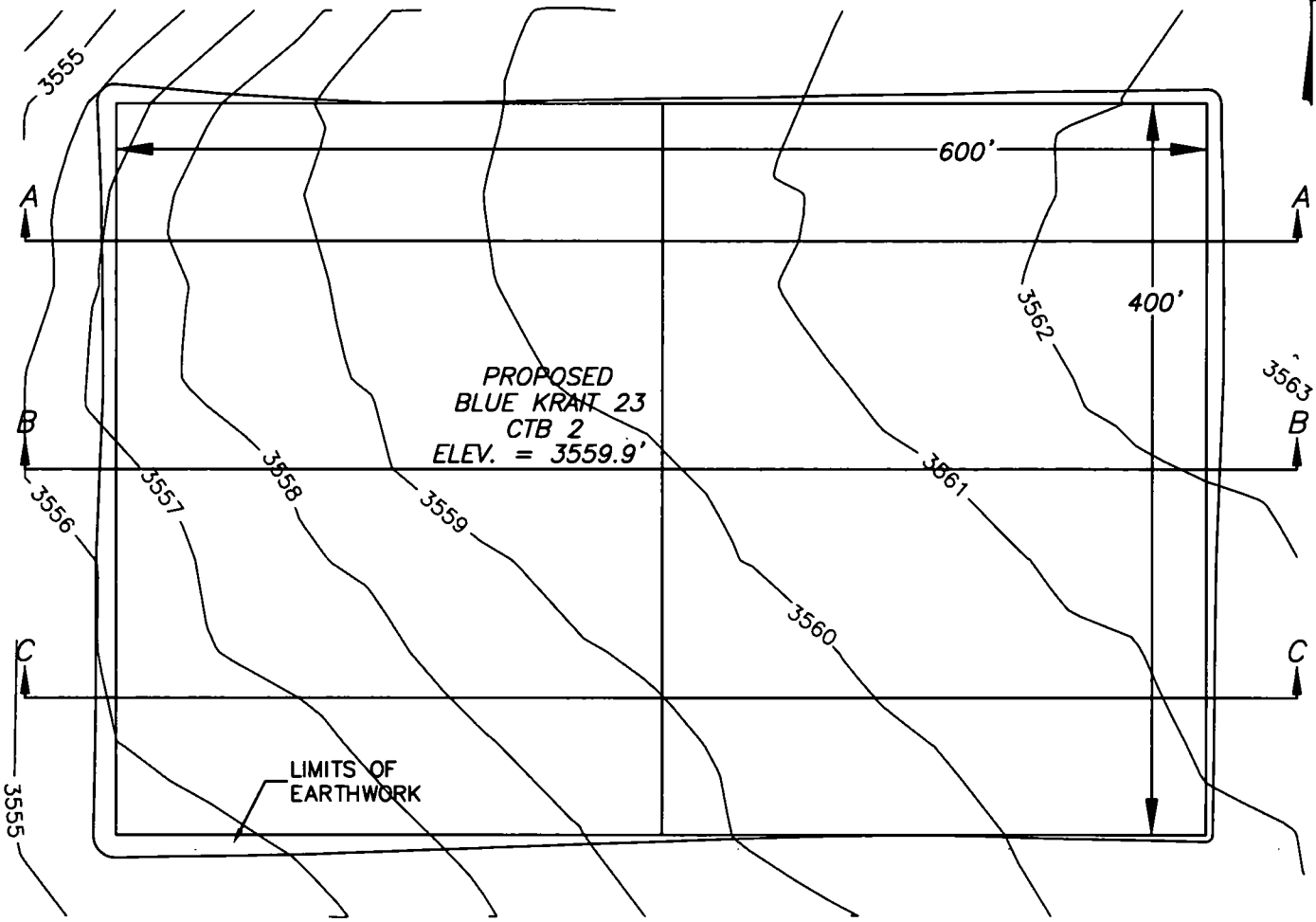
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 11/27/2018
Horizon Row, LLC
924 Richardson Dr., Jasper, TX
(903) 388-3045 75951
Employee of Horizon Row, LLC

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# PLAN VIEW




0 100 200

SHEET 5 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 CTB 2

| CUT | FILL | NET |
|---|---|---|
| 6,208 CY | 6,208 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

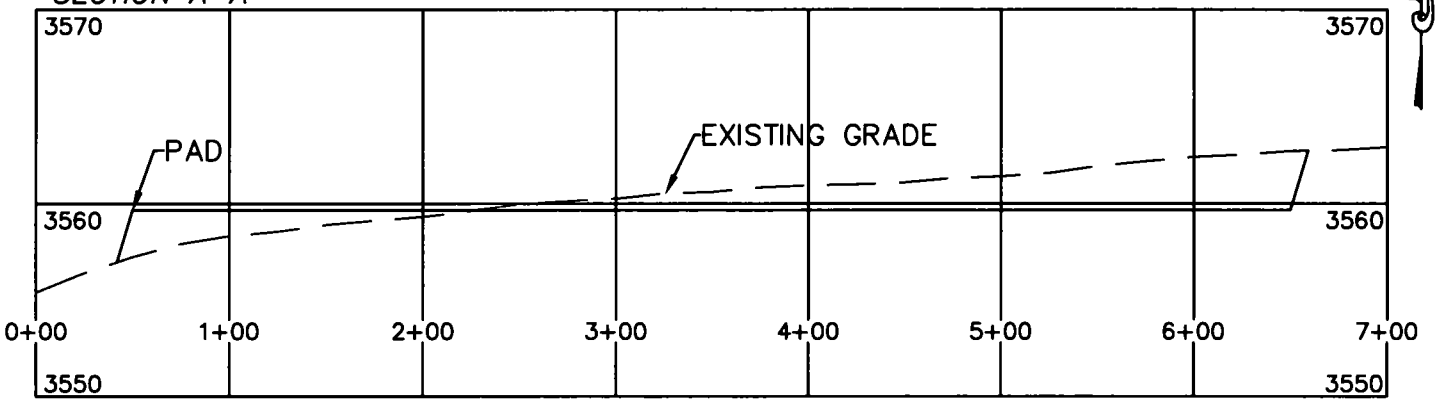
Drawn by: CHRIS MAAS

Date: 11/13/2018

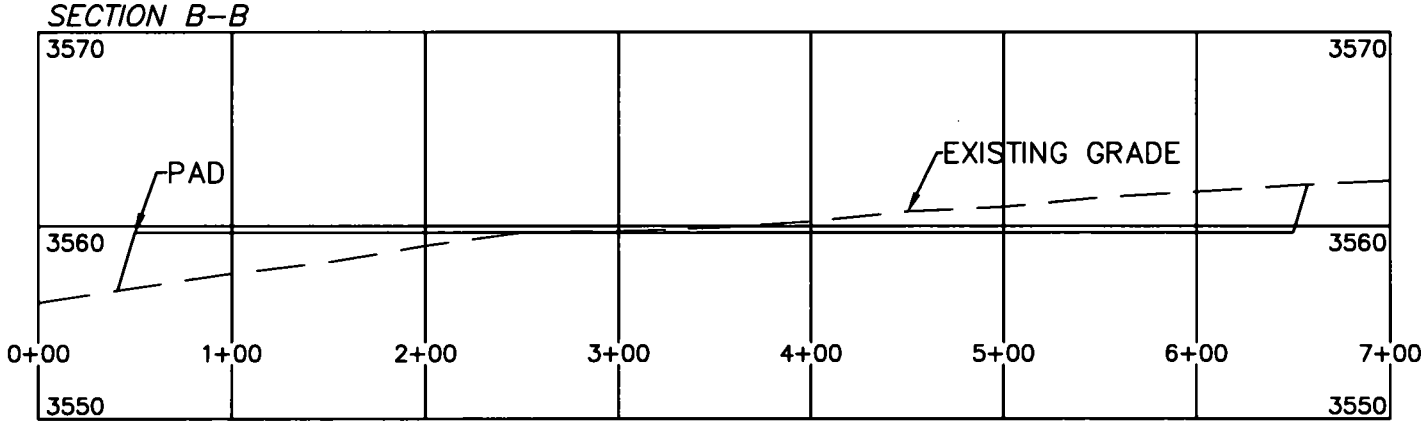
Drawn for: devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# CROSS SECTIONS

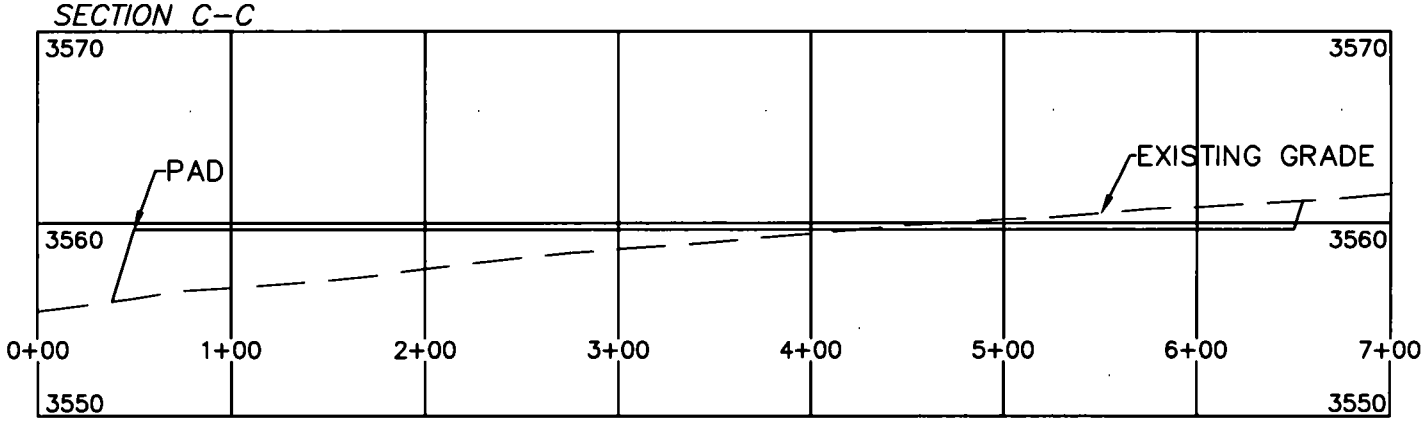
SECTION A–A




SECTION B–B




SECTION C–C




SCALE 1" = 100' HORIZONTAL
SCALE 1" = 10' VERTICAL

SHEET 6 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 CTB 2

| CUT | FILL | NET |
|---|---|---|
| 6,208 CY | 6,208 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

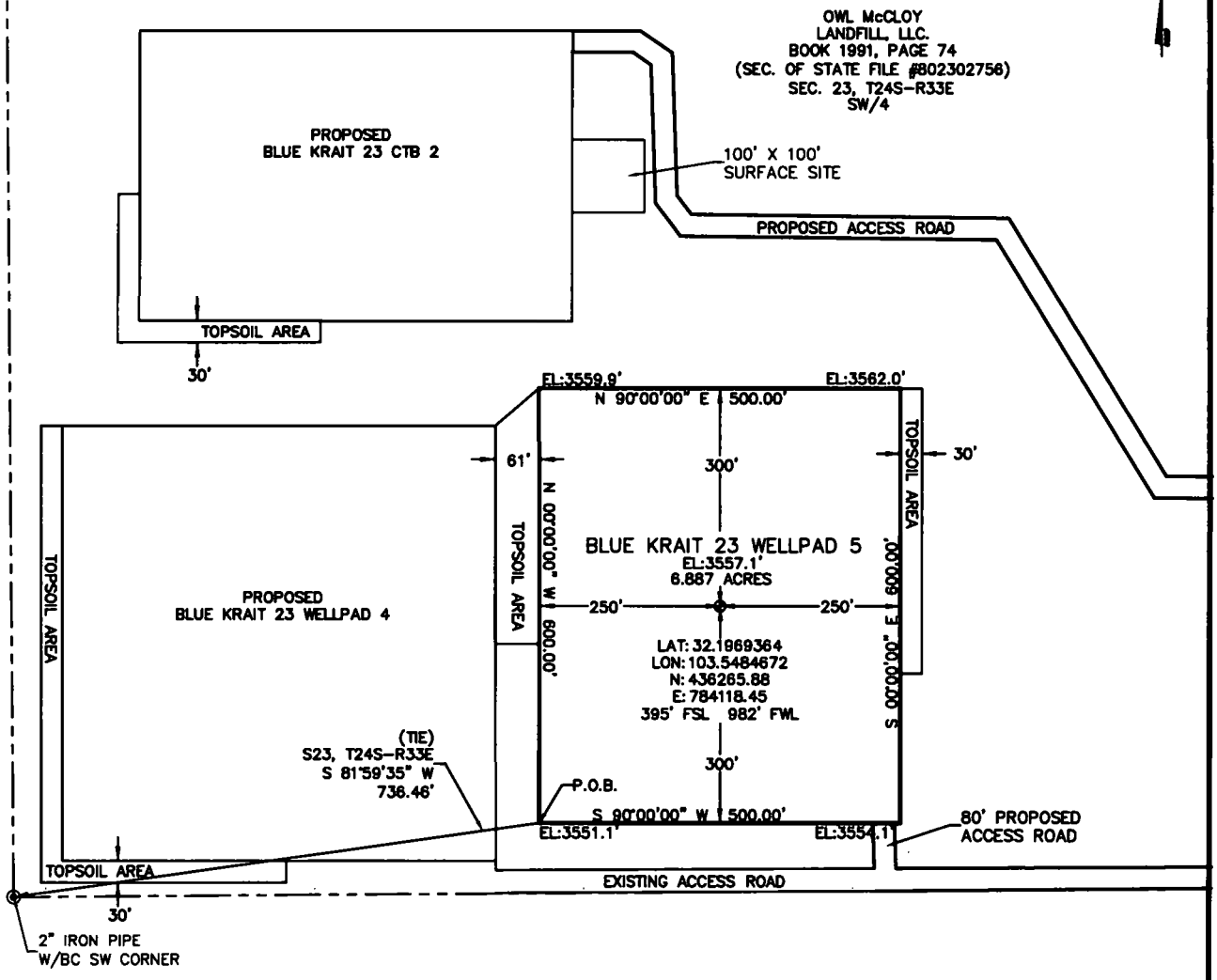
Date: 11/13/2018

Drawn for:

devon

# BLUE KRAIT 23 WELLPAD 5

## DEVON ENERGY PRODUCTION COMPANY, L.P.
## IN THE SOUTHWEST QUARTER (SW/4)
## SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
## LEA COUNTY, NEW MEXICO
## SHEET 1 OF 6




## DESCRIPTION

BEING A SURFACE SITE EASEMENT LYING IN THE SOUTHWEST QUARTER (SW/4) OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHWEST CORNER OF SAID SITE EASEMENT, WHERE A 2" IRON PIPE W/BC FOR THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST N.M.P.M. BEARS S 81°59'35" W, A DISTANCE 736.46';

THENCE N 00°00'00" W, A DISTANCE 600.00 FEET TO THE NORTHWEST CORNER OF THIS EASEMENT;
THENCE N 90°00'00" E, A DISTANCE 500.00 FEET TO THE NORTHEAST CORNER OF THIS EASEMENT;
THENCE S 00°00'00" E, A DISTANCE 600.00 FEET TO THE SOUTHEAST CORNER OF THIS EASEMENT;
THENCE S 90°00'00" W, A DISTANCE 500.00 FEET TO THE SOUTHWEST CORNER OF THIS EASEMENT,
TO THE POINT OF BEGINNING; CONTAINING 6.887 ACRES.

GENERAL NOTES:

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A WELLPAD.
2.) All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS #22404
Horizonrow, LLC
Date Signed: 11-28-2018
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizonrow, LLC

B. L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

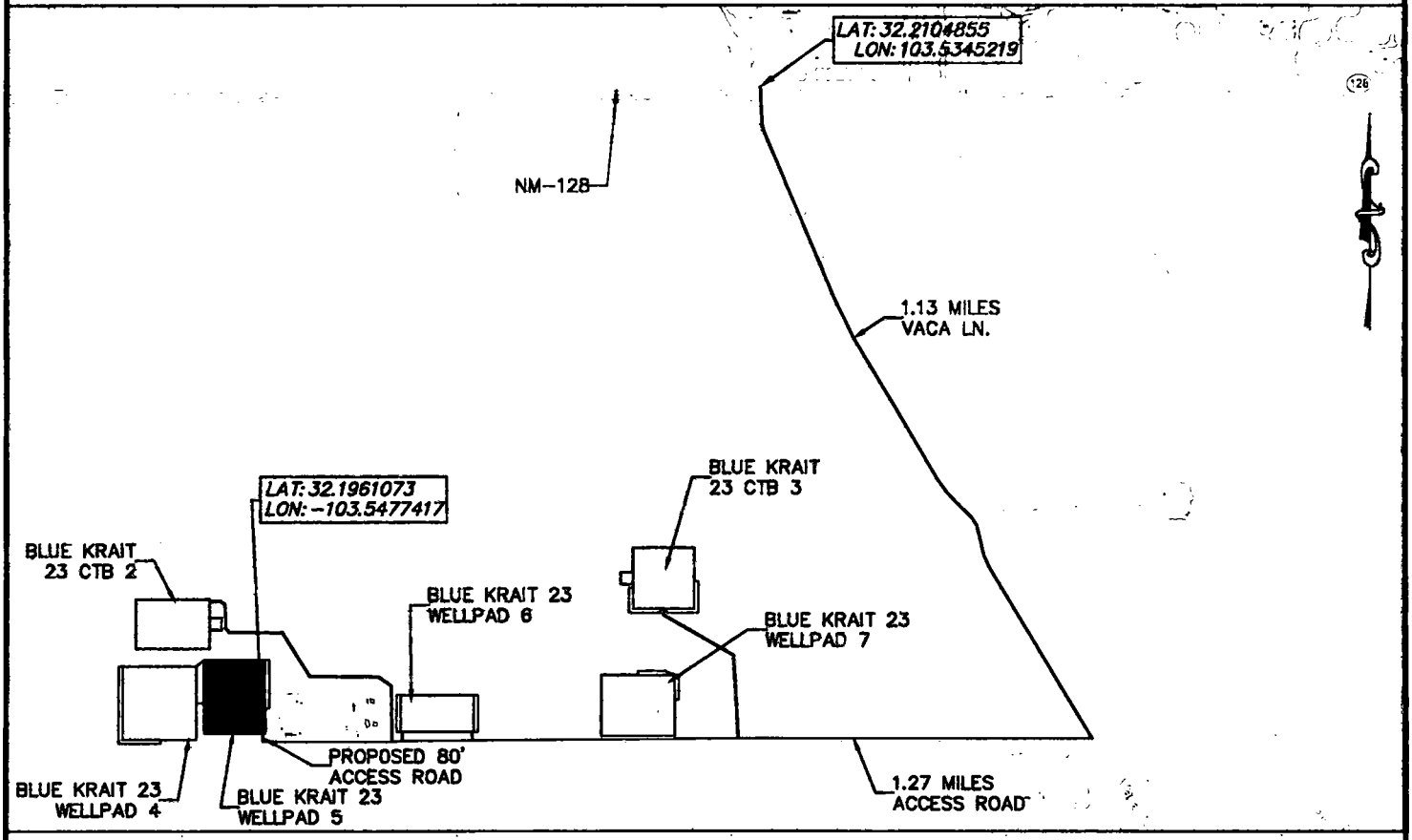
*DIRECTIONS TO LOCATION*

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.

0 250 500

| | | |
|---|---|---|
| HORIZON ROW LLC<br>Drawn for: devon | DEVON ENERGY PRODUCTION COMPANY, L.P.<br>BLUE KRAIT 23 WELLPAD 5 | SITE NUMBER: AA000214615 |
| | | WBS NUMBER: XX-129903.01.SLC |
| | SURVEY PLAT SHOWING A WELLPAD ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC. | SCALE: 1" = 250' |
| | | REVISIONS: |
| Drawn by: CHRIS MAAS<br>Date: 11/15/2018 | | DATE OF SURVEY: 07/16/18 |

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# AERIAL ACCESS ROUTE MAP




NOT TO SCALE

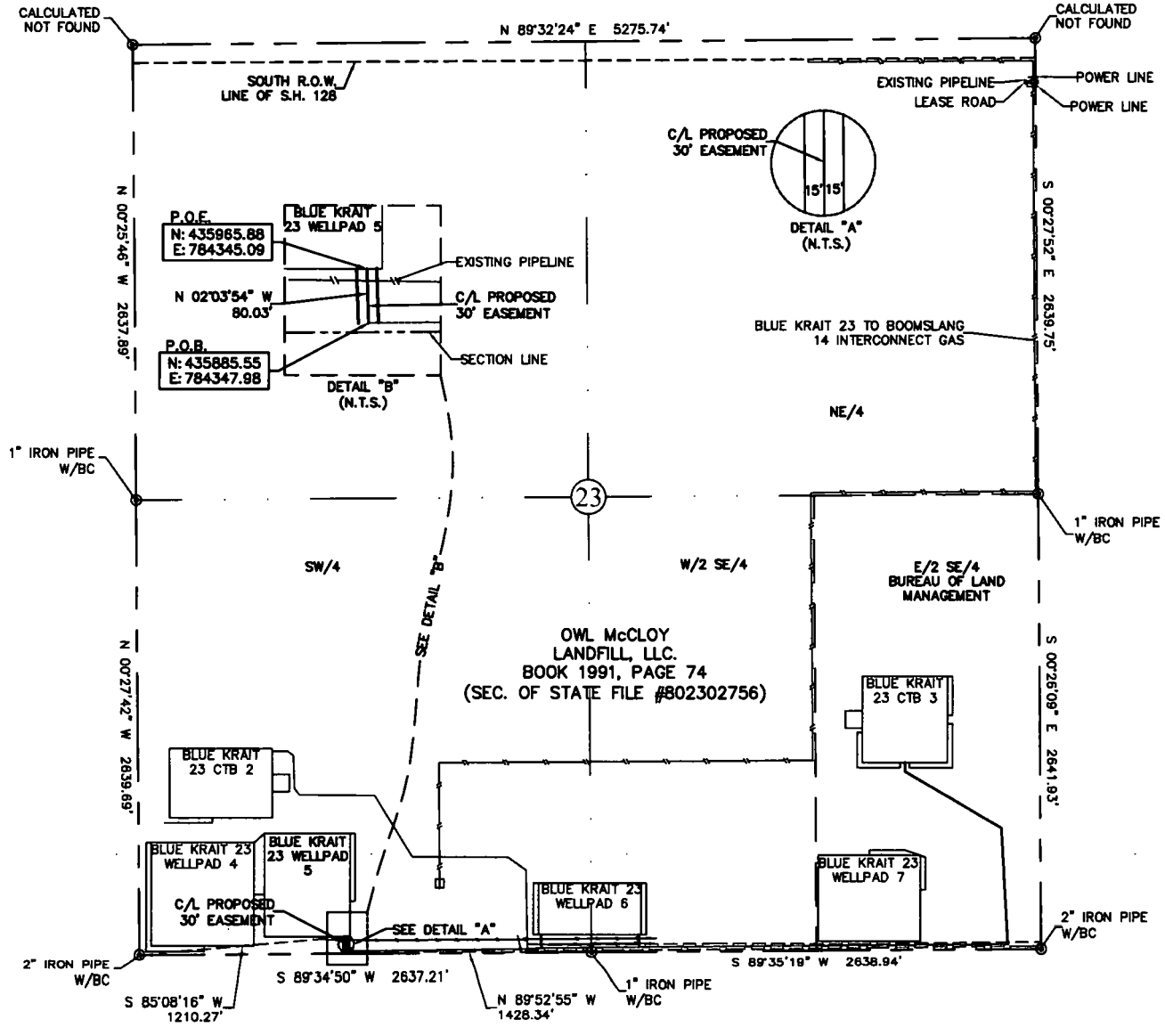
## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM-128 AND VACA LN, HEAD SOUTH ON VACA LN FOR 1.13 MILES. TURN RIGHT AND HEAD WEST ON AN EXISTING ACCESS ROAD FOR 1.27 MILES TO THE POINT OF BEGINNING OF A PROPOSED ACCESS ROAD. TURN RIGHT AND HEAD NORTH FOR 80' TO THE SOUTHEAST CORNER OF THE BLUE KRAIT 23 WELLPAD 5.



| | | |
|---|---|---|
| HORIZON ROW LLC | | Drawn for: |
| DEVON ENERGY PRODUCTION CO., L.P. | | devon |
| Drawn by: CHRIS MAAS | Date: 11/15/2018 | |

# EXHIBIT "A"
## ACCESS ROAD PLAT
## SECTION 23, T24S–R33E, N.M.P.M.
## LEA COUNTY, NEW MEXICO




30' EASEMENT AREA = 0.055 ACRE(S)
80.03 FEET OR 4.85 RODS

0+00.0 P.O.B./EXISTING ACCESS ROAD
0+62.9 EXISTING PIPELINE
0+80.3 P.O.E./BLUE KRAIT 23 WELLPAD 5

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Date Signed: 11-28-2018
Horizonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizonrow, LLC

0 1000 2000

HORIZON ROW LLC

Drawn for: devon

Drawn by: CHRIS MAAS

Date: 11/15/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.

BLUE KRAIT 23 WELLPAD 5
ACCESS ROAD

PROPOSED 30' EASEMENT
ON THE PROPERTY OF
OWL MCCLOY LANDFILL, LLC
SECTION 23, T24S–R33E, N.M.P.M.

LINE NUMBER: 7610117R
WBS NUMBER: XX-129903.01.SLC
SCALE: 1" = 1000'
REVISIONS:
DATE OF SURVEY: 8/20/18

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ACCESS ROAD PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 Secretary of State file #802302756of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 89°52'55" W, a distance of 1428.34' to the **Point of Beginning** of this easement having coordinates of Northing= 435885.55 feet, Easting=784347.98 feet and continuing the following course;

Thence N 02°03'54" W, a distance of 80.03' to the **Point of Ending** having coordinates of Northing=435965.88 feet, Easting=784345.09 feet, from said point a 2" iron pipe w/BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 85°08'16" W a distance of 1210.27', covering **80.03' or 4.85 rods** and having an area of **0.055 acres**.

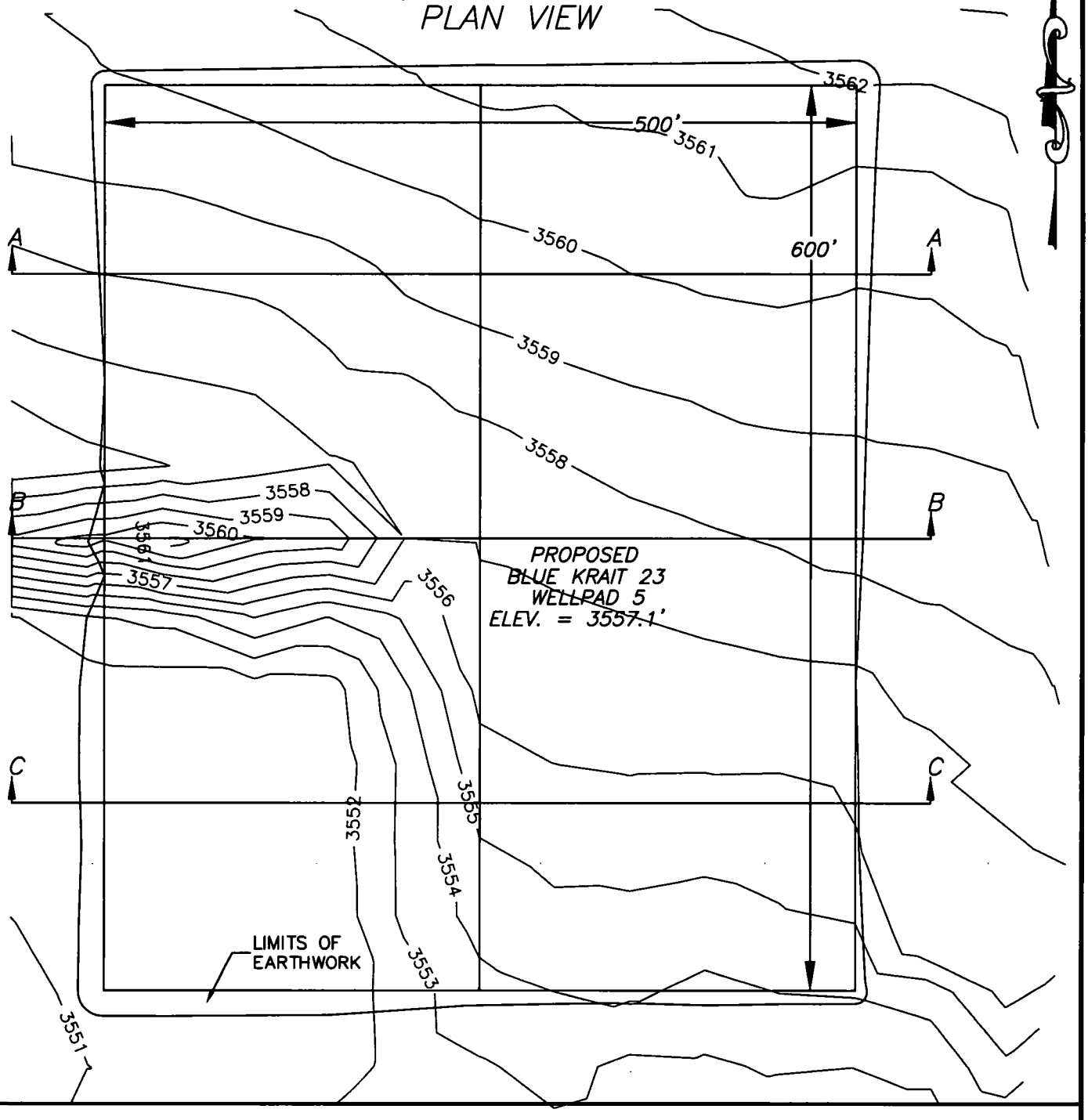
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 11/28/2018
Horizon Row, LLC
924 Richardson Dr., Jasper, TX
(903) 388-3045 75951
Employee of Horizon Row, LLC

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
## PLAN VIEW




0 100 200

SHEET 5 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

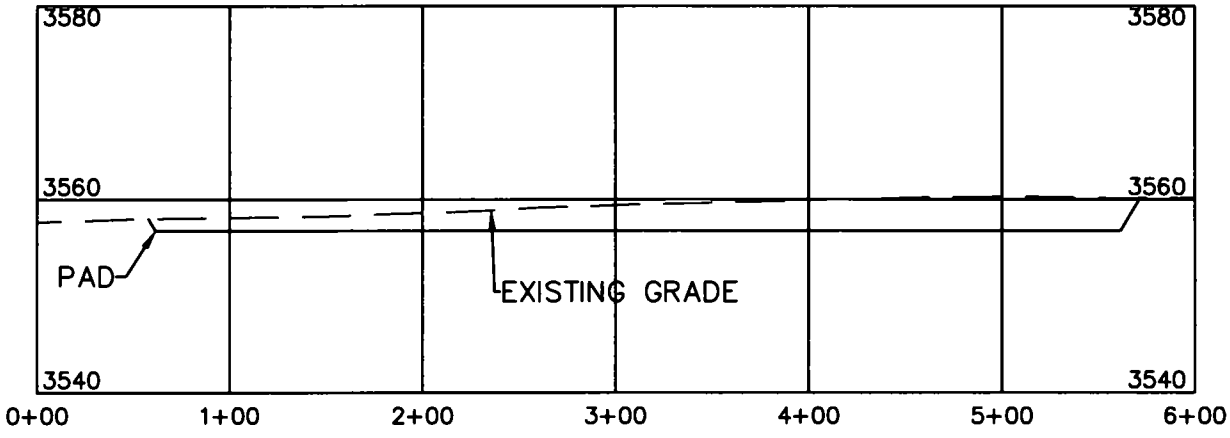
Date: 11/15/2018

Drawn for:

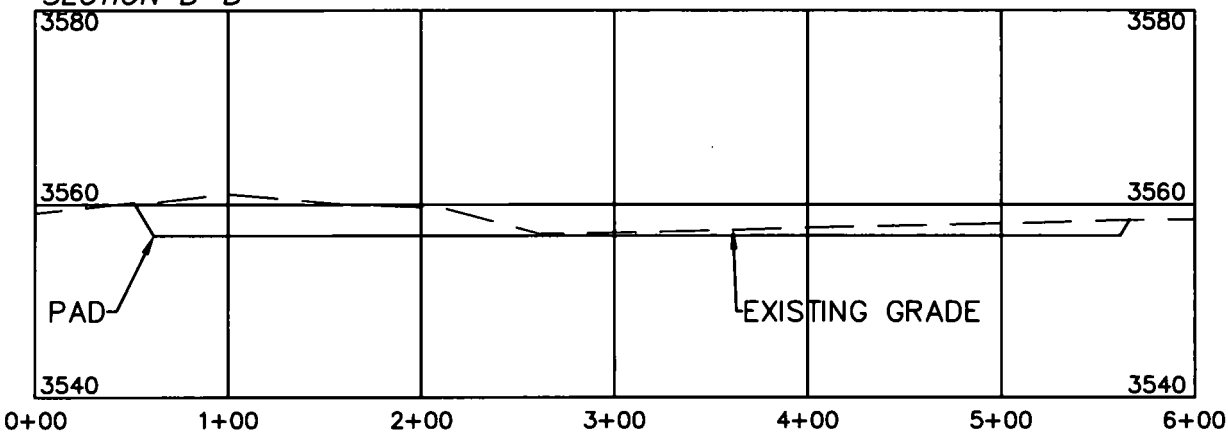
devon

# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# CROSS SECTIONS

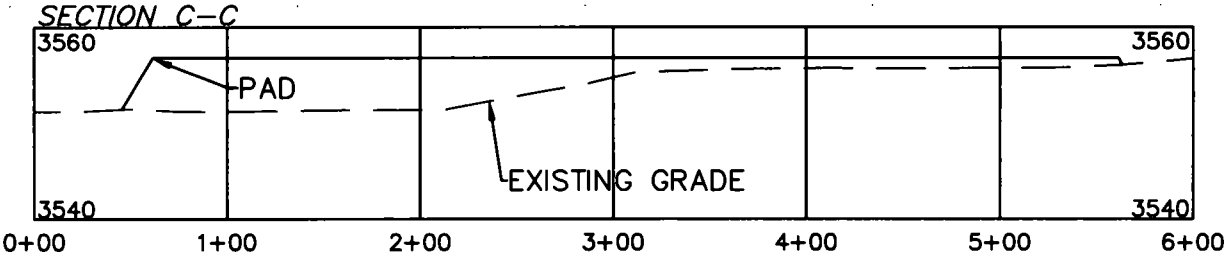
SECTION A–A




SECTION B–B




SECTION C–C




SCALE 1" = 100' HORIZONTAL
SCALE 1" = 20' VERTICAL

SHEET 6 OF 6

EARTHWORK QUANTITIES FOR
BLUE KRAIT 23 WELLPAD 5

| CUT | FILL | NET |
|---|---|---|
| 14,219 CY | 14,219 CY | 0 CY |

EARTHWORK QUANTITIES ARE ESTIMATED

HORIZON ROW LLC

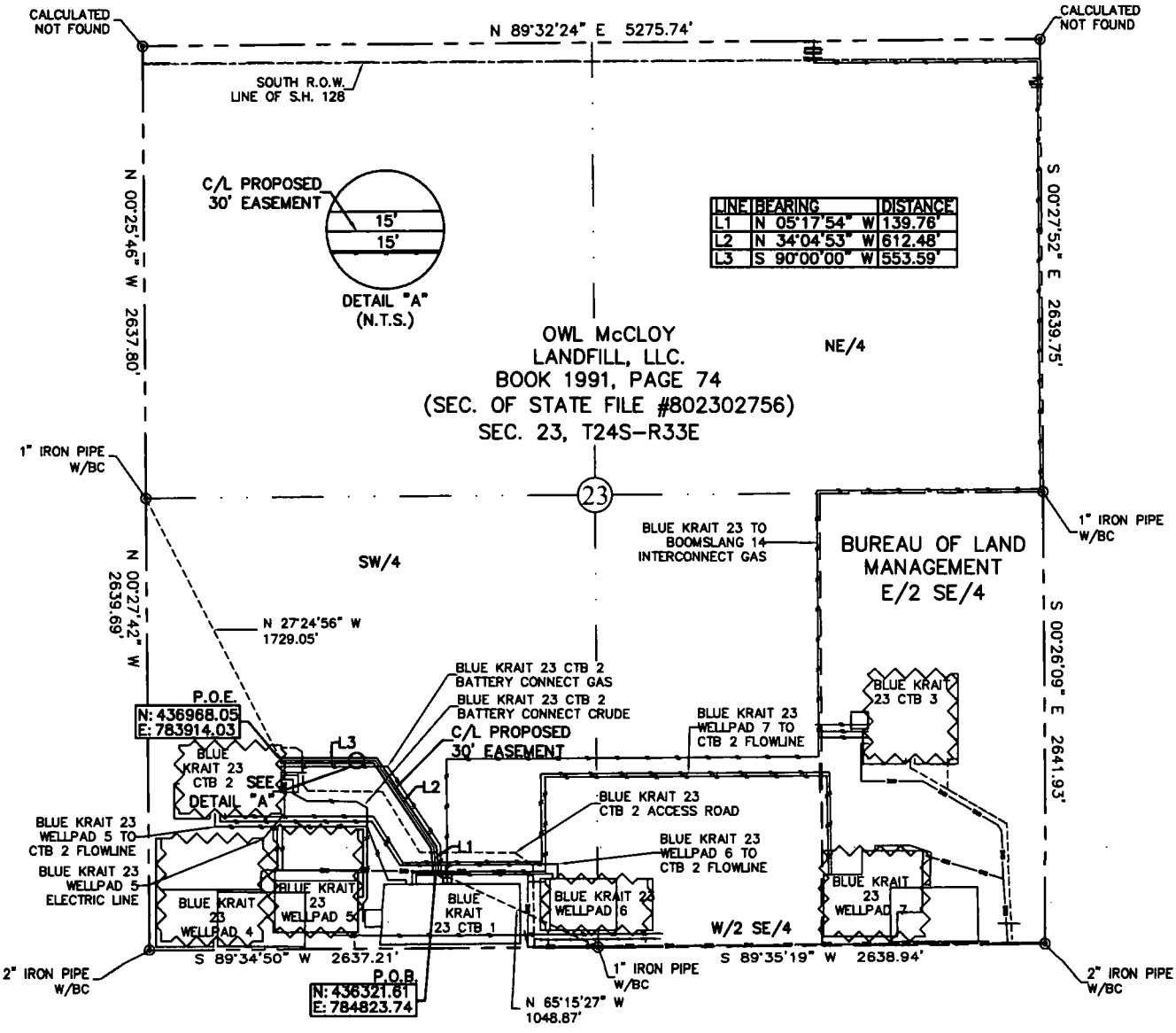
DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 11/15/2018

Drawn for: devon

EXHIBIT "A"
PAGE 1 of 2
ELECTRIC LINE PLAT
SECTION 23, T24S–R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO




30' EASEMENT AREA = 0.899 ACRE(S)
1305.83 FEET OR 79.14 RODS

| | |
|---|---|
| 0+00 | P.O.B./EXISTING POWERLINE |
| 0+37.4 | BLUE KRAIT 23 WELLPAD 6 TO CTB 2 FLOWLINE |
| 0+51.2 | BLUE KRAIT 23 WELLPAD 7 TO CTB 2 FLOWLINE |
| 1+09.5 | BLUE KRAIT 23 CTB 2 ACCESS ROAD |
| 7+09.9 | BLUE KRAIT 23 CTB 2 BATTERY CONNECT GAS |
| 11+80.6 | BLUE KRAIT 23 CTB 2 ACCESS ROAD |
| 12+85.8 | BLUE KRAIT 23 WELLPAD 4 ELECTRIC LINE |
| 13+05.8 | P.O.E./BLUE KRAIT 23 CTB 2 |

SEE THE ATTACHED LEGAL DESCRIPTION
Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS 22404
Date Signed: 12-08-2018
Horizonrow, LLC
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizonrow, LLC

0 1000 2000

HORIZON ROW LLC
Drawn for: devon
Drawn by: JEANNIE PERRY
Date: 11/23/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23 CTB 2
ELECTRIC LINE
PROPOSED 30' EASEMENT
ON THE PROPERTY OF
OWL MCCLOY LANDFILL, LLC
SECTION 23, T24S–R33E, N.M.P.M.

LINE NUMBER: EL8271
WBS NUMBER: XX–129903.01.SLC
SCALE: 1" = 1000'
REVISIONS:
DATE OF SURVEY: 11/19/2018

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**ELECTRIC LINE PLAT**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 (Sec. of State File #802302756) of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 65°15'27" W, a distance of 1048.87' to the **Point of Beginning** of this easement having coordinates of Northing=436321.61 feet, Easting=784823.74 feet and continuing the following courses;

Thence N 05°17'54" W, a distance of 139.76' to an angle point;

Thence N 34°04'53" W, a distance of 612.48' to an angle point;

Thence S 90°00'00" W, a distance of 553.59' to the **Point of Ending** having coordinates of Northing=436968.05 feet, Easting=783914.03 feet, from said point a 1" iron pipe w/ BC found for the west quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears N 27°24'56" W a distance of 1729.05', covering **1305.83' or 79.14 rods** and having an area of **0.899 acres**.

**NOTES:**

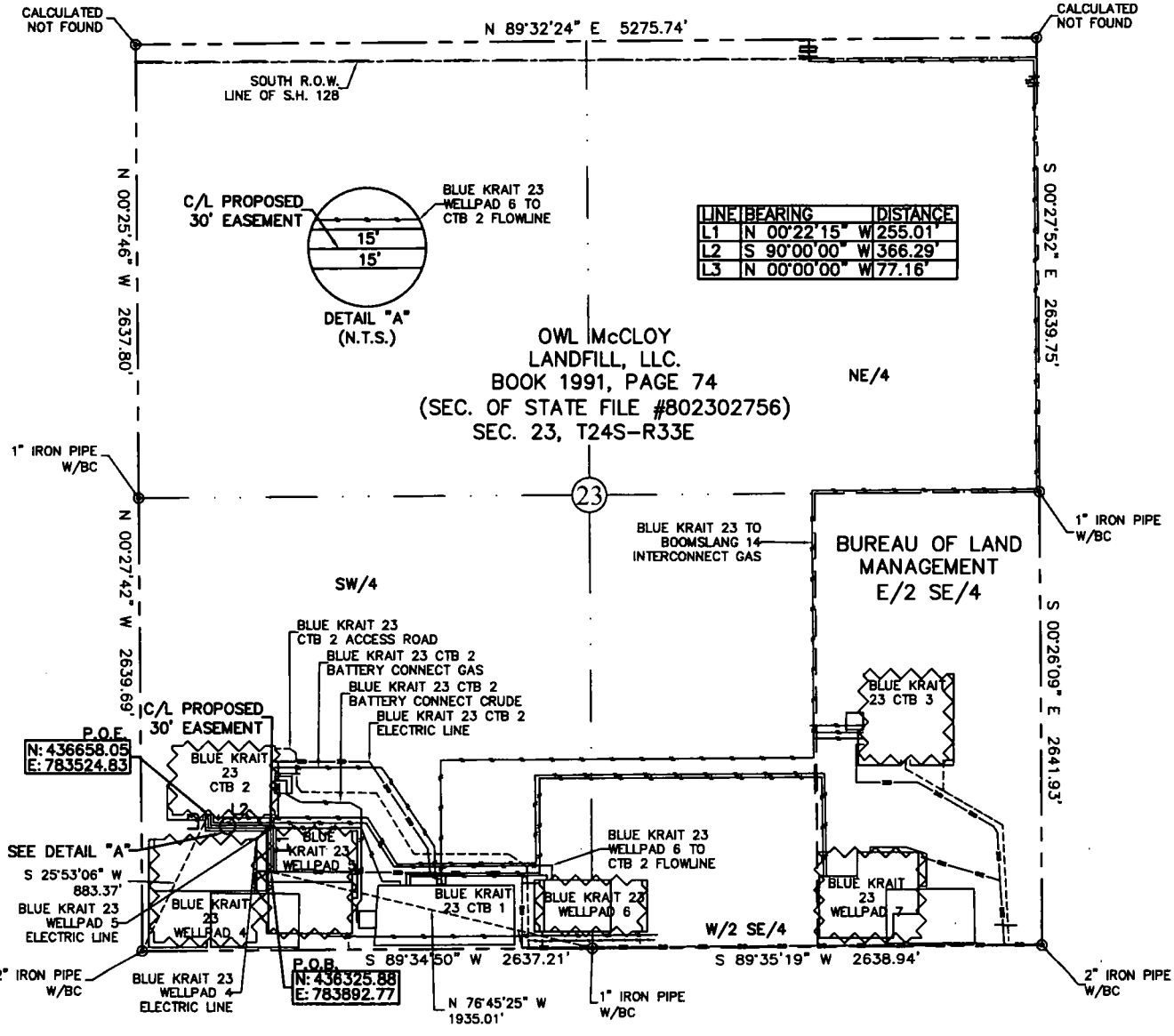
Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 12/09/2018
Horizon Row, LLC
P.O. Box 548, Dry Creek, LA
(903) 388-3045 70637
Employee of Horizon Row, LLC

# Four (8") Buried Composite Flow lines and One (8") Buried Composite Gas Lift from Blue Krait Well Pad 5 to CTB 2

EXHIBIT "A"
PAGE 1 of 2
SECTION 23, T24S–R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO




30' EASEMENT AREA = 0.481 ACRE(S)
698.46 FEET OR 42.33 RODS

0+00 P.O.B./BLUE KRAIT 23 WELLPAD 5
0+02.2 EXISTING POWERLINE
2+71.7 BLUE KRAIT 23 WELLPAD 4 ELECTRIC LINE
2+77.6 BLUE KRAIT 23 WELLPAD 5 ELECTRIC LINE
6+98.5 P.O.E./BLUE KRAIT 23 CTB 2

SEE THE ATTACHED LEGAL DESCRIPTION

Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

NEW MEXICO 22404 PROFESSIONAL SURVEYOR

B.L. Laman PLS 22404
Date Signed: 12-06-2018
Horizonrow, LLC
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70837
Employee of Horizonrow, LLC

0 1000 2000

HORIZON ROW LLC

Drawn for: devon

Drawn by: JEANNIE PERRY

Date: 11/19/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.

BLUE KRAIT 23 WELLPAD 5 TO CTB 2 FLOWLINE

PROPOSED 30' EASEMENT ON THE PROPERTY OF OWL MCCLOY LANDFILL, LLC SECTION 23, T24S–R33E, N.M.P.M.

LINE NUMBER: 7810110F
WBS NUMBER: XX-129903.01.SLC
SCALE: 1" = 1000'
REVISIONS:
DATE OF SURVEY: 11/19/2018

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL MCCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter (SW ¼) of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the OWL McCloy Landfill, LLC, described in Book 1991, Page 74 (Sec. of State File #802302756) of the deed records of Lea County, NM. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 76°45'25" W, a distance of 1935.01' to the **Point of Beginning** of this easement having coordinates of Northing=436325.88 feet, Easting=783892.77 feet and continuing the following courses;

Thence N 00°22'15" W, a distance of 255.01' to an angle point;

Thence S 90°00'00" W, a distance of 366.29' to an angle point;

Thence N 00°00'00" W, a distance of 77.16' to the **Point of Ending** having coordinates of Northing=436658.05 feet, Easting=783524.83 feet, from said point a 2" iron pipe w/ BC found for the southwest corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico bears S 25°53'06" W a distance of 883.37', covering **698.46' or 42.33 rods** and having an area of **0.481 acres**.

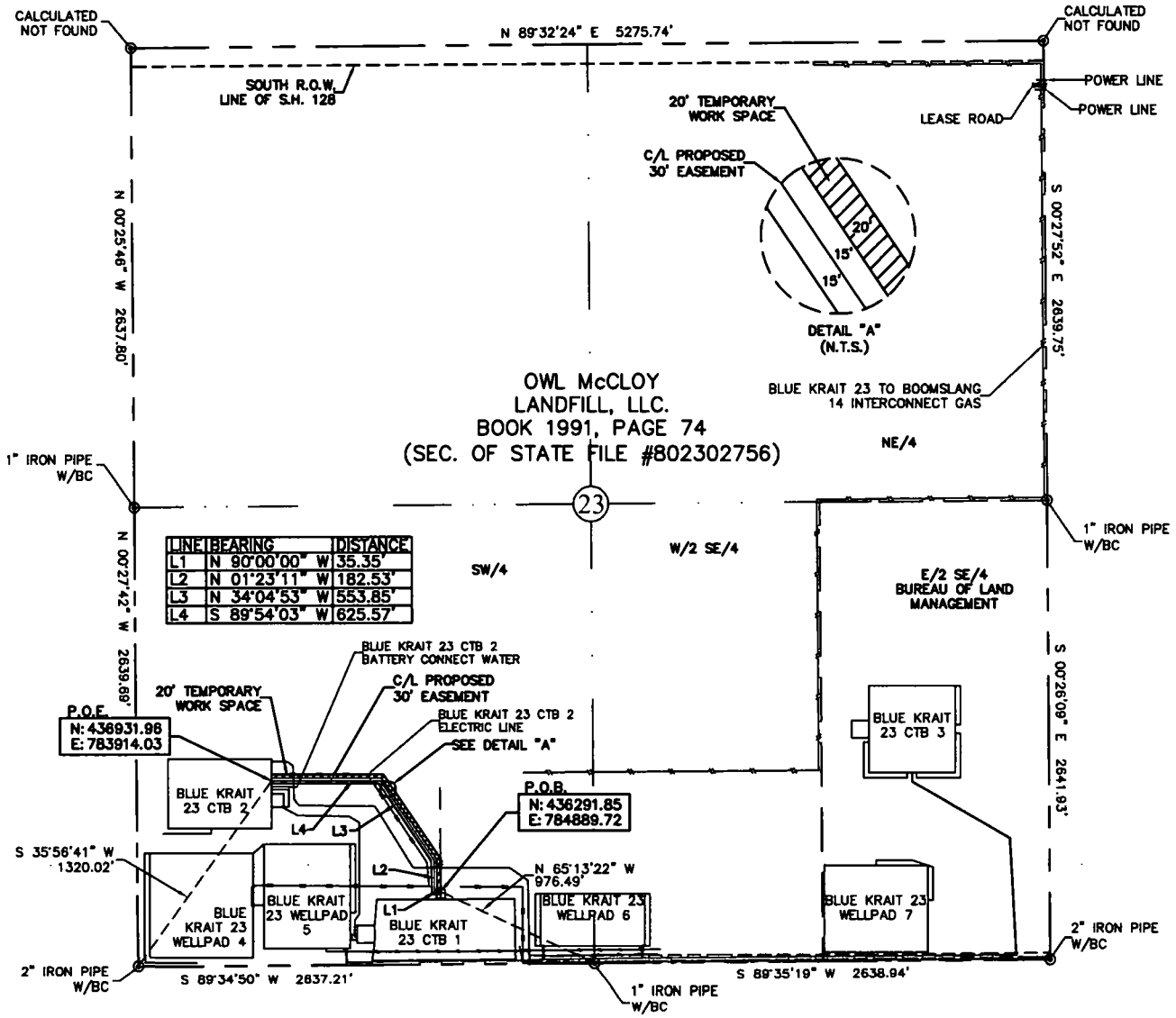
**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS 22404
Date Signed: 12/06/2018
Horizon Row, LLC
P.O. Box 548, Dry Creek, LA
(903) 388-3045 70637
Employee of Horizon Row, LLC

EXHIBIT "A"
PAGE 1 OF 2
SECTION 23, T24S-R33E, N.M.P.M.
LEA COUNTY, NEW MEXICO




| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | N 90°00'00" W | 35.35' |
| L2 | N 01°23'11" W | 182.53' |
| L3 | N 34°04'53" W | 553.85' |
| L4 | S 89°54'03" W | 625.57' |

0+00.0 P.O.B./BLUE KRAIT 23 TO BOOMSLANG 14 INTERCONNECT GAS
0+45.1 BLUE KRAIT 23 WELLPAD 6 TO CTB 1 FLOWLINE
0+57.2 BLUE KRAIT 23 WELLPAD 7 TO CTB 1 FLOWLINE
0+65.0 OVERHEAD ELECTRIC LINE
1+02.6 BLUE KRAIT 23 WELLPAD 6 TO CTB 2 FLOWLINE
1+16.3 BLUE KRAIT 23 WELLPAD 7 TO CTB 2 FLOWLINE
1+74.1 BLUE KRAIT 23 CTB 2 ACCESS ROAD
8+20.0 BLUE KRAIT 23 CTB 2 ELECTRIC LINE
12+70.8 BLUE KRAIT 23 CTB 2 ACCESS ROAD
13+77.3 BLUE KRAIT 23 WELLPAD 4 ELECTRIC LINE
13+97.3 P.O.E./BLUE KRAIT 23 CTB 2

20' TEMPORARY WORK SPACE = 0.638 ACRE(S)
30' EASEMENT AREA = 0.962 ACRE(S)
1397.30 FEET OR 84.68 RODS

SEE THE ATTACHED LEGAL DESCRIPTION
Note: All bearings recited herein are based on the New Mexico State Plane Coordinate System, NAD 83, New Mexico East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. LAMAN
NEW MEXICO
22404
PROFESSIONAL SURVEYOR

B.L. Laman PLS #22404
Date Signed: 12-12-2018
Horizonrow, LLC
P.O. BOX 548, Dry Creek, La.
(903) 388-3045 70837
Employee of Horizonrow, LLC

0 1000 2000

HORIZON ROW LLC
Drawn for: devon
Drawn by: STEVE LONDON
Date: 11/27/2018

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23 CTB 2
BATTERY CONNECT GAS
PROPOSED 30' EASEMENT
ON THE PROPERTY OF
OWL MCCLOY LANDFILL, LLC
SECTION 23, T24S-R33E, N.M.P.M.

LINE NUMBER: 7610120X
WBS NUMBER: XX-129903.01.SLC
SCALE: 1" = 1000'
REVISIONS:
DATE OF SURVEY: 8/20/18

**SECTION 23, T24S-R33E, N.M.P.M.,**
**LEA COUNTY, NEW MEXICO**

**LEGAL DESCRIPTION**

**FOR**

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

**OWL McCLOY LANDFILL, LLC.**

**30' EASEMENT DESCRIPTION:**

**BEING** an easement thirty (30) feet in width lying fifteen (15) feet on the right side and fifteen (15) feet on the left side of the survey centerline described below, being out of the southwest quarter of Section 23, Township 24 South, Range 33 East, N.M.P.M., Lea County, New Mexico, and being out of a parcel of land owned by the Owl McCloy Landfill, LLC., recorded in Book 1991, Page 74, Sec of State File #802302756. Said centerline of easement being more particularly described as follows:

Commencing from a 1" iron pipe w/ BC found for the south quarter corner of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico;

Thence N 65°13'22" W a distance of 976.49' to the **Point of Beginning** of this easement having coordinates of Northing=436291.85, Easting=784889.72 feet and continuing the following courses;

Thence N 90°00'00" W a distance of 35.35' to an angle point;

Thence N 01°23'11" W a distance of 182.53' to an angle point;

Thence N 34°04'53" W a distance of 553.85' to an angle point;

Thence S 89°54'03" W a distance of 625.57' to the **Point of Ending** having coordinates of Northing= 436931.96, Easting= 783914.03 feet in the southwest quarter of Section 23, T24S-R33E, N.M.P.M., Lea County, New Mexico, from said point a 2" iron pipe w/BC for the southwest corner of Section 23, T24S-R33E, bears S 35°56'41" W a distance of 1320.02', covering **1397.30' or 84.68 rods** and having an area of **0.962 acre**.

**20' TEMPORARY WORK SPACE EASEMENT DESCRIPTION:**

Being a temporary work space twenty (20) feet in width lying on the right side and adjoining the right side of the above described thirty (30) feet easement, having a total area of **0.638 acres.**

**NOTES:**

Bearings, distances and coordinates shown herein are based on New Mexico State Plane Coordinate System, NAD 83, East Zone 3001, US Survey Feet, all distances are grid.

I, B.L. Laman, New Mexico PLS No. 22404, hereby certify this survey to reflect an actual survey made on the ground under my supervision. This survey meets the minimum standards for surveying in New Mexico.

B.L. Laman PLS# 22404
Date Signed: 12-12-2018
Horizon Row, LLC
P.O. Box 548, Dry Creek, La.
(903) 388-3045 70637
Employee of Horizon Row, LLC

# BLUE KRAIT 23 FED WELL PAD 5

## BLUE KRAIT 23-14 FED 25H, 35H,31H,36H,32H

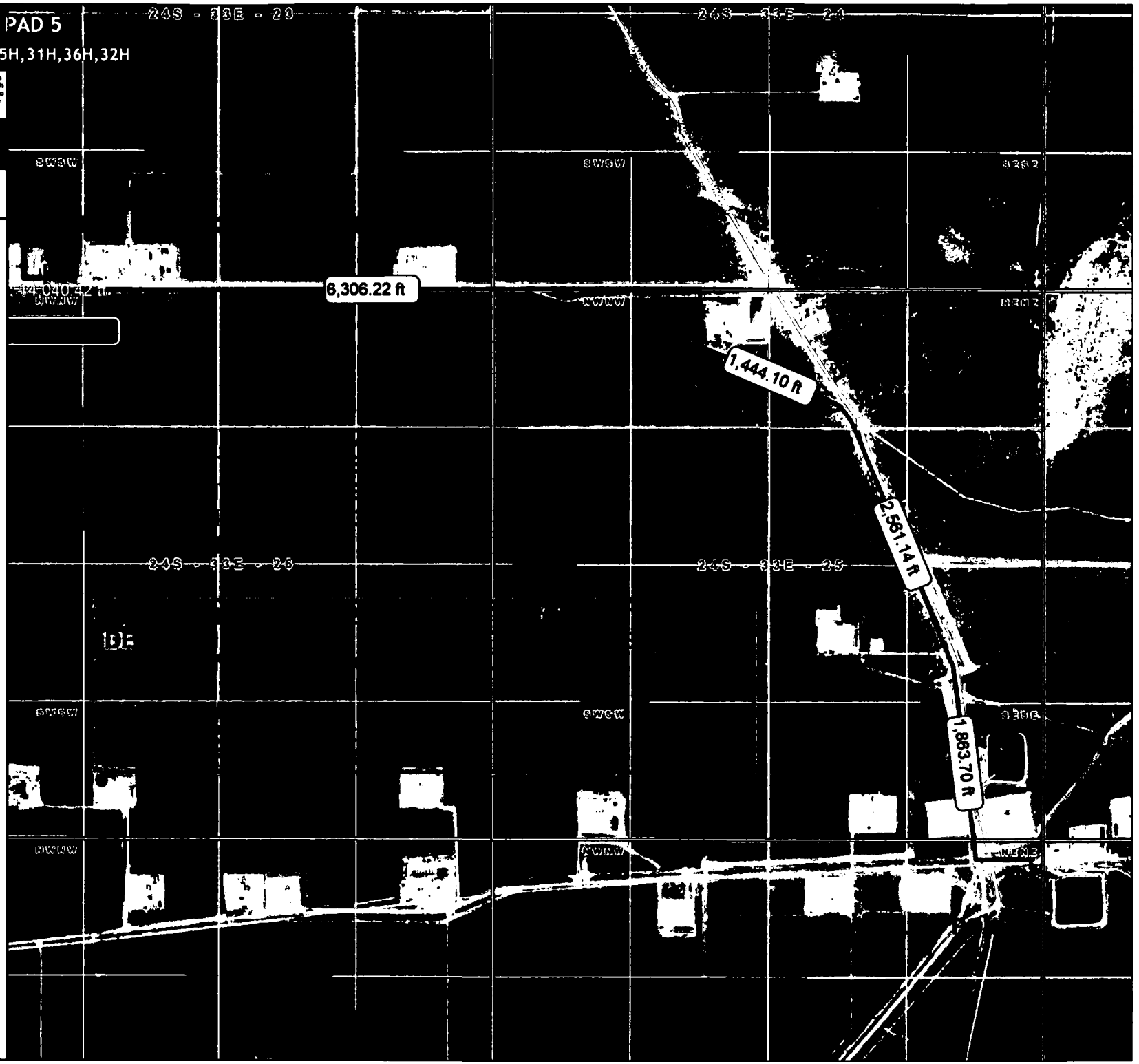
devon

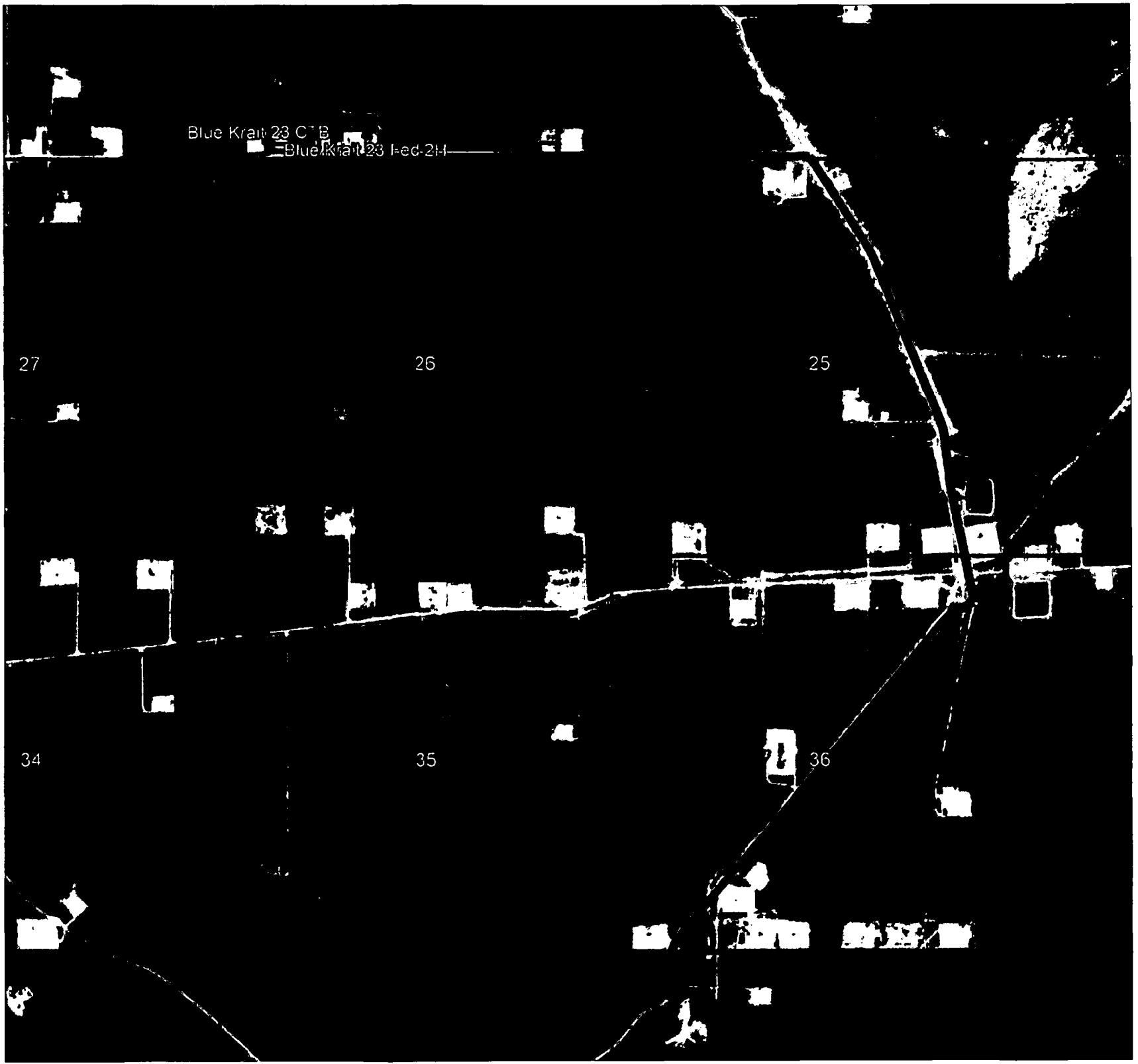
This map is for illustrative purposes only and is neither a legally recorded map nor survey and is not intended to be used as one. Devon makes no warranty, representation, or guarantee of any kind regarding this map.

WGS_1984_Web_Mercator_Auxiliary_Sphere
Prepared by: _User
Map is current as of: 22-Jan-2019

N

Miles
0 0.07 0.14 0.28 1: 14,228




Blue Kraft 23 C 1B
Blue Kraft 23 Fed 2H
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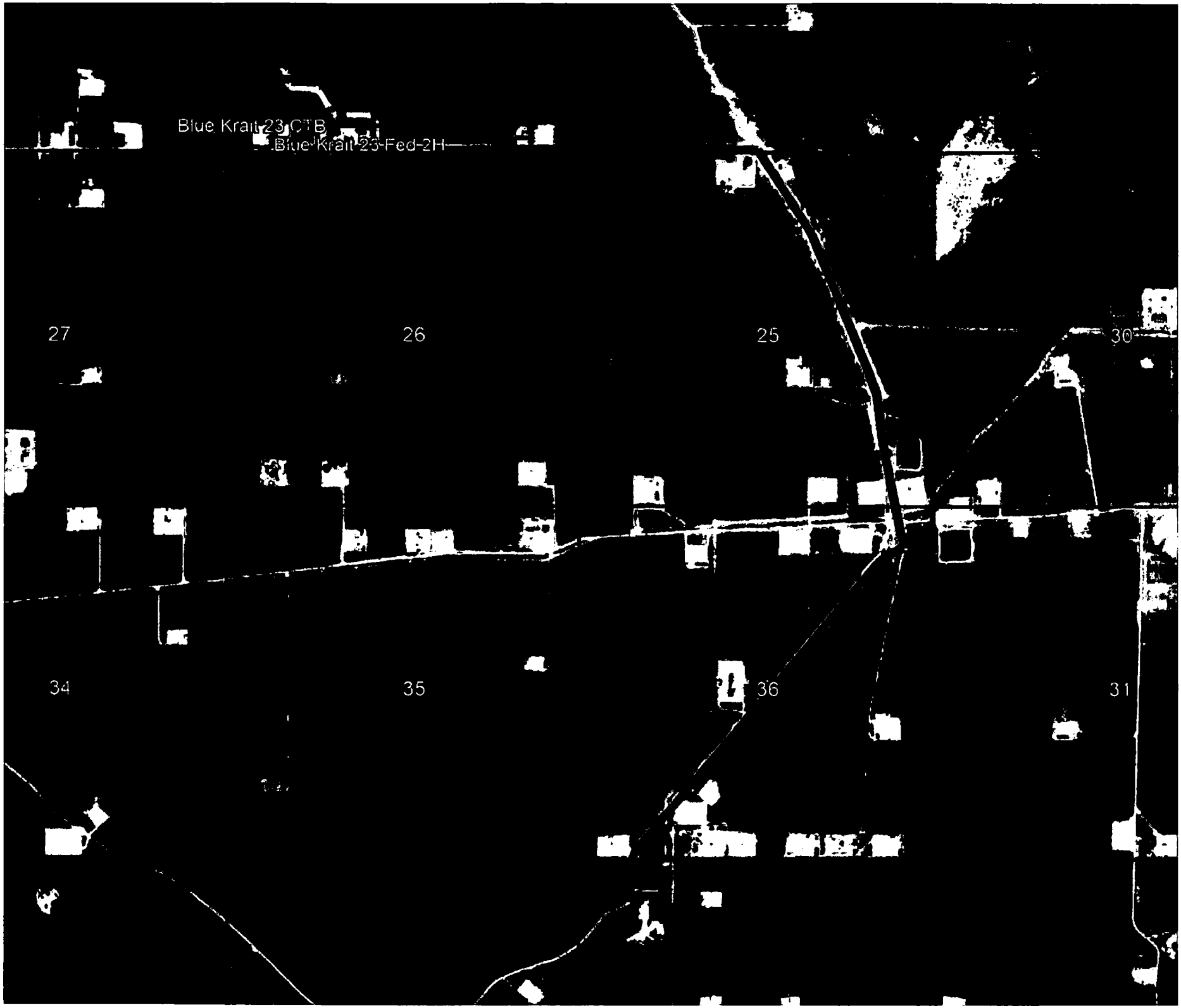
Blue Krait 23 CTB
Blue Krait 23-Fed-2H
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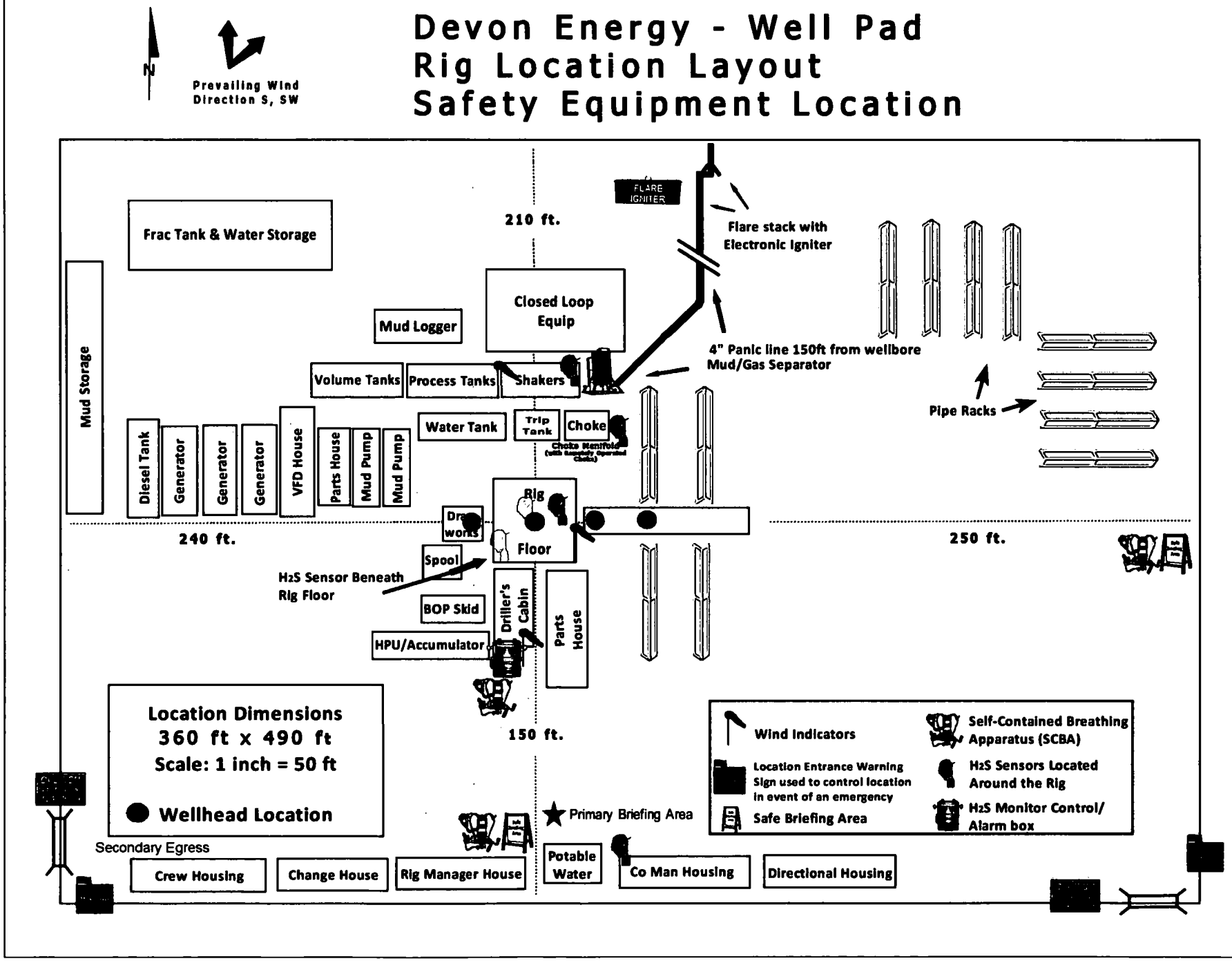
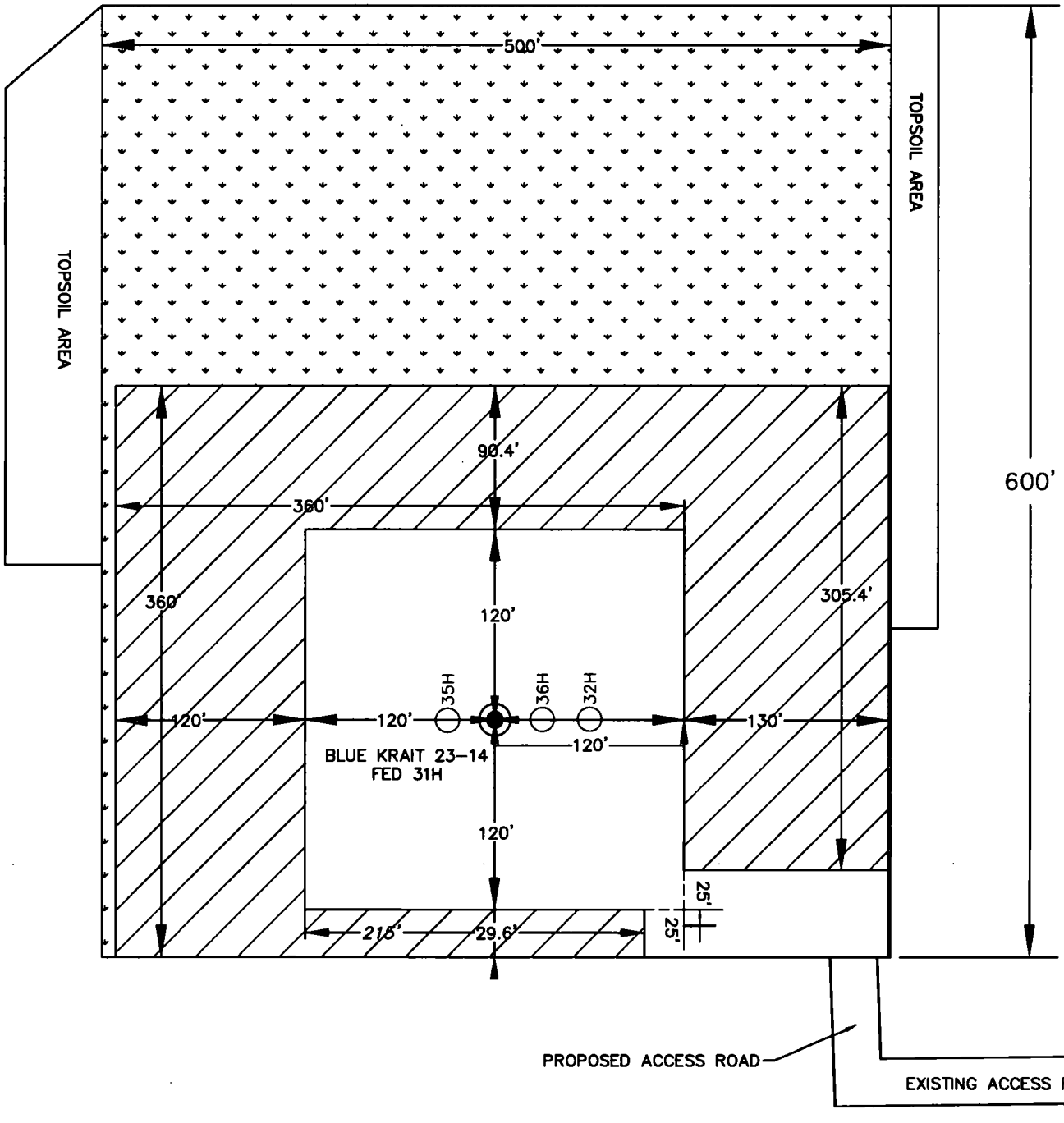
31

# Devon Energy - Well Pad
# Rig Location Layout
# Safety Equipment Location



# SECTION 23, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.
# LEA COUNTY, STATE OF NEW MEXICO
# INTERIM SITE BUILD PLAN




DENOTES INTERIM PAD RECLAMATION AREA

DENOTES GRADING SITE RECLAMATION AREA

2.548± ACRES INTERIM PAD RECLAMATION AREA
2.837± ACRES GRADING SITE RECLAMATION AREA
1.502± ACRES NON-RECLAIMED AREA
6.887± ACRES GRADING SITE RECLAMATION AREA

0 100 200

DEVON ENERGY PRODUCTION COMPANY, L.P.
BLUE KRAIT 23-14 FED 31H
LOCATED 245 FT. FROM THE SOUTH LINE
AND 980 FT. FROM THE WEST LINE OF
SECTION 23, TOWNSHIP 24 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

HORIZON ROW LLC

DEVON ENERGY PRODUCTION CO., L.P.

Drawn by: CHRIS MAAS

Date: 11/28/2018

Drawn for:

devon

**APD ID:** 10400038419 **Submission Date:** 01/28/2019

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

## 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:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

**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?**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**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):**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

**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

10/09/2019

**APD ID:** 10400038419 **Submission Date:** 01/28/2019

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

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

Show Final Text

## Bond Information

**Federal/Indian APD:** FED

**BLM Bond number:** CO1104

**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:**

**Operator Name:** DEVON ENERGY PRODUCTION COMPANY LP

**Well Name:** BLUE KRAIT 23-14 FED **Well Number:** 31H

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXIT Leg #1 | 100 | FNL | 1026 | FWL | 24S | 33E | 14 | Aliquot NWNW | 32.224585 | -103.548331 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0063798 | -8969 | 22392 | 12525 |
| BHL Leg #1 | 20 | FNL | 380 | FWL | 24S | 33E | 14 | Aliquot NWNW | 32.224805 | -103.54834 | LEA | NEW MEXICO | NEW MEXICO | F | NMLC0063798 | -8969 | 22473 | 12525 |