# PECOS DISTRICT
# DRILLING CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | Matador Prod Co |
| LEASE NO.: | NM135247 |
| WELL NAME & NO.: | 133H-Nina Cortell Fed |
| SURFACE HOLE FOOTAGE: | 150'/S & 2118'/E |
| BOTTOM HOLE FOOTAGE | 240'/N & 2313'/E |
| LOCATION: | Section 3, T. 22 S., R. 32 E. |
| COUNTY: | Lea County, New Mexico |

| | | | |
|---|---|---|---|
| Potash | ○ None | ◉ Secretary | ○ R-111-P |
| Cave/Karst Potential | ◉ Low | ○ Medium | ○ High |
| Variance | ○ None | ◉ Flex Hose | ○ Other |
| Wellhead | ○ Conventional | ◉ Multibowl | |
| Other | ☐ 4 String Area | ☐ Capitan Reef | ☐ WIPP |

## A. Hydrogen Sulfide

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

## B. CASING

1. The **13 3/8** inch surface casing shall be set at approximately **1200** feet (a minimum of 25 feet 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 **24 hours in the Potash Area** 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 **9 5/8** inch intermediate casing is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.**

3. The minimum required fill of cement behind the **5 1/2** inch production casing is:

   - Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.

## 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:**

i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13 3/8** inch first surface casing shoe shall be **2000 (2M)** psi.

ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9 5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

**Option 2:**

i. 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 **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. 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.

**MHH 02102018**

# GENERAL REQUIREMENTS

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

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

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

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

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

3. The record of the drilling rate along with the GR/N well log 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.

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.

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. Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.
    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.

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

| | |
|---|---|
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| LEASE NO.: | NM135247 |
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| LOCATION: | Section 3, T. 22 S., R. 32 E. |
| 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.

☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker
- Hydrology
- Cave/Karst
- Range

☐ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads

☐ **Road Section Diagram**
☐ **Production (Post Drilling)**
- Well Structures & Facilities

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**



**Approval Date: 02/16/2018**

## 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.

**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.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

## Watershed/Water Quality:

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

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

- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

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

Construction of the new access road through the existing fence which separates the proposed Nina Cortell Fed Com Slot 1 and Slot 2 well pads on New Mexico State Trust lands from the proposed Nina Cortell Fed Com Slot 3 and Slot 4 well pads on Federal lands (Exhibits 24 and 25) would require that a new fence and a cattle guard be installed.

Following proper procedures for crossing fence lines including bracing and tying off on both sides of the passageway with H-braces prior to cutting the fence, would mitigate the impacts to the fence. The operator would notify the private surface landowner and grazing allotment holders prior to crossing any fences.

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

Prior to construction of the Nina Cortell Slot 3 and Slot 4 well pads, a straw wattle and earthen berm would be placed along the southern edges of the well pads (Exhibits 12 and 22 – Slot 3 well pad, Exhibits 15 and 23 – Slot 4 well pad) to avoid impacts to the un-named drainage feature located approximately 400-feet south of the two well pads. These measures would also be maintained during interim reclamation earthwork.

Production facilities on the four well pads would be bermed to prevent oil, salt, and other chemical contaminants from leaving the pads. Topsoil shall not be used to construct the berms. No water flow from the uphill side(s) of the pads shall be allowed to enter the well pads. The berms around the production facilities shall be maintained through the life of the wells and after interim reclamation has been completed.

Any water erosion that may occur due to the construction of the well pads or during the life of the wells and associated infrastructure would be corrected within two weeks and proper measures would be taken to prevent future erosion.

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Any water erosion that may occur due to the construction of the well pads or during the life of the wells and associated infrastructure would be corrected within two weeks and proper measures would be taken to prevent future erosion.

All spills or leaks shall be reported to the BLM immediately for their immediate and proper treatment. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required.

# 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.

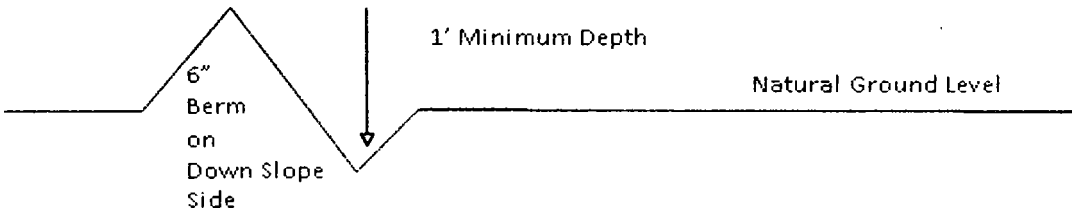
**Turnouts**
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**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

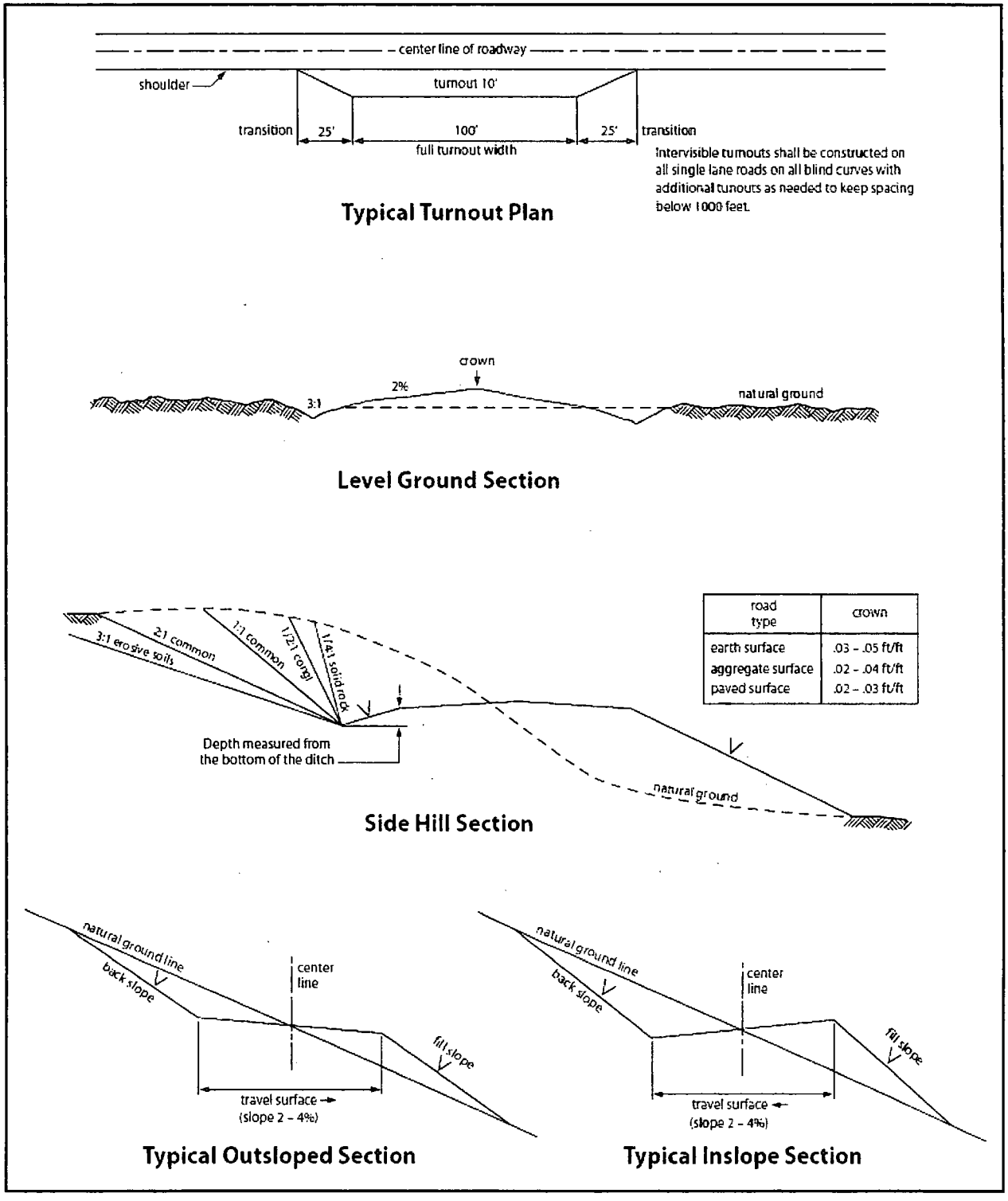



Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

# 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.

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

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

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

**VRM Facility Requirement**
Low-profile tanks not greater than eight-feet-high shall be used.

## 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).

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

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

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

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

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

Seed Mixture 2, for Sandy Sites

The 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 will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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 |
|---|---|
| Sand dropseed (Sporobolus cryptandrus) | 1.0 |
| Sand love grass (Eragrostis trichodes) | 1.0 |
| Plains bristlegrass (Setaria macrostachya) | 2.0 |

*Pounds of pure live seed:

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



**Approval Date: 02/16/2018**

# PECOS DISTRICT
# SURFACE USE
# CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | Matador Prod Co |
| LEASE NO.: | NM135247 |
| WELL NAME & NO.: | 133H-Nina Cortell Fed |
| SURFACE HOLE FOOTAGE: | 150'/S & 2118'/E |
| BOTTOM HOLE FOOTAGE | 240'/N & 2313'/E |
| LOCATION: | Section 3, T. 22 S., R. 32 E. |
| 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.


☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker
- Hydrology
- Cave/Karst
- Range

☐ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads

☐ **Road Section Diagram**
☐ **Production (Post Drilling)**
- Well Structures & Facilities

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**




**Approval Date: 02/16/2018**

## 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.

**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.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

## Watershed/Water Quality:

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

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

- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

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

Construction of the new access road through the existing fence which separates the proposed Nina Cortell Fed Com Slot 1 and Slot 2 well pads on New Mexico State Trust lands from the proposed Nina Cortell Fed Com Slot 3 and Slot 4 well pads on Federal lands (Exhibits 24 and 25) would require that a new fence and a cattle guard be installed.

Following proper procedures for crossing fence lines including bracing and tying off on both sides of the passageway with H-braces prior to cutting the fence, would mitigate the impacts to the fence. The operator would notify the private surface landowner and grazing allotment holders prior to crossing any fences.

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

Prior to construction of the Nina Cortell Slot 3 and Slot 4 well pads, a straw wattle and earthen berm would be placed along the southern edges of the well pads (Exhibits 12 and 22 – Slot 3 well pad, Exhibits 15 and 23 – Slot 4 well pad) to avoid impacts to the un-named drainage feature located approximately 400-feet south of the two well pads. These measures would also be maintained during interim reclamation earthwork.

Production facilities on the four well pads would be bermed to prevent oil, salt, and other chemical contaminants from leaving the pads. Topsoil shall not be used to construct the berms. No water flow from the uphill side(s) of the pads shall be allowed to enter the well pads. The berms around the production facilities shall be maintained through the life of the wells and after interim reclamation has been completed.

Any water erosion that may occur due to the construction of the well pads or during the life of the wells and associated infrastructure would be corrected within two weeks and proper measures would be taken to prevent future erosion.

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Any water erosion that may occur due to the construction of the well pads or during the life of the wells and associated infrastructure would be corrected within two weeks and proper measures would be taken to prevent future erosion.

All spills or leaks shall be reported to the BLM immediately for their immediate and proper treatment. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required.

# 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.

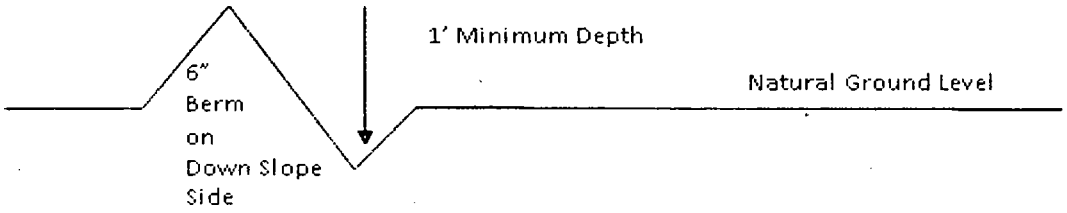
**Turnouts**
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**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

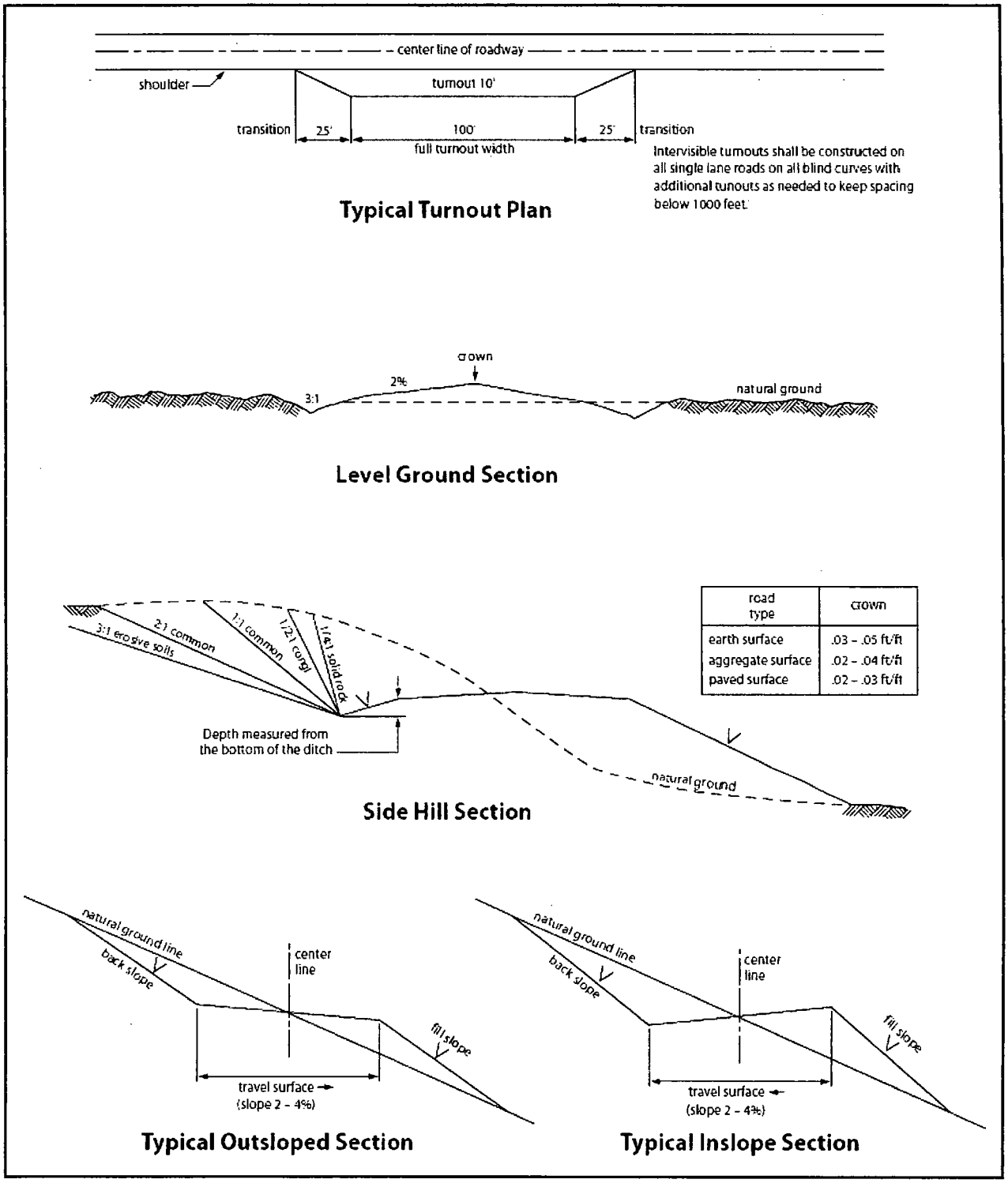



Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

# 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.

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*Pounds of pure live seed:

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



**Approval Date: 02/16/2018**

Hydrogen Sulfide Drilling

Operations Plan

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system, and briefing areas
- Evacuation procedures, routes, and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors will be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse.

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area will be high enough to be visible.
- Windsock on the rig floor and / top of doghouse will be high enough to be visible.

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
    - Green Flag – Normal Safe Operation Condition
    - Yellow Flag – Potential Pressure and Danger
    - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See attachments

6 Communication:

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

7 Drilling Stem Testing:

- No DSTs or cores are planned at this time.

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment.

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

11 Emergency Contacts

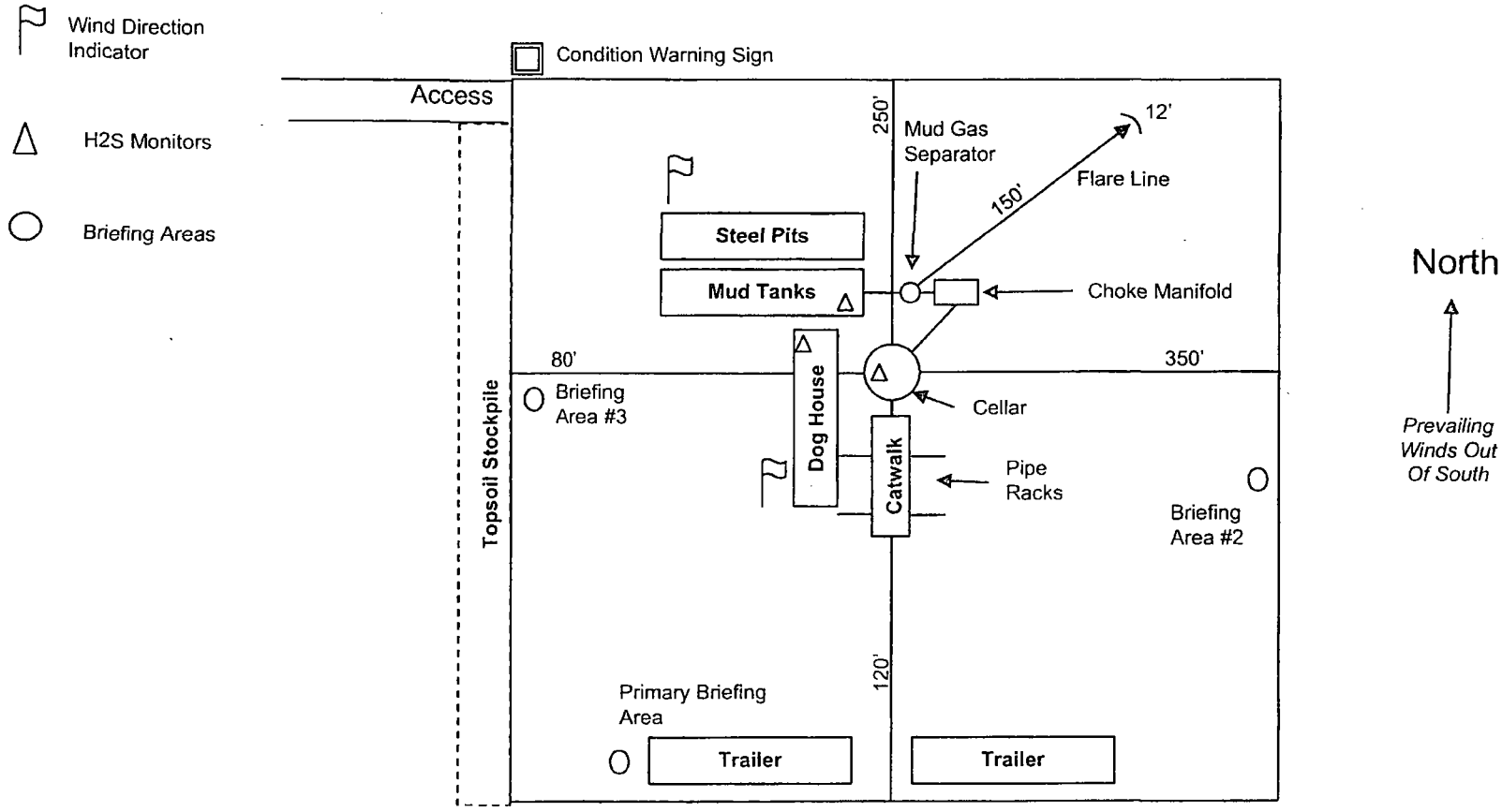
- See following page

H2S Contingency Plan Emergency Contacts
Nina Cortell wells
Matador Production Company
Sec. 3, T22S, R32E Lea County, NM

| | | | |
|---|---|---|---|
| **Company Office** | | | |
| Matador Production Company | (972)-371-5200 | | |
| **Key Personnel** | | | |
| **Name** | **Title** | **Office** | **Mobile** |
| Billy Goodwin | Vice President Drilling | 972-371-5210 | 817-522-2928 |
| Gary Martin | Drilling Superintendent | | 601-669-1774 |
| Dee Smith | Drilling Superintendent | 972-371-5447 | 972-822-1010 |
| Adam Lange | Drilling Engineer | 972-371-5427 | 626-318-5808 |
| **Lea County** | | | |
| Ambulance | | 911 | |
| Nor Lea General Hospital (Hobbs) | | 575-397-0560 | |
| State Police (Hobbs) | | 575-392-5580 | |
| City Police (Hobbs) | | 575-397-9625 | |
| Sheriff's Office (Lovington) | | 575-396-3611 | |
| Fire Marshall (Lovington) | | 575-391-2983 | |
| Volunteer Fire Dept. (Eunice) | | 575-394-3258 | |
| Emergency Management (Lovington) | | 575-391-2983 | |
| New Mexico Oil Conservation Division (Hobbs) | | 575-393-6161 | 575-390-3186 |
| BLM (Hobbs) | | 575-393-3612 | |
| Hobbs Animal Clinic | | 575-392-5563 | |
| Dal Paso Animal Hospital (Hobbs) | | 575-397-2286 | |
| Mountain States Equine (Hobbs) | | 575-392-7488 | |
| **Carlsbad** | | | |
| BLM | | 575-234-5972 | |
| **Santa Fe** | | | |
| New Mexico Emergency Response Commission (Santa Fe) | | 505-476-9600 | |
| New Mexico Emergency Response Commission (Santa Fe) 24 hrs | | 505-827-9126 | |
| New Mexico State Emergency Operations Center | | 505-476-9635 | |
| **National** | | | |
| National Emergency Response Center (Washington, D.C.) | | 800-424-8802 | |
| **Medical** | | | |
| Flight for Life- 4000 24th St.; Lubbock, TX | | 806-743-9911 | |
| Aerocare- R3, Box 49F; Lubbock, TX | | 806-747-8923 | |
| Med Flight Air Amb- 2301 Yale Blvd SE, D3; Albuquerque, NM | | 505-842-4433 | |
| SB Air Med Service- 2505 Clark Carr Loop SE; Albuquerque, NM | | 505-842-4949 | |
| **Other** | | | |
| Boots & Coots IWC | | 800-256-9688 | or 281-931-8884 |
| Cudd Pressure Control | | 432-699-0139 | or 432-563-3356 |
| Halliburton | | 575-746-2757 | |
| B.J. Services | | 575-746-3569 | |
| NM Dept. of Transportation (Roswell) | | 575-637-7200 | |

# H2S Rig Diagram

Nina Cortell Fed133H
SHL 150' FSL & 2118' FEL
3-22S-32E Lea County, NM



Matador Resources
Lea County, NM
Nina Cortell Fed Com
No. 133H
Prelim Plan B

US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

RKB Elevation: Well @ 3835.00usft

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 514903.00 | 707669.00 | 32.413785°N | 103.660389°W | |

SECTION DETAILS- Lateral

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | VSect |
|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 1500.00 | 0.00 | 0.00 | 1500.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 2000.00 | 5.00 | 242.27 | 1999.37 | -10.15 | -19.30 | 1.00 | -9.97 |
| 4 | 4014.49 | 5.00 | 242.27 | 4006.19 | -91.85 | -174.70 | 0.00 | -90.23 |
| 5 | 4514.49 | 0.00 | 0.00 | 4505.56 | -102.00 | -194.00 | 1.00 | -100.20 |
| 6 | 11379.97 | 0.00 | 0.00 | 11371.04 | -102.00 | -194.00 | 0.00 | -100.20 |
| 7 | 12279.97 | 90.00 | 359.47 | 11944.00 | 470.93 | -199.29 | 10.00 | 472.76 |
| 8 | 16689.23 | 90.00 | 359.47 | 11944.00 | 4880.00 | -240.00 | 0.00 | 4882.01 |

Azimuths to Grid North
True North: -0.35°
Magnetic North: 6.57°

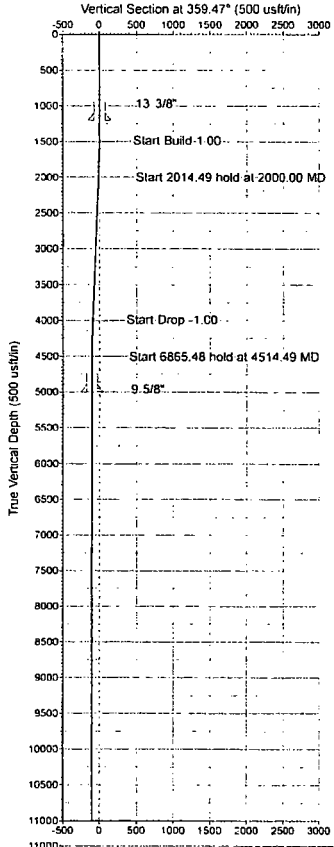
Magnetic Field
Strength: 48279.7snT
Dip Angle: 60.30°
Date: 7/31/2017
Model: HDGM

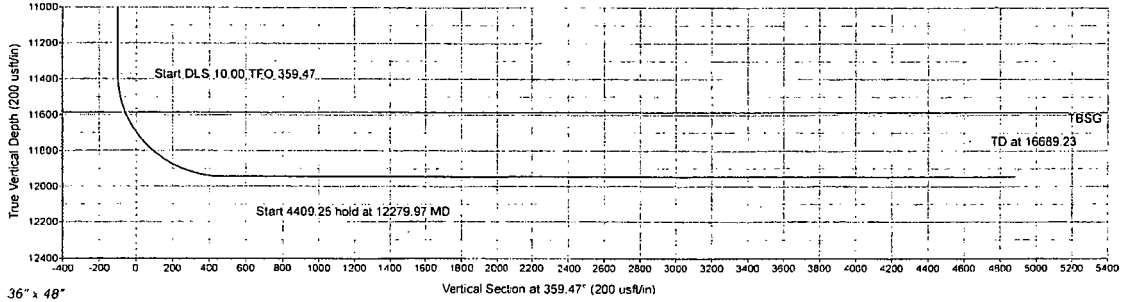
Azimuth Corrections

Total Magnetic Corr. (M to G): 6.57°

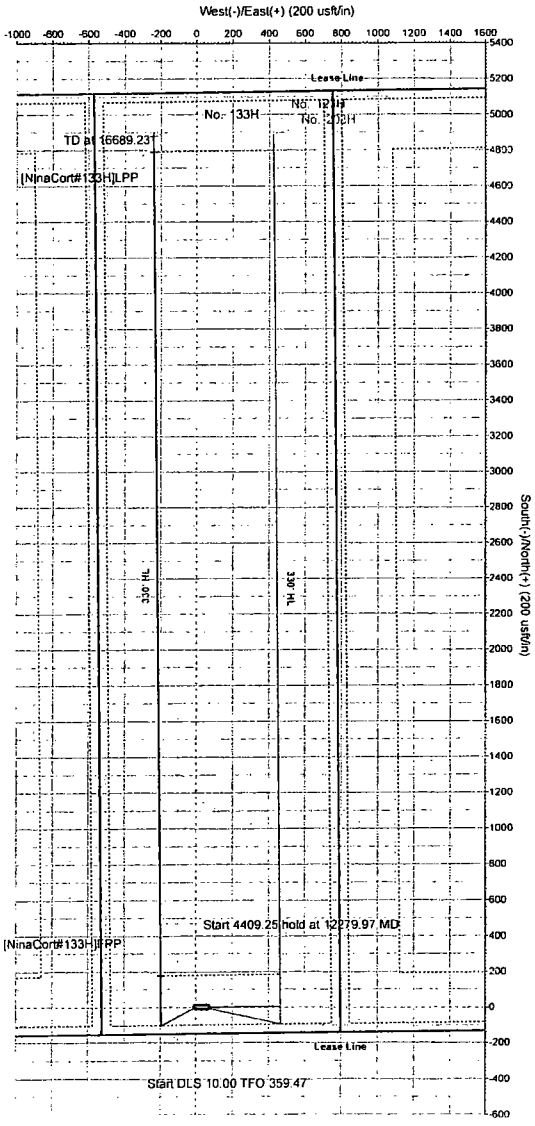
Declination (M to T): 6.93° East

Vertical Section at 359.47° (500 usft/in)




West(-)/East(+) (200 usft/in)

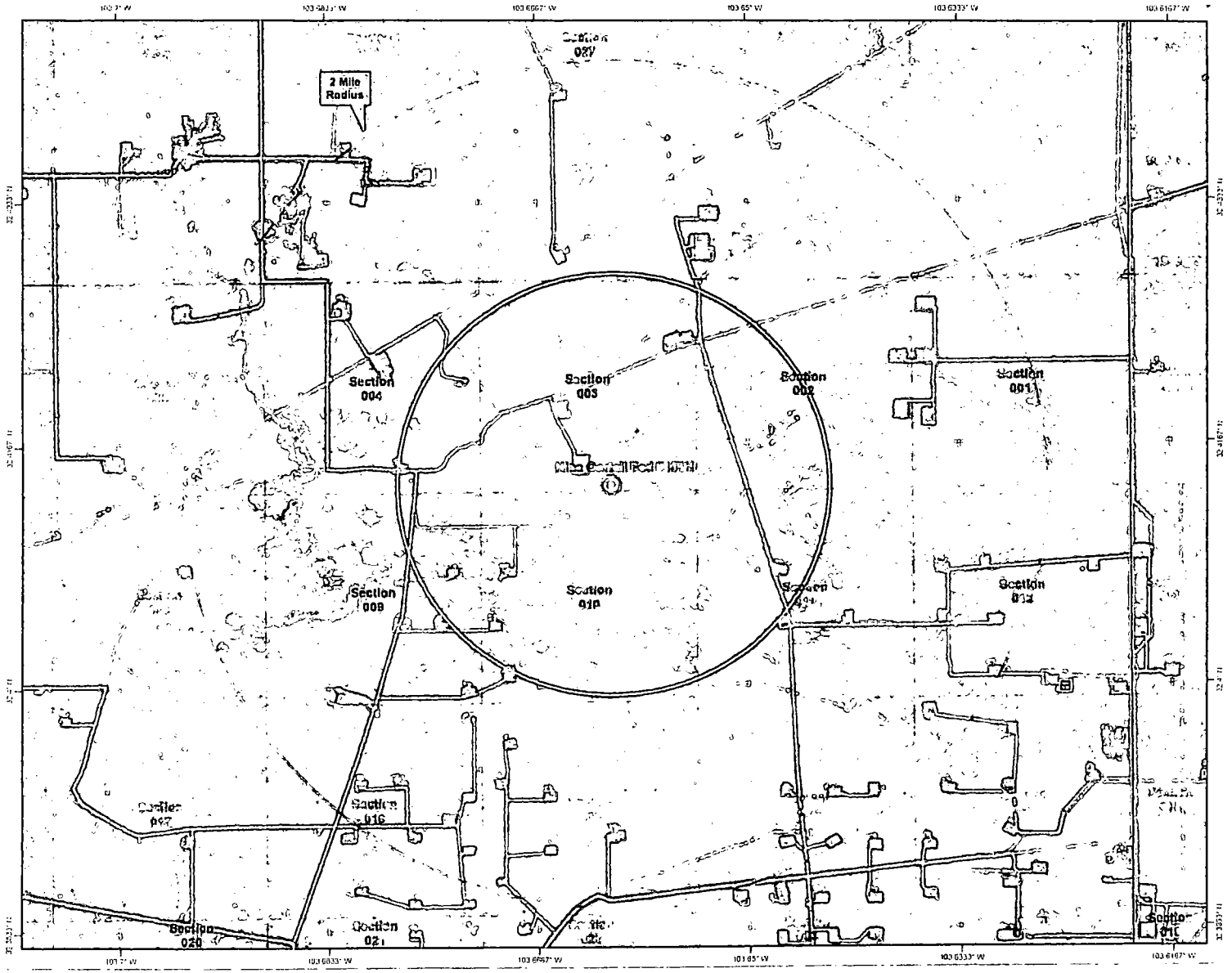



36" x 48"

# Matador Production Company

**Nina Cortell Fed #133H**
**$H_2S$ Contingency Plan:**
**2 Mile Radius Map**

Section 3, Township 22S, Range 32E
Lea County, New Mexico




Surface Hole Location

1:27,000

0 0.25 0.5 1

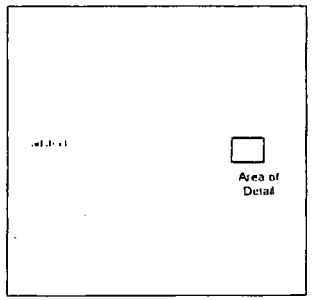
Miles

N

NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., November 15, 2017
for Matador Production Company



# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

| | | | |
|---|---|---|---|
| **Project** | Lea County, NM | | |
| **Map System:** | US State Plane 1927 (Exact solution) | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | NAD 1927 (NADCON CONUS) | | |
| **Map Zone:** | New Mexico East 3001 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Site** | Nina Cortell Fed Com | | | | |
| **Site Position:** | | **Northing:** | 514,876.00 usft | **Latitude:** | 32.413755°N |
| **From:** | Map | **Easting:** | 705,087.00 usft | **Longitude:** | 103.668756°W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.36 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | No. 133H | | | | | |
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 514,903.00 usft | **Latitude:** | 32.413785°N |
| | **+E/-W** | 0.00 usft | **Easting:** | 707,669.00 usft | **Longitude:** | 103.660389°W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,806.00 usft |

| | | | | | |
|---|---|---|---|---|---|
| **Wellbore** | OH | | | | |
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | HDGM | 7/31/2017 | 6.93 | 60.30 | 48,279.70 |

| | | | | | |
|---|---|---|---|---|---|
| **Design** | Prelim Plan B | | | | |
| **Audit Notes:** | | | | | |
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |
| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (°)** | |
| | 0.00 | 0.00 | 0.00 | 359.47 | |

**Survey Tool Program** **Date** 8/11/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 1,200.00 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |
| 1,200.00 | 5,000.00 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |
| 5,000.00 | 16,689.23 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **13 3/8"** | | | | | | | | | |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 1.00 | 242.27 | 1,599.99 | -0.41 | -0.77 | -0.40 | 1.00 | 1.00 | 0.00 |
| 1,700.00 | 2.00 | 242.27 | 1,699.96 | -1.62 | -3.09 | -1.60 | 1.00 | 1.00 | 0.00 |
| 1,800.00 | 3.00 | 242.27 | 1,799.86 | -3.65 | -6.95 | -3.59 | 1.00 | 1.00 | 0.00 |
| 1,900.00 | 4.00 | 242.27 | 1,899.68 | -6.50 | -12.35 | -6.38 | 1.00 | 1.00 | 0.00 |
| 2,000.00 | 5.00 | 242.27 | 1,999.37 | -10.15 | -19.30 | -9.97 | 1.00 | 1.00 | 0.00 |
| 2,100.00 | 5.00 | 242.27 | 2,098.99 | -14.20 | -27.01 | -13.95 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 5.00 | 242.27 | 2,198.60 | -18.26 | -34.73 | -17.94 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 5.00 | 242.27 | 2,298.22 | -22.31 | -42.44 | -21.92 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 5.00 | 242.27 | 2,397.84 | -26.37 | -50.16 | -25.91 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 5.00 | 242.27 | 2,497.46 | -30.43 | -57.87 | -29.89 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 5.00 | 242.27 | 2,597.08 | -34.48 | -65.58 | -33.87 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 5.00 | 242.27 | 2,696.70 | -38.54 | -73.30 | -37.86 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 5.00 | 242.27 | 2,796.32 | -42.59 | -81.01 | -41.84 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 5.00 | 242.27 | 2,895.94 | -46.65 | -88.73 | -45.83 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 5.00 | 242.27 | 2,995.56 | -50.71 | -96.44 | -49.81 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 5.00 | 242.27 | 3,095.18 | -54.76 | -104.16 | -53.80 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 5.00 | 242.27 | 3,194.80 | -58.82 | -111.87 | -57.78 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 5.00 | 242.27 | 3,294.42 | -62.87 | -119.58 | -61.77 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 5.00 | 242.27 | 3,394.04 | -66.93 | -127.30 | -65.75 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 5.00 | 242.27 | 3,493.66 | -70.99 | -135.01 | -69.73 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 5.00 | 242.27 | 3,593.28 | -75.04 | -142.73 | -73.72 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 5.00 | 242.27 | 3,692.90 | -79.10 | -150.44 | -77.70 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 5.00 | 242.27 | 3,792.52 | -83.15 | -158.16 | -81.69 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 5.00 | 242.27 | 3,892.14 | -87.21 | -165.87 | -85.67 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 5.00 | 242.27 | 3,991.76 | -91.27 | -173.58 | -89.66 | 0.00 | 0.00 | 0.00 |
| 4,014.49 | 5.00 | 242.27 | 4,006.19 | -91.85 | -174.70 | -90.23 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 4.14 | 242.27 | 4,091.43 | -95.03 | -180.74 | -93.35 | 1.00 | -1.00 | 0.00 |
| 4,200.00 | 3.14 | 242.27 | 4,191.22 | -97.98 | -186.36 | -96.26 | 1.00 | -1.00 | 0.00 |
| 4,300.00 | 2.14 | 242.27 | 4,291.12 | -100.13 | -190.45 | -98.37 | 1.00 | -1.00 | 0.00 |
| 4,400.00 | 1.14 | 242.27 | 4,391.07 | -101.47 | -192.99 | -99.68 | 1.00 | -1.00 | 0.00 |
| 4,500.00 | 0.14 | 242.27 | 4,491.07 | -101.99 | -193.98 | -100.19 | 1.00 | -1.00 | 0.00 |
| 4,514.49 | 0.00 | 0.00 | 4,505.56 | -102.00 | -194.00 | -100.20 | 1.00 | -1.00 | 0.00 |
| 4,600.00 | 0.00 | 0.00 | 4,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 0.00 | 0.00 | 4,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 4,900.00 | 0.00 | 0.00 | 4,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,008.93 | 0.00 | 0.00 | 5,000.00 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| **9 5/8"** | | | | | | | | | |
| 5,100.00 | 0.00 | 0.00 | 5,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 7,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 8,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 0.00 | 0.00 | 8,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 0.00 | 0.00 | 8,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 0.00 | 0.00 | 8,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 0.00 | 0.00 | 8,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 0.00 | 0.00 | 8,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 9,100.00 | 0.00 | 0.00 | 9,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 0.00 | 0.00 | 9,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 0.00 | 0.00 | 9,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 0.00 | 0.00 | 9,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 0.00 | 0.00 | 9,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 0.00 | 0.00 | 9,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 0.00 | 0.00 | 9,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 0.00 | 0.00 | 9,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 0.00 | 0.00 | 9,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 0.00 | 0.00 | 9,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 0.00 | 0.00 | 10,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 0.00 | 0.00 | 10,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 0.00 | 0.00 | 10,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 0.00 | 0.00 | 10,391.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 0.00 | 0.00 | 10,491.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 0.00 | 0.00 | 10,591.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 0.00 | 0.00 | 10,691.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 0.00 | 0.00 | 10,791.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 0.00 | 0.00 | 10,891.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 0.00 | 0.00 | 10,991.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 0.00 | 0.00 | 11,091.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 0.00 | 0.00 | 11,191.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 0.00 | 0.00 | 11,291.07 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,379.97 | 0.00 | 0.00 | 11,371.04 | -102.00 | -194.00 | -100.20 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 2.00 | 359.47 | 11,391.06 | -101.65 | -194.00 | -99.85 | 10.00 | 10.00 | 0.00 |
| 11,450.00 | 7.00 | 359.47 | 11,440.89 | -97.73 | -194.04 | -95.93 | 10.00 | 10.00 | 0.00 |
| 11,500.00 | 12.00 | 359.47 | 11,490.19 | -89.47 | -194.12 | -87.68 | 10.00 | 10.00 | 0.00 |
| 11,550.00 | 17.00 | 359.47 | 11,538.58 | -76.96 | -194.23 | -75.16 | 10.00 | 10.00 | 0.00 |
| 11,600.00 | 22.00 | 359.47 | 11,585.70 | -60.27 | -194.39 | -58.47 | 10.00 | 10.00 | 0.00 |
| 11,650.00 | 27.00 | 359.47 | 11,631.18 | -39.54 | -194.58 | -37.74 | 10.00 | 10.00 | 0.00 |
| 11,700.00 | 32.00 | 359.47 | 11,674.68 | -14.93 | -194.80 | -13.13 | 10.00 | 10.00 | 0.00 |
| 11,750.00 | 37.00 | 359.47 | 11,715.88 | 13.38 | -195.07 | 15.19 | 10.00 | 10.00 | 0.00 |
| 11,800.00 | 42.00 | 359.47 | 11,754.44 | 45.18 | -195.36 | 46.98 | 10.00 | 10.00 | 0.00 |
| 11,850.00 | 47.00 | 359.47 | 11,790.09 | 80.21 | -195.68 | 82.02 | 10.00 | 10.00 | 0.00 |
| 11,900.00 | 52.00 | 359.47 | 11,822.55 | 118.22 | -196.03 | 120.03 | 10.00 | 10.00 | 0.00 |
| 11,950.00 | 57.00 | 359.47 | 11,851.58 | 158.91 | -196.41 | 160.72 | 10.00 | 10.00 | 0.00 |
| 12,000.00 | 62.00 | 359.47 | 11,876.94 | 201.98 | -196.81 | 203.79 | 10.00 | 10.00 | 0.00 |
| 12,050.00 | 67.00 | 359.47 | 11,898.46 | 247.09 | -197.22 | 248.91 | 10.00 | 10.00 | 0.00 |
| 12,100.00 | 72.00 | 359.47 | 11,915.96 | 293.91 | -197.66 | 295.73 | 10.00 | 10.00 | 0.00 |
| 12,150.00 | 77.00 | 359.47 | 11,929.32 | 342.08 | -198.10 | 343.89 | 10.00 | 10.00 | 0.00 |
| 12,200.00 | 82.00 | 359.47 | 11,938.43 | 391.22 | -198.55 | 393.04 | 10.00 | 10.00 | 0.00 |
| 12,250.00 | 87.00 | 359.47 | 11,943.21 | 440.97 | -199.01 | 442.80 | 10.00 | 10.00 | 0.00 |
| 12,279.97 | 90.00 | 359.47 | 11,944.00 | 470.93 | -199.29 | 472.76 | 10.00 | 10.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 12,300.00 | 90.00 | 359.47 | 11,944.00 | 490.96 | -199.47 | 492.78 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 359.47 | 11,944.00 | 590.95 | -200.40 | 592.78 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 359.47 | 11,944.00 | 690.95 | -201.32 | 692.78 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 359.47 | 11,944.00 | 790.95 | -202.24 | 792.78 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 359.47 | 11,944.00 | 890.94 | -203.17 | 892.78 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 359.47 | 11,944.00 | 990.94 | -204.09 | 992.78 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 359.47 | 11,944.00 | 1,090.93 | -205.01 | 1,092.78 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 359.47 | 11,944.00 | 1,190.93 | -205.94 | 1,192.78 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 359.47 | 11,944.00 | 1,290.92 | -206.86 | 1,292.78 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 359.47 | 11,944.00 | 1,390.92 | -207.78 | 1,392.78 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 359.47 | 11,944.00 | 1,490.92 | -208.71 | 1,492.78 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 359.47 | 11,944.00 | 1,590.91 | -209.63 | 1,592.78 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 359.47 | 11,944.00 | 1,690.91 | -210.55 | 1,692.78 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 359.47 | 11,944.00 | 1,790.90 | -211.48 | 1,792.78 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 359.47 | 11,944.00 | 1,890.90 | -212.40 | 1,892.78 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 359.47 | 11,944.00 | 1,990.89 | -213.32 | 1,992.78 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 359.47 | 11,944.00 | 2,090.89 | -214.25 | 2,092.78 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 359.47 | 11,944.00 | 2,190.89 | -215.17 | 2,192.78 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 359.47 | 11,944.00 | 2,290.88 | -216.09 | 2,292.78 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 359.47 | 11,944.00 | 2,390.88 | -217.02 | 2,392.78 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 359.47 | 11,944.00 | 2,490.87 | -217.94 | 2,492.78 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 359.47 | 11,944.00 | 2,590.87 | -218.86 | 2,592.78 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 359.47 | 11,944.00 | 2,690.86 | -219.79 | 2,692.78 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 359.47 | 11,944.00 | 2,790.86 | -220.71 | 2,792.78 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 359.47 | 11,944.00 | 2,890.86 | -221.63 | 2,892.78 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 359.47 | 11,944.00 | 2,990.85 | -222.56 | 2,992.78 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 359.47 | 11,944.00 | 3,090.85 | -223.48 | 3,092.78 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 359.47 | 11,944.00 | 3,190.84 | -224.40 | 3,192.78 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 359.47 | 11,944.00 | 3,290.84 | -225.33 | 3,292.78 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 359.47 | 11,944.00 | 3,390.83 | -226.25 | 3,392.78 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 359.47 | 11,944.00 | 3,490.83 | -227.17 | 3,492.78 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 359.47 | 11,944.00 | 3,590.83 | -228.10 | 3,592.78 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 359.47 | 11,944.00 | 3,690.82 | -229.02 | 3,692.78 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 359.47 | 11,944.00 | 3,790.82 | -229.94 | 3,792.78 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 359.47 | 11,944.00 | 3,890.81 | -230.87 | 3,892.78 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 359.47 | 11,944.00 | 3,990.81 | -231.79 | 3,992.78 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 359.47 | 11,944.00 | 4,090.80 | -232.71 | 4,092.78 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 359.47 | 11,944.00 | 4,190.80 | -233.64 | 4,192.78 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 359.47 | 11,944.00 | 4,290.80 | -234.56 | 4,292.78 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 359.47 | 11,944.00 | 4,390.79 | -235.48 | 4,392.78 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 359.47 | 11,944.00 | 4,490.79 | -236.41 | 4,492.78 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 359.47 | 11,944.00 | 4,590.78 | -237.33 | 4,592.78 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 359.47 | 11,944.00 | 4,690.78 | -238.25 | 4,692.78 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Well:** | No. 133H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan B | **Database:** | WellPlanner1 |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 16,600.00 | 90.00 | 359.47 | 11,944.00 | 4,790.77 | -239.18 | 4,792.78 | 0.00 | 0.00 | 0.00 |
| 16,689.23 | 90.00 | 359.47 | 11,944.00 | 4,880.00 | -240.00 | 4,882.01 | 0.00 | 0.00 | 0.00 |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| [NinaCort#133H]LPP | 0.00 | 0.00 | 0.00 | 4,790.00 | -239.00 | 519,693.00 | 707,430.00 | 32.426956°N | 103.661066°W |
| - plan misses target center by 4795.96usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| [NinaCort#133H]FPP | 0.00 | 0.00 | 11,500.00 | 178.00 | -197.00 | 515,081.00 | 707,472.00 | 32.414278°N | 103.661024°W |
| - plan misses target center by 252.90usft at 11620.85usft MD (11604.88 TVD, -52.11 N, -194.46 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| [NinaCort#133H]BHL | 0.00 | 0.00 | 11,944.00 | 4,880.00 | -240.00 | 519,783.00 | 707,429.00 | 32.427203°N | 103.661067°W |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

**Casing Points**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|---|---|---|---|---|
| 1,200.00 | 1,200.00 | 13 3/8" | 13-3/8 | 17-1/2 |
| 5,008.93 | 5,000.00 | 9 5/8" | 9-5/8 | 12-1/4 |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 11,600.33 | 11,586.00 | TBSG | | 0.00 | |

Checked By: _____ Approved By: _____ Date: _____

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Reference** Prelim Plan B

| | | | |
|---|---|---|---|
| **Filter type:** | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| **Interpolation Method:** | Stations | **Error Model:** | ISCWSA |
| **Depth Range:** | Unlimited | **Scan Method:** | Closest Approach 3D |
| **Results Limited by:** | Maximum center-center distance of 9,999.98 usft | **Error Surface:** | Pedal Curve |
| **Warning Levels Evaluated at:** | 2.00 Sigma | **Casing Method:** | Not applied |

**Survey Tool Program** **Date** 8/11/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 1,200.00 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |
| 1,200.00 | 5,000.00 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |
| 5,000.00 | 16,689.23 | Prelim Plan B (OH) | MWD+HDGM | OWSG MWD + HRGM |

**Summary**

| Site Name Offset Well - Wellbore - Design | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|
| Nina Cortell Fed Com | | | | | | |
| No. 123H - OH - Prelim Plan B | 1,100.00 | 1,100.00 | 60.01 | 52.58 | 8.083 | CC, ES |
| No. 123H - OH - Prelim Plan B | 1,300.00 | 1,297.85 | 63.46 | 54.98 | 7.481 | SF |
| No. 203H - OH - Prelim Plan B | 1,300.00 | 1,299.00 | 30.00 | 21.49 | 3.527 | CC, ES, SF |

**Offset Design** Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 89.05 | 1.00 | 60.00 | 60.01 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.13 | 0.13 | 89.05 | 1.00 | 60.00 | 60.01 | 59.75 | 0.25 | 235.775 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.49 | 0.49 | 89.05 | 1.00 | 60.00 | 60.01 | 59.04 | 0.97 | 61.771 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.84 | 0.84 | 89.05 | 1.00 | 60.00 | 60.01 | 58.32 | 1.69 | 35.542 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 1.20 | 1.20 | 89.05 | 1.00 | 60.00 | 60.01 | 57.60 | 2.41 | 24.948 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 1.56 | 1.56 | 89.05 | 1.00 | 60.00 | 60.01 | 56.89 | 3.12 | 19.219 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.92 | 1.92 | 89.05 | 1.00 | 60.00 | 60.01 | 56.17 | 3.84 | 15.630 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 2.28 | 2.28 | 89.05 | 1.00 | 60.00 | 60.01 | 55.45 | 4.56 | 13.171 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 2.64 | 2.64 | 89.05 | 1.00 | 60.00 | 60.01 | 54.74 | 5.27 | 11.380 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 3.00 | 3.00 | 89.05 | 1.00 | 60.00 | 60.01 | 54.02 | 5.99 | 10.018 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 3.35 | 3.35 | 89.05 | 1.00 | 60.00 | 60.01 | 53.30 | 6.71 | 8.947 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 3.71 | 3.71 | 89.05 | 1.00 | 60.00 | 60.01 | 52.58 | 7.42 | 8.083 | CC, ES |
| 1,200.00 | 1,200.00 | 1,198.95 | 1,198.95 | 4.07 | 4.06 | 89.05 | 1.01 | 60.85 | 60.87 | 52.74 | 8.13 | 7.489 | |
| 1,300.00 | 1,300.00 | 1,297.85 | 1,297.81 | 4.25 | 4.23 | 89.06 | 1.04 | 63.42 | 63.46 | 54.98 | 8.48 | 7.481 | SF |
| 1,400.00 | 1,400.00 | 1,396.63 | 1,395.49 | 4.28 | 4.27 | 89.07 | 1.09 | 67.68 | 67.78 | 59.23 | 8.54 | 7.935 | |
| 1,500.00 | 1,500.00 | 1,495.23 | 1,494.91 | 4.34 | 4.33 | 89.09 | 1.17 | 73.62 | 73.81 | 65.16 | 8.65 | 8.529 | |
| 1,600.00 | 1,599.99 | 1,606.57 | 1,592.82 | 4.43 | 4.43 | -153.39 | 1.26 | 81.23 | 82.33 | 73.50 | 8.83 | 9.323 | |
| 1,700.00 | 1,699.96 | 1,707.19 | 1,691.82 | 4.54 | 4.56 | -154.02 | 1.37 | 89.89 | 93.38 | 84.32 | 9.06 | 10.306 | |
| 1,800.00 | 1,799.86 | 1,791.99 | 1,790.63 | 4.67 | 4.69 | -154.91 | 1.47 | 98.53 | 106.01 | 96.69 | 9.32 | 11.378 | |
| 1,900.00 | 1,899.68 | 1,909.05 | 1,889.21 | 4.83 | 4.89 | -155.94 | 1.58 | 107.16 | 120.24 | 110.57 | 9.67 | 12.434 | |
| 2,000.00 | 1,999.37 | 1,989.65 | 1,987.54 | 5.01 | 5.05 | -157.02 | 1.69 | 115.76 | 136.09 | 126.09 | 10.00 | 13.608 | |
| 2,100.00 | 2,098.99 | 2,088.22 | 2,085.73 | 5.22 | 5.27 | -158.06 | 1.79 | 124.35 | 152.78 | 142.38 | 10.40 | 14.691 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,200.00 | 2,198.60 | 2,186.78 | 2,183.92 | 5.44 | 5.49 | -158.89 | 1.90 | 132.94 | 169.51 | 158.68 | 10.83 | 15.652 | |
| 2,300.00 | 2,298.22 | 2,285.35 | 2,282.10 | 5.68 | 5.74 | -159.57 | 2.00 | 141.53 | 186.27 | 174.98 | 11.29 | 16.498 | |
| 2,400.00 | 2,397.84 | 2,383.91 | 2,380.29 | 5.94 | 6.00 | -160.14 | 2.11 | 150.12 | 203.05 | 191.27 | 11.78 | 17.242 | |
| 2,500.00 | 2,497.46 | 2,482.47 | 2,478.48 | 6.20 | 6.27 | -160.62 | 2.22 | 158.71 | 219.84 | 207.56 | 12.29 | 17.894 | |
| 2,600.00 | 2,597.08 | 2,581.04 | 2,576.67 | 6.48 | 6.54 | -161.04 | 2.32 | 167.30 | 236.65 | 223.84 | 12.82 | 18.466 | |
| 2,700.00 | 2,696.70 | 2,679.60 | 2,674.86 | 6.77 | 6.83 | -161.40 | 2.43 | 175.89 | 253.47 | 240.11 | 13.36 | 18.968 | |
| 2,800.00 | 2,796.32 | 2,778.16 | 2,773.05 | 7.07 | 7.13 | -161.71 | 2.53 | 184.48 | 270.30 | 256.37 | 13.93 | 19.409 | |
| 2,900.00 | 2,895.94 | 2,876.73 | 2,871.24 | 7.37 | 7.43 | -161.99 | 2.64 | 193.07 | 287.14 | 272.63 | 14.50 | 19.797 | |
| 3,000.00 | 2,995.56 | 2,975.29 | 2,969.42 | 7.68 | 7.74 | -162.24 | 2.74 | 201.66 | 303.98 | 288.88 | 15.09 | 20.139 | |
| 3,100.00 | 3,095.18 | 3,073.86 | 3,067.61 | 8.00 | 8.05 | -162.46 | 2.85 | 210.25 | 320.82 | 305.13 | 15.69 | 20.442 | |
| 3,200.00 | 3,194.80 | 3,172.42 | 3,165.80 | 8.32 | 8.37 | -162.66 | 2.96 | 218.84 | 337.67 | 321.37 | 16.30 | 20.710 | |
| 3,300.00 | 3,294.42 | 3,270.98 | 3,263.99 | 8.65 | 8.69 | -162.84 | 3.06 | 227.43 | 354.53 | 337.60 | 16.92 | 20.949 | |
| 3,400.00 | 3,394.04 | 3,369.55 | 3,362.18 | 8.98 | 9.02 | -163.00 | 3.17 | 236.02 | 371.38 | 353.83 | 17.55 | 21.161 | |
| 3,500.00 | 3,493.66 | 3,468.11 | 3,460.37 | 9.31 | 9.35 | -163.15 | 3.27 | 244.61 | 388.24 | 370.06 | 18.18 | 21.350 | |
| 3,600.00 | 3,593.28 | 3,566.67 | 3,558.56 | 9.65 | 9.69 | -163.29 | 3.38 | 253.20 | 405.10 | 386.28 | 18.82 | 21.520 | |
| 3,700.00 | 3,692.90 | 3,665.24 | 3,656.75 | 9.99 | 10.02 | -163.41 | 3.49 | 261.78 | 421.97 | 402.50 | 19.47 | 21.673 | |
| 3,800.00 | 3,792.52 | 3,763.80 | 3,754.93 | 10.34 | 10.36 | -163.53 | 3.59 | 270.37 | 438.83 | 418.71 | 20.12 | 21.810 | |
| 3,900.00 | 3,892.14 | 3,862.37 | 3,853.12 | 10.68 | 10.70 | -163.64 | 3.70 | 278.96 | 455.70 | 434.92 | 20.78 | 21.934 | |
| 4,000.00 | 3,991.76 | 3,960.93 | 3,951.31 | 11.03 | 11.04 | -163.74 | 3.80 | 287.55 | 472.57 | 451.13 | 21.44 | 22.045 | |
| 4,014.49 | 4,006.19 | 3,975.22 | 3,965.54 | 11.08 | 11.09 | -163.75 | 3.82 | 288.80 | 475.01 | 453.48 | 21.53 | 22.061 | |
| 4,100.00 | 4,091.43 | 4,059.60 | 4,049.60 | 11.38 | 11.39 | -163.85 | 3.91 | 296.15 | 488.83 | 466.74 | 22.10 | 22.120 | |
| 4,200.00 | 4,191.22 | 4,158.52 | 4,148.15 | 11.72 | 11.74 | -163.90 | 4.01 | 304.77 | 503.46 | 480.70 | 22.76 | 22.116 | |
| 4,300.00 | 4,291.12 | 4,257.67 | 4,246.92 | 12.06 | 12.09 | -163.89 | 4.12 | 313.41 | 516.43 | 493.00 | 23.43 | 22.039 | |
| 4,400.00 | 4,391.07 | 4,357.03 | 4,345.90 | 12.39 | 12.44 | -163.83 | 4.23 | 322.07 | 527.73 | 503.63 | 24.10 | 21.895 | |
| 4,500.00 | 4,491.07 | 4,456.55 | 4,445.05 | 12.72 | 12.79 | -163.72 | 4.33 | 330.75 | 537.37 | 512.59 | 24.77 | 21.691 | |
| 4,514.49 | 4,505.56 | 4,470.99 | 4,459.43 | 12.77 | 12.84 | 78.57 | 4.35 | 332.01 | 538.63 | 513.76 | 24.87 | 21.658 | |
| 4,600.00 | 4,591.07 | 4,556.17 | 4,544.29 | 13.03 | 13.15 | 78.72 | 4.44 | 339.43 | 545.95 | 520.52 | 25.43 | 21.470 | |
| 4,700.00 | 4,691.07 | 4,655.79 | 4,643.53 | 13.34 | 13.50 | 78.88 | 4.55 | 348.11 | 554.52 | 528.44 | 26.09 | 21.258 | |
| 4,800.00 | 4,791.07 | 4,755.41 | 4,742.77 | 13.65 | 13.86 | 79.04 | 4.66 | 356.79 | 563.10 | 536.35 | 26.74 | 21.054 | |
| 4,900.00 | 4,891.07 | 4,855.03 | 4,842.01 | 13.97 | 14.22 | 79.20 | 4.76 | 365.47 | 571.68 | 544.27 | 27.41 | 20.858 | |
| 5,000.00 | 4,991.07 | 4,954.65 | 4,941.25 | 14.13 | 14.49 | 79.35 | 4.87 | 374.16 | 580.26 | 552.45 | 27.81 | 20.863 | |
| 5,100.00 | 5,091.07 | 5,054.27 | 5,040.49 | 14.14 | 14.60 | 79.49 | 4.98 | 382.84 | 588.85 | 560.94 | 27.91 | 21.100 | |
| 5,200.00 | 5,191.07 | 5,153.89 | 5,139.73 | 14.15 | 14.64 | 79.64 | 5.08 | 391.52 | 597.44 | 569.50 | 27.94 | 21.381 | |
| 5,300.00 | 5,291.07 | 5,253.51 | 5,238.97 | 14.18 | 14.69 | 79.77 | 5.19 | 400.20 | 606.04 | 578.04 | 27.99 | 21.648 | |
| 5,400.00 | 5,391.07 | 5,353.12 | 5,338.21 | 14.22 | 14.75 | 79.91 | 5.30 | 408.88 | 614.63 | 586.57 | 28.07 | 21.899 | |
| 5,500.00 | 5,491.07 | 5,452.74 | 5,437.45 | 14.26 | 14.82 | 80.04 | 5.40 | 417.56 | 623.23 | 595.08 | 28.16 | 22.135 | |
| 5,600.00 | 5,591.07 | 5,552.36 | 5,536.69 | 14.32 | 14.90 | 80.17 | 5.51 | 426.25 | 631.84 | 603.58 | 28.26 | 22.355 | |
| 5,700.00 | 5,691.07 | 5,651.98 | 5,635.93 | 14.38 | 14.99 | 80.29 | 5.62 | 434.93 | 640.45 | 612.06 | 28.39 | 22.560 | |
| 5,800.00 | 5,791.07 | 5,751.60 | 5,735.17 | 14.45 | 15.09 | 80.41 | 5.72 | 443.61 | 649.06 | 620.53 | 28.53 | 22.749 | |
| 5,900.00 | 5,891.07 | 5,851.09 | 5,846.31 | 14.53 | 15.20 | 80.53 | 5.83 | 452.37 | 656.83 | 628.10 | 28.73 | 22.865 | |
| 6,000.00 | 5,991.07 | 5,975.74 | 5,958.76 | 14.62 | 15.32 | 80.62 | 5.91 | 459.03 | 662.68 | 633.74 | 28.93 | 22.902 | |
| 6,100.00 | 6,091.07 | 6,088.61 | 6,071.54 | 14.72 | 15.44 | 80.67 | 5.97 | 463.49 | 666.58 | 637.42 | 29.15 | 22.864 | |
| 6,200.00 | 6,191.07 | 6,201.61 | 6,184.52 | 14.82 | 15.56 | 80.70 | 6.00 | 465.72 | 668.53 | 639.15 | 29.38 | 22.752 | |
| 6,300.00 | 6,291.07 | 6,308.16 | 6,291.07 | 14.93 | 15.67 | 80.71 | 6.00 | 466.00 | 668.78 | 639.16 | 29.61 | 22.583 | |
| 6,400.00 | 6,391.07 | 6,408.16 | 6,391.07 | 15.05 | 15.78 | 80.71 | 6.00 | 466.00 | 668.78 | 638.93 | 29.85 | 22.404 | |
| 6,500.00 | 6,491.07 | 6,508.16 | 6,491.07 | 15.18 | 15.90 | 80.71 | 6.00 | 466.00 | 668.78 | 638.68 | 30.10 | 22.217 | |
| 6,600.00 | 6,591.07 | 6,608.16 | 6,591.07 | 15.31 | 16.02 | 80.71 | 6.00 | 466.00 | 668.78 | 638.41 | 30.37 | 22.022 | |
| 6,700.00 | 6,691.07 | 6,708.16 | 6,691.07 | 15.46 | 16.16 | 80.71 | 6.00 | 466.00 | 668.78 | 638.13 | 30.65 | 21.820 | |
| 6,800.00 | 6,791.07 | 6,808.16 | 6,791.07 | 15.61 | 16.29 | 80.71 | 6.00 | 466.00 | 668.78 | 637.83 | 30.94 | 21.612 | |
| 6,900.00 | 6,891.07 | 6,908.16 | 6,891.07 | 15.76 | 16.44 | 80.71 | 6.00 | 466.00 | 668.78 | 637.52 | 31.25 | 21.398 | |
| 7,000.00 | 6,991.07 | 7,008.16 | 6,991.07 | 15.92 | 16.59 | 80.71 | 6.00 | 466.00 | 668.78 | 637.20 | 31.58 | 21.180 | |
| 7,100.00 | 7,091.07 | 7,108.16 | 7,091.07 | 16.09 | 16.75 | 80.71 | 6.00 | 466.00 | 668.78 | 636.87 | 31.91 | 20.958 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7,200.00 | 7,191.07 | 7,208.16 | 7,191.07 | 16.27 | 16.91 | 80.71 | 6.00 | 466.00 | 668.78 | 636.52 | 32.26 | 20.732 | |
| 7,300.00 | 7,291.07 | 7,308.16 | 7,291.07 | 16.45 | 17.08 | 80.71 | 6.00 | 466.00 | 668.78 | 636.16 | 32.62 | 20.504 | |
| 7,400.00 | 7,391.07 | 7,408.16 | 7,391.07 | 16.63 | 17.26 | 80.71 | 6.00 | 466.00 | 668.78 | 635.79 | 32.99 | 20.273 | |
| 7,500.00 | 7,491.07 | 7,508.16 | 7,491.07 | 16.83 | 17.44 | 80.71 | 6.00 | 466.00 | 668.78 | 635.41 | 33.37 | 20.041 | |
| 7,600.00 | 7,591.07 | 7,608.16 | 7,591.07 | 17.02 | 17.63 | 80.71 | 6.00 | 466.00 | 668.78 | 635.01 | 33.76 | 19.807 | |
| 7,700.00 | 7,691.07 | 7,708.16 | 7,691.07 | 17.23 | 17.82 | 80.71 | 6.00 | 466.00 | 668.78 | 634.61 | 34.17 | 19.573 | |
| 7,800.00 | 7,791.07 | 7,808.16 | 7,791.07 | 17.43 | 18.02 | 80.71 | 6.00 | 466.00 | 668.78 | 634.20 | 34.58 | 19.339 | |
| 7,900.00 | 7,891.07 | 7,908.16 | 7,891.07 | 17.65 | 18.22 | 80.71 | 6.00 | 466.00 | 668.78 | 633.77 | 35.01 | 19.105 | |
| 8,000.00 | 7,991.07 | 8,008.16 | 7,991.07 | 17.86 | 18.42 | 80.71 | 6.00 | 466.00 | 668.78 | 633.34 | 35.44 | 18.871 | |
| 8,100.00 | 8,091.07 | 8,108.16 | 8,091.07 | 18.08 | 18.64 | 80.71 | 6.00 | 466.00 | 668.78 | 632.90 | 35.88 | 18.639 | |
| 8,200.00 | 8,191.07 | 8,208.16 | 8,191.07 | 18.31 | 18.85 | 80.71 | 6.00 | 466.00 | 668.78 | 632.45 | 36.33 | 18.407 | |
| 8,300.00 | 8,291.07 | 8,308.16 | 8,291.07 | 18.54 | 19.07 | 80.71 | 6.00 | 466.00 | 668.78 | 631.99 | 36.79 | 18.178 | |
| 8,400.00 | 8,391.07 | 8,408.16 | 8,391.07 | 18.77 | 19.30 | 80.71 | 6.00 | 466.00 | 668.78 | 631.52 | 37.26 | 17.949 | |
| 8,500.00 | 8,491.07 | 8,508.16 | 8,491.07 | 19.01 | 19.52 | 80.71 | 6.00 | 466.00 | 668.78 | 631.04 | 37.73 | 17.723 | |
| 8,600.00 | 8,591.07 | 8,608.16 | 8,591.07 | 19.25 | 19.76 | 80.71 | 6.00 | 466.00 | 668.78 | 630.56 | 38.22 | 17.499 | |
| 8,700.00 | 8,691.07 | 8,708.16 | 8,691.07 | 19.50 | 19.99 | 80.71 | 6.00 | 466.00 | 668.78 | 630.07 | 38.71 | 17.278 | |
| 8,800.00 | 8,791.07 | 8,808.16 | 8,791.07 | 19.75 | 20.23 | 80.71 | 6.00 | 466.00 | 668.78 | 629.57 | 39.20 | 17.059 | |
| 8,900.00 | 8,891.07 | 8,908.16 | 8,891.07 | 20.00 | 20.47 | 80.71 | 6.00 | 466.00 | 668.78 | 629.07 | 39.71 | 16.842 | |
| 9,000.00 | 8,991.07 | 9,008.16 | 8,991.07 | 20.26 | 20.72 | 80.71 | 6.00 | 466.00 | 668.78 | 628.56 | 40.22 | 16.628 | |
| 9,100.00 | 9,091.07 | 9,108.16 | 9,091.07 | 20.51 | 20.97 | 80.71 | 6.00 | 466.00 | 668.78 | 628.04 | 40.74 | 16.417 | |
| 9,200.00 | 9,191.07 | 9,208.16 | 9,191.07 | 20.78 | 21.22 | 80.71 | 6.00 | 466.00 | 668.78 | 627.52 | 41.26 | 16.210 | |
| 9,300.00 | 9,291.07 | 9,308.16 | 9,291.07 | 21.04 | 21.48 | 80.71 | 6.00 | 466.00 | 668.78 | 626.99 | 41.79 | 16.005 | |
| 9,400.00 | 9,391.07 | 9,408.16 | 9,391.07 | 21.31 | 21.74 | 80.71 | 6.00 | 466.00 | 668.78 | 626.46 | 42.32 | 15.803 | |
| 9,500.00 | 9,491.07 | 9,508.16 | 9,491.07 | 21.58 | 22.00 | 80.71 | 6.00 | 466.00 | 668.78 | 625.92 | 42.86 | 15.604 | |
| 9,600.00 | 9,591.07 | 9,608.16 | 9,591.07 | 21.85 | 22.26 | 80.71 | 6.00 | 466.00 | 668.78 | 625.37 | 43.40 | 15.408 | |
| 9,700.00 | 9,691.07 | 9,708.16 | 9,691.07 | 22.12 | 22.53 | 80.71 | 6.00 | 466.00 | 668.78 | 624.82 | 43.95 | 15.216 | |
| 9,800.00 | 9,791.07 | 9,808.16 | 9,791.07 | 22.40 | 22.80 | 80.71 | 6.00 | 466.00 | 668.78 | 624.27 | 44.51 | 15.026 | |
| 9,900.00 | 9,891.07 | 9,908.16 | 9,891.07 | 22.68 | 23.07 | 80.71 | 6.00 | 466.00 | 668.78 | 623.71 | 45.07 | 14.840 | |
| 10,000.00 | 9,991.07 | 10,008.16 | 9,991.07 | 22.96 | 23.34 | 80.71 | 6.00 | 466.00 | 668.78 | 623.15 | 45.63 | 14.657 | |
| 10,100.00 | 10,091.07 | 10,108.16 | 10,091.07 | 23.25 | 23.62 | 80.71 | 6.00 | 466.00 | 668.78 | 622.58 | 46.20 | 14.477 | |
| 10,200.00 | 10,191.07 | 10,208.16 | 10,191.07 | 23.53 | 23.90 | 80.71 | 6.00 | 466.00 | 668.78 | 622.01 | 46.77 | 14.300 | |
| 10,300.00 | 10,291.07 | 10,308.16 | 10,291.07 | 23.82 | 24.18 | 80.71 | 6.00 | 466.00 | 668.78 | 621.43 | 47.34 | 14.126 | |
| 10,310.31 | 10,301.38 | 10,318.47 | 10,301.38 | 23.85 | 24.21 | 80.71 | 6.00 | 466.00 | 668.78 | 621.37 | 47.40 | 14.108 | |
| 10,400.00 | 10,391.07 | 10,405.74 | 10,388.64 | 24.11 | 24.45 | 80.69 | 6.16 | 466.00 | 668.81 | 620.89 | 47.92 | 13.958 | |
| 10,500.00 | 10,491.07 | 10,489.68 | 10,472.12 | 24.40 | 24.69 | 80.01 | 14.28 | 465.92 | 670.36 | 621.92 | 48.44 | 13.838 | |
| 10,600.00 | 10,591.07 | 10,569.63 | 10,549.71 | 24.69 | 24.91 | 78.41 | 33.27 | 465.75 | 674.74 | 625.80 | 48.94 | 13.787 | |
| 10,700.00 | 10,691.07 | 10,643.06 | 10,618.02 | 24.99 | 25.11 | 76.19 | 60.07 | 465.50 | 683.04 | 633.66 | 49.38 | 13.833 | |
| 10,800.00 | 10,791.07 | 10,708.65 | 10,675.70 | 25.28 | 25.28 | 73.66 | 91.22 | 465.21 | 696.57 | 646.83 | 49.74 | 14.005 | |
| 10,900.00 | 10,891.07 | 10,766.16 | 10,723.06 | 25.58 | 25.42 | 71.08 | 123.80 | 464.91 | 716.51 | 666.51 | 50.00 | 14.331 | |
| 11,000.00 | 10,991.07 | 10,816.03 | 10,761.31 | 25.88 | 25.53 | 68.62 | 155.78 | 464.62 | 743.65 | 693.50 | 50.15 | 14.829 | |
| 11,100.00 | 11,091.07 | 10,859.08 | 10,791.99 | 26.18 | 25.64 | 66.37 | 185.97 | 464.34 | 778.32 | 728.12 | 50.20 | 15.503 | |
| 11,200.00 | 11,191.07 | 10,900.00 | 10,818.97 | 26.49 | 25.74 | 64.16 | 216.72 | 464.06 | 820.41 | 770.20 | 50.21 | 16.339 | |
| 11,300.00 | 11,291.07 | 10,928.33 | 10,836.33 | 26.79 | 25.80 | 62.59 | 239.10 | 463.85 | 869.43 | 819.30 | 50.13 | 17.343 | |
| 11,379.97 | 11,371.04 | 10,950.00 | 10,848.85 | 27.03 | 25.86 | 61.39 | 256.79 | 463.69 | 913.22 | 863.15 | 50.07 | 18.239 | |
| 11,400.00 | 11,391.06 | 10,950.00 | 10,848.85 | 27.09 | 25.86 | 60.69 | 256.79 | 463.69 | 924.68 | 874.66 | 50.02 | 18.487 | |
| 11,450.00 | 11,440.89 | 10,970.37 | 10,860.00 | 27.24 | 25.91 | 56.74 | 273.83 | 463.53 | 952.83 | 902.81 | 50.03 | 19.047 | |
| 11,500.00 | 11,490.19 | 10,985.05 | 10,867.66 | 27.39 | 25.95 | 53.39 | 286.36 | 463.42 | 980.38 | 930.38 | 50.00 | 19.609 | |
| 11,550.00 | 11,538.58 | 11,000.00 | 10,875.12 | 27.53 | 25.99 | 50.34 | 299.31 | 463.30 | 1,007.02 | 957.06 | 49.97 | 20.154 | |
| 11,600.00 | 11,585.70 | 11,016.05 | 10,882.76 | 27.67 | 26.04 | 47.57 | 313.42 | 463.17 | 1,032.54 | 982.60 | 49.95 | 20.673 | |
| 11,650.00 | 11,631.18 | 11,032.23 | 10,890.05 | 27.80 | 26.09 | 45.11 | 327.86 | 463.03 | 1,056.74 | 1,006.81 | 49.93 | 21.165 | |
| 11,700.00 | 11,674.68 | 11,050.00 | 10,897.59 | 27.92 | 26.14 | 42.91 | 343.95 | 462.88 | 1,079.45 | 1,029.53 | 49.92 | 21.623 | |
| 11,750.00 | 11,715.88 | 11,065.64 | 10,903.81 | 28.04 | 26.19 | 41.04 | 358.31 | 462.75 | 1,100.52 | 1,050.61 | 49.91 | 22.051 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11,800.00 | 11,754.44 | 11,082.79 | 10,910.18 | 28.14 | 26.24 | 39.39 | 374.23 | 462.61 | 1,119.81 | 1,069.90 | 49.91 | 22.439 | |
| 11,850.00 | 11,790.09 | 11,100.00 | 10,916.08 | 28.25 | 26.30 | 37.98 | 390.39 | 462.46 | 1,137.21 | 1,087.30 | 49.91 | 22.785 | |
| 11,900.00 | 11,822.55 | 11,117.77 | 10,921.67 | 28.37 | 26.36 | 36.78 | 407.25 | 462.30 | 1,152.62 | 1,102.70 | 49.93 | 23.087 | |
| 11,950.00 | 11,851.58 | 11,135.52 | 10,926.73 | 28.49 | 26.42 | 35.79 | 424.27 | 462.14 | 1,165.96 | 1,116.01 | 49.95 | 23.343 | |
| 12,000.00 | 11,876.94 | 11,150.00 | 10,930.46 | 28.62 | 26.47 | 35.01 | 438.26 | 462.02 | 1,177.16 | 1,127.19 | 49.97 | 23.556 | |
| 12,050.00 | 11,898.46 | 11,171.43 | 10,935.33 | 28.75 | 26.55 | 34.35 | 459.13 | 461.82 | 1,186.14 | 1,136.10 | 50.03 | 23.706 | |
| 12,100.00 | 11,915.95 | 11,200.00 | 10,940.61 | 28.89 | 26.65 | 33.85 | 487.20 | 461.56 | 1,193.00 | 1,142.87 | 50.13 | 23.797 | |
| 12,150.00 | 11,929.32 | 11,200.00 | 10,940.61 | 29.04 | 26.65 | 33.61 | 487.20 | 461.56 | 1,197.40 | 1,147.24 | 50.16 | 23.873 | |
| 12,200.00 | 11,938.43 | 11,225.87 | 10,944.17 | 29.19 | 26.75 | 33.45 | 512.82 | 461.33 | 1,199.49 | 1,149.21 | 50.28 | 23.856 | |
| 12,250.00 | 11,943.21 | 11,250.00 | 10,946.45 | 29.35 | 26.85 | 33.46 | 536.84 | 461.11 | 1,199.37 | 1,148.96 | 50.41 | 23.790 | |
| 12,279.97 | 11,944.00 | 11,250.00 | 10,946.45 | 29.44 | 26.85 | 33.53 | 536.84 | 461.11 | 1,198.15 | 1,147.68 | 50.47 | 23.739 | |
| 12,300.00 | 11,944.00 | 11,262.26 | 10,947.22 | 29.51 | 26.90 | 33.55 | 549.07 | 460.99 | 1,197.15 | 1,146.61 | 50.54 | 23.687 | |
| 12,384.40 | 11,944.00 | 11,294.65 | 10,948.00 | 29.82 | 27.03 | 33.57 | 581.45 | 460.70 | 1,195.37 | 1,144.55 | 50.82 | 23.520 | |
| 12,400.00 | 11,944.00 | 11,310.25 | 10,948.00 | 29.88 | 27.10 | 33.57 | 597.05 | 460.55 | 1,195.37 | 1,144.47 | 50.90 | 23.487 | |
| 12,500.00 | 11,944.00 | 11,410.25 | 10,948.00 | 30.32 | 27.56 | 33.57 | 697.04 | 459.63 | 1,195.37 | 1,143.96 | 51.41 | 23.253 | |
| 12,600.00 | 11,944.00 | 11,510.25 | 10,948.00 | 30.81 | 28.09 | 33.57 | 797.04 | 458.71 | 1,195.37 | 1,143.38 | 51.99 | 22.990 | |
| 12,700.00 | 11,944.00 | 11,610.25 | 10,948.00 | 31.37 | 28.69 | 33.57 | 897.03 | 457.79 | 1,195.37 | 1,142.72 | 52.66 | 22.701 | |
| 12,800.00 | 11,944.00 | 11,710.25 | 10,948.00 | 31.98 | 29.34 | 33.57 | 997.03 | 456.87 | 1,195.37 | 1,141.98 | 53.39 | 22.389 | |
| 12,900.00 | 11,944.00 | 11,810.25 | 10,948.00 | 32.64 | 30.05 | 33.57 | 1,097.03 | 455.94 | 1,195.37 | 1,141.18 | 54.19 | 22.057 | |
| 13,000.00 | 11,944.00 | 11,910.25 | 10,948.00 | 33.35 | 30.81 | 33.57 | 1,197.02 | 455.02 | 1,195.37 | 1,140.31 | 55.06 | 21.709 | |
| 13,100.00 | 11,944.00 | 12,010.25 | 10,948.00 | 34.11 | 31.61 | 33.57 | 1,297.02 | 454.10 | 1,195.38 | 1,139.38 | 56.00 | 21.348 | |
| 13,200.00 | 11,944.00 | 12,110.25 | 10,948.00 | 34.91 | 32.46 | 33.57 | 1,397.01 | 453.18 | 1,195.38 | 1,138.39 | 56.99 | 20.976 | |
| 13,300.00 | 11,944.00 | 12,210.25 | 10,948.00 | 35.75 | 33.35 | 33.57 | 1,497.01 | 452.26 | 1,195.38 | 1,137.34 | 58.04 | 20.597 | |
| 13,400.00 | 11,944.00 | 12,310.25 | 10,948.00 | 36.63 | 34.28 | 33.57 | 1,597.00 | 451.33 | 1,195.38 | 1,136.24 | 59.14 | 20.214 | |
| 13,500.00 | 11,944.00 | 12,410.25 | 10,948.00 | 37.54 | 35.25 | 33.57 | 1,697.00 | 450.41 | 1,195.38 | 1,135.09 | 60.29 | 19.827 | |
| 13,600.00 | 11,944.00 | 12,510.25 | 10,948.00 | 38.48 | 36.24 | 33.57 | 1,797.00 | 449.49 | 1,195.38 | 1,133.89 | 61.49 | 19.440 | |
| 13,700.00 | 11,944.00 | 12,610.25 | 10,948.00 | 39.46 | 37.27 | 33.57 | 1,896.99 | 448.57 | 1,195.38 | 1,132.65 | 62.73 | 19.055 | |
| 13,800.00 | 11,944.00 | 12,710.25 | 10,948.00 | 40.46 | 38.32 | 33.57 | 1,996.99 | 447.65 | 1,195.38 | 1,131.36 | 64.02 | 18.671 | |
| 13,900.00 | 11,944.00 | 12,810.25 | 10,948.00 | 41.49 | 39.39 | 33.57 | 2,096.98 | 446.73 | 1,195.38 | 1,130.03 | 65.35 | 18.292 | |
| 14,000.00 | 11,944.00 | 12,910.25 | 10,948.00 | 42.55 | 40.49 | 33.57 | 2,196.98 | 445.80 | 1,195.38 | 1,128.67 | 66.71 | 17.918 | |
| 14,100.00 | 11,944.00 | 13,010.25 | 10,948.00 | 43.62 | 41.61 | 33.57 | 2,296.97 | 444.88 | 1,195.38 | 1,127.27 | 68.11 | 17.550 | |
| 14,200.00 | 11,944.00 | 13,110.25 | 10,948.00 | 44.72 | 42.75 | 33.57 | 2,396.97 | 443.96 | 1,195.39 | 1,125.84 | 69.55 | 17.188 | |
| 14,300.00 | 11,944.00 | 13,210.25 | 10,948.00 | 45.84 | 43.91 | 33.57 | 2,496.97 | 443.04 | 1,195.39 | 1,124.38 | 71.01 | 16.834 | |
| 14,400.00 | 11,944.00 | 13,310.25 | 10,948.00 | 46.97 | 45.08 | 33.57 | 2,596.96 | 442.12 | 1,195.39 | 1,122.88 | 72.50 | 16.487 | |
| 14,500.00 | 11,944.00 | 13,410.25 | 10,948.00 | 48.12 | 46.27 | 33.57 | 2,696.96 | 441.20 | 1,195.39 | 1,121.36 | 74.02 | 16.149 | |
| 14,600.00 | 11,944.00 | 13,510.25 | 10,948.00 | 49.28 | 47.48 | 33.57 | 2,796.95 | 440.27 | 1,195.39 | 1,119.82 | 75.57 | 15.818 | |
| 14,700.00 | 11,944.00 | 13,610.25 | 10,948.00 | 50.46 | 48.69 | 33.57 | 2,896.95 | 439.35 | 1,195.39 | 1,118.25 | 77.14 | 15.496 | |
| 14,800.00 | 11,944.00 | 13,710.25 | 10,948.00 | 51.66 | 49.92 | 33.57 | 2,996.94 | 438.43 | 1,195.39 | 1,116.66 | 78.73 | 15.183 | |
| 14,900.00 | 11,944.00 | 13,810.25 | 10,948.00 | 52.86 | 51.16 | 33.57 | 3,096.94 | 437.51 | 1,195.39 | 1,115.04 | 80.35 | 14.878 | |
| 15,000.00 | 11,944.00 | 13,910.25 | 10,948.00 | 54.08 | 52.41 | 33.57 | 3,196.94 | 436.59 | 1,195.39 | 1,113.41 | 81.98 | 14.581 | |
| 15,100.00 | 11,944.00 | 14,010.25 | 10,948.00 | 55.31 | 53.67 | 33.57 | 3,296.93 | 435.67 | 1,195.39 | 1,111.76 | 83.64 | 14.293 | |
| 15,200.00 | 11,944.00 | 14,110.25 | 10,948.00 | 56.55 | 54.94 | 33.57 | 3,396.93 | 434.74 | 1,195.39 | 1,110.08 | 85.31 | 14.012 | |
| 15,300.00 | 11,944.00 | 14,210.25 | 10,948.00 | 57.80 | 56.21 | 33.57 | 3,496.92 | 433.82 | 1,195.39 | 1,108.40 | 87.00 | 13.740 | |
| 15,400.00 | 11,944.00 | 14,310.25 | 10,948.00 | 59.05 | 57.50 | 33.57 | 3,596.92 | 432.90 | 1,195.40 | 1,106.69 | 88.70 | 13.476 | |
| 15,500.00 | 11,944.00 | 14,410.25 | 10,948.00 | 60.32 | 58.79 | 33.57 | 3,696.91 | 431.98 | 1,195.40 | 1,104.97 | 90.42 | 13.220 | |
| 15,600.00 | 11,944.00 | 14,510.25 | 10,948.00 | 61.59 | 60.09 | 33.57 | 3,796.91 | 431.06 | 1,195.40 | 1,103.24 | 92.16 | 12.972 | |
| 15,700.00 | 11,944.00 | 14,610.25 | 10,948.00 | 62.87 | 61.39 | 33.57 | 3,896.91 | 430.14 | 1,195.40 | 1,101.50 | 93.90 | 12.730 | |
| 15,800.00 | 11,944.00 | 14,710.25 | 10,948.00 | 64.16 | 62.71 | 33.57 | 3,996.90 | 429.21 | 1,195.40 | 1,099.74 | 95.66 | 12.496 | |
| 15,900.00 | 11,944.00 | 14,810.25 | 10,948.00 | 65.45 | 64.02 | 33.57 | 4,096.90 | 428.29 | 1,195.40 | 1,097.97 | 97.43 | 12.269 | |
| 16,000.00 | 11,944.00 | 14,910.25 | 10,948.00 | 66.75 | 65.35 | 33.57 | 4,196.89 | 427.37 | 1,195.40 | 1,096.18 | 99.22 | 12.048 | |
| 16,100.00 | 11,944.00 | 15,010.25 | 10,948.00 | 68.06 | 66.67 | 33.57 | 4,296.89 | 426.45 | 1,195.40 | 1,094.39 | 101.01 | 11.834 | |
| 16,200.00 | 11,944.00 | 15,110.25 | 10,948.00 | 69.37 | 68.00 | 33.57 | 4,396.89 | 425.53 | 1,195.40 | 1,092.59 | 102.81 | 11.627 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16,300.00 | 11,944.00 | 15,210.25 | 10,948.00 | 70.68 | 69.34 | 33.57 | 4,496.88 | 424.61 | 1,195.40 | 1,090.78 | 104.63 | 11.425 | |
| 16,400.00 | 11,944.00 | 15,310.25 | 10,948.00 | 72.00 | 70.68 | 33.57 | 4,596.88 | 423.68 | 1,195.40 | 1,088.95 | 106.45 | 11.230 | |
| 16,500.00 | 11,944.00 | 15,410.25 | 10,948.00 | 73.33 | 72.03 | 33.57 | 4,696.87 | 422.76 | 1,195.41 | 1,087.12 | 108.28 | 11.040 | |
| 16,600.00 | 11,944.00 | 15,510.25 | 10,948.00 | 74.66 | 73.37 | 33.57 | 4,796.87 | 421.84 | 1,195.41 | 1,085.29 | 110.12 | 10.855 | |
| 16,689.23 | 11,944.00 | 15,599.48 | 10,948.00 | 75.85 | 74.58 | 33.57 | 4,886.09 | 421.02 | 1,195.41 | 1,083.64 | 111.77 | 10.695 | |

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 203H - OH - Prelim Plan B — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM, 12329-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1.00 | -1.00 | 0.00 | 0.00 | 90.00 | 0.00 | 30.00 | 30.00 | | | | |
| 100.00 | 100.00 | 101.00 | 99.00 | 0.13 | 0.13 | 90.00 | 0.00 | 30.00 | 30.00 | 29.74 | 0.26 | 116.234 | |
| 200.00 | 200.00 | 201.00 | 199.00 | 0.49 | 0.49 | 90.00 | 0.00 | 30.00 | 30.00 | 29.02 | 0.98 | 30.768 | |
| 300.00 | 300.00 | 301.00 | 299.00 | 0.84 | 0.85 | 90.00 | 0.00 | 30.00 | 30.00 | 28.31 | 1.69 | 17.731 | |
| 400.00 | 400.00 | 401.00 | 399.00 | 1.20 | 1.21 | 90.00 | 0.00 | 30.00 | 30.00 | 27.59 | 2.41 | 12.454 | |
| 500.00 | 500.00 | 501.00 | 499.00 | 1.56 | 1.56 | 90.00 | 0.00 | 30.00 | 30.00 | 26.87 | 3.13 | 9.597 | |
| 600.00 | 600.00 | 601.00 | 599.00 | 1.92 | 1.92 | 90.00 | 0.00 | 30.00 | 30.00 | 26.16 | 3.84 | 7.807 | |
| 700.00 | 700.00 | 701.00 | 699.00 | 2.28 | 2.28 | 90.00 | 0.00 | 30.00 | 30.00 | 25.44 | 4.56 | 6.579 | |
| 800.00 | 800.00 | 801.00 | 799.00 | 2.64 | 2.64 | 90.00 | 0.00 | 30.00 | 30.00 | 24.72 | 5.28 | 5.685 | |
| 900.00 | 900.00 | 901.00 | 899.00 | 3.00 | 3.00 | 90.00 | 0.00 | 30.00 | 30.00 | 24.01 | 5.99 | 5.005 | |
| 1,000.00 | 1,000.00 | 1,001.00 | 999.00 | 3.35 | 3.36 | 90.00 | 0.00 | 30.00 | 30.00 | 23.29 | 6.71 | 4.471 | |
| 1,100.00 | 1,100.00 | 1,101.00 | 1,099.00 | 3.71 | 3.72 | 90.00 | 0.00 | 30.00 | 30.00 | 22.57 | 7.43 | 4.039 | |
| 1,200.00 | 1,200.00 | 1,201.00 | 1,199.00 | 4.07 | 4.07 | 90.00 | 0.00 | 30.00 | 30.00 | 21.86 | 8.14 | 3.684 | |
| 1,300.00 | 1,300.00 | 1,299.00 | 1,299.00 | 4.25 | 4.25 | 90.00 | 0.00 | 30.00 | 30.00 | 21.49 | 8.51 | 3.527 | CC, ES, SF |
| 1,400.00 | 1,400.00 | 1,398.49 | 1,398.48 | 4.28 | 4.28 | 90.33 | -0.18 | 30.83 | 30.83 | 22.27 | 8.56 | 3.600 | |
| 1,500.00 | 1,500.00 | 1,497.91 | 1,497.87 | 4.34 | 4.34 | 91.25 | -0.73 | 33.34 | 33.37 | 24.69 | 8.68 | 3.844 | |
| 1,600.00 | 1,599.99 | 1,597.17 | 1,597.04 | 4.43 | 4.43 | -150.40 | -1.64 | 37.53 | 38.37 | 29.53 | 8.85 | 4.338 | |
| 1,700.00 | 1,699.96 | 1,696.11 | 1,695.80 | 4.54 | 4.54 | -150.60 | -2.91 | 43.37 | 46.59 | 37.53 | 9.06 | 5.142 | |
| 1,800.00 | 1,799.86 | 1,805.48 | 1,793.91 | 4.67 | 4.70 | -151.24 | -4.53 | 50.84 | 58.01 | 48.67 | 9.34 | 6.210 | |
| 1,900.00 | 1,899.68 | 1,906.46 | 1,892.55 | 4.83 | 4.87 | -152.15 | -6.36 | 59.27 | 71.89 | 62.22 | 9.67 | 7.437 | |
| 2,000.00 | 1,999.37 | 2,007.67 | 1,990.97 | 5.01 | 5.06 | -153.27 | -8.19 | 67.69 | 87.32 | 77.29 | 10.03 | 8.702 | |
| 2,100.00 | 2,098.99 | 2,109.01 | 2,089.25 | 5.22 | 5.28 | -154.32 | -10.02 | 76.09 | 103.55 | 93.11 | 10.44 | 9.919 | |
| 2,200.00 | 2,198.60 | 2,189.65 | 2,187.53 | 5.44 | 5.47 | -155.08 | -11.85 | 84.49 | 119.81 | 108.98 | 10.83 | 11.061 | |
| 2,300.00 | 2,298.22 | 2,288.31 | 2,285.81 | 5.68 | 5.71 | -155.66 | -13.67 | 92.89 | 136.09 | 124.80 | 11.29 | 12.052 | |
| 2,400.00 | 2,397.84 | 2,386.97 | 2,384.10 | 5.94 | 5.96 | -156.12 | -15.50 | 101.29 | 152.37 | 140.60 | 11.78 | 12.936 | |
| 2,500.00 | 2,497.46 | 2,485.62 | 2,482.38 | 6.20 | 6.23 | -156.49 | -17.33 | 109.70 | 168.67 | 156.38 | 12.29 | 13.725 | |
| 2,600.00 | 2,597.08 | 2,584.28 | 2,580.66 | 6.48 | 6.51 | -156.79 | -19.15 | 118.10 | 184.97 | 172.15 | 12.82 | 14.429 | |
| 2,700.00 | 2,696.70 | 2,682.94 | 2,678.95 | 6.77 | 6.79 | -157.05 | -20.98 | 126.50 | 201.27 | 187.90 | 13.37 | 15.056 | |
| 2,800.00 | 2,796.32 | 2,781.60 | 2,777.23 | 7.07 | 7.09 | -157.26 | -22.81 | 134.90 | 217.58 | 203.64 | 13.93 | 15.616 | |
| 2,900.00 | 2,895.94 | 2,880.26 | 2,875.51 | 7.37 | 7.39 | -157.45 | -24.63 | 143.31 | 233.88 | 219.37 | 14.51 | 16.117 | |
| 3,000.00 | 2,995.56 | 2,978.92 | 2,973.80 | 7.68 | 7.70 | -157.61 | -26.46 | 151.71 | 250.20 | 235.09 | 15.10 | 16.566 | |
| 3,100.00 | 3,095.18 | 3,077.58 | 3,072.08 | 8.00 | 8.01 | -157.75 | -28.29 | 160.11 | 266.51 | 250.80 | 15.71 | 16.970 | |
| 3,200.00 | 3,194.80 | 3,176.23 | 3,170.36 | 8.32 | 8.33 | -157.88 | -30.11 | 168.51 | 282.82 | 266.50 | 16.32 | 17.333 | |
| 3,300.00 | 3,294.42 | 3,274.89 | 3,268.65 | 8.65 | 8.65 | -157.99 | -31.94 | 176.92 | 299.14 | 282.20 | 16.94 | 17.660 | |
| 3,400.00 | 3,394.04 | 3,373.55 | 3,366.93 | 8.98 | 8.98 | -158.09 | -33.77 | 185.32 | 315.45 | 297.89 | 17.57 | 17.957 | |
| 3,500.00 | 3,493.66 | 3,472.21 | 3,465.21 | 9.31 | 9.31 | -158.18 | -35.59 | 193.72 | 331.77 | 313.57 | 18.20 | 18.226 | |
| 3,600.00 | 3,593.28 | 3,570.87 | 3,563.49 | 9.65 | 9.64 | -158.26 | -37.42 | 202.12 | 348.09 | 329.24 | 18.85 | 18.470 | |
| 3,700.00 | 3,692.90 | 3,669.53 | 3,661.78 | 9.99 | 9.97 | -158.34 | -39.24 | 210.53 | 364.41 | 344.91 | 19.49 | 18.693 | |
| 3,800.00 | 3,792.52 | 3,768.18 | 3,760.06 | 10.34 | 10.31 | -158.41 | -41.07 | 218.93 | 380.73 | 360.58 | 20.15 | 18.897 | |
| 3,900.00 | 3,892.14 | 3,866.84 | 3,858.34 | 10.68 | 10.65 | -158.47 | -42.90 | 227.33 | 397.05 | 376.24 | 20.81 | 19.084 | |
| 4,000.00 | 3,991.76 | 3,965.50 | 3,956.63 | 11.03 | 11.00 | -158.53 | -44.72 | 235.73 | 413.37 | 391.90 | 21.47 | 19.256 | |
| 4,014.49 | 4,006.19 | 3,979.80 | 3,970.87 | 11.08 | 11.05 | -158.53 | -44.99 | 236.95 | 415.73 | 394.17 | 21.56 | 19.279 | |
| 4,100.00 | 4,091.43 | 4,064.25 | 4,055.00 | 11.38 | 11.34 | -158.60 | -46.55 | 244.14 | 429.10 | 406.97 | 22.13 | 19.388 | |
| 4,200.00 | 4,191.22 | 4,163.25 | 4,153.62 | 11.72 | 11.69 | -158.59 | -48.39 | 252.57 | 443.24 | 420.44 | 22.80 | 19.440 | |
| 4,300.00 | 4,291.12 | 4,262.45 | 4,252.45 | 12.06 | 12.04 | -158.50 | -50.22 | 261.02 | 455.78 | 432.31 | 23.47 | 19.420 | |
| 4,400.00 | 4,391.07 | 4,361.84 | 4,351.45 | 12.39 | 12.39 | -158.32 | -52.06 | 269.49 | 466.71 | 442.57 | 24.14 | 19.332 | |
| 4,500.00 | 4,491.07 | 4,461.37 | 4,450.61 | 12.72 | 12.75 | -158.08 | -53.91 | 277.97 | 476.03 | 451.22 | 24.81 | 19.184 | |
| 4,514.49 | 4,505.56 | 4,475.81 | 4,464.99 | 12.77 | 12.80 | 84.23 | -54.17 | 279.19 | 477.25 | 452.34 | 24.91 | 19.159 | |
| 4,600.00 | 4,591.07 | 4,560.99 | 4,549.85 | 13.03 | 13.10 | 84.50 | -55.75 | 286.45 | 484.34 | 458.87 | 25.47 | 19.018 | |
| 4,700.00 | 4,691.07 | 4,660.61 | 4,649.09 | 13.34 | 13.46 | 84.81 | -57.59 | 294.93 | 492.65 | 466.53 | 26.12 | 18.858 | |
| 4,800.00 | 4,791.07 | 4,760.23 | 4,748.33 | 13.65 | 13.82 | 85.11 | -59.44 | 303.42 | 500.98 | 474.19 | 26.78 | 18.704 | |
| 4,900.00 | 4,891.07 | 4,859.85 | 4,847.57 | 13.97 | 14.18 | 85.40 | -61.28 | 311.90 | 509.31 | 481.87 | 27.45 | 18.556 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 203H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM, 12329-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,991.07 | 4,959.47 | 4,946.81 | 14.13 | 14.44 | 85.68 | -63.13 | 320.39 | 517.66 | 489.82 | 27.84 | 18.591 | |
| 5,100.00 | 5,091.07 | 5,059.09 | 5,046.05 | 14.14 | 14.54 | 85.95 | -64.97 | 328.87 | 526.02 | 498.09 | 27.93 | 18.832 | |
| 5,200.00 | 5,191.07 | 5,158.71 | 5,145.29 | 14.15 | 14.58 | 86.21 | -66.82 | 337.35 | 534.40 | 506.43 | 27.97 | 19.107 | |
| 5,300.00 | 5,291.07 | 5,258.33 | 5,244.53 | 14.18 | 14.63 | 86.47 | -68.66 | 345.84 | 542.78 | 514.76 | 28.02 | 19.369 | |
| 5,400.00 | 5,391.07 | 5,357.95 | 5,343.77 | 14.22 | 14.69 | 86.71 | -70.51 | 354.32 | 551.17 | 523.08 | 28.10 | 19.618 | |
| 5,500.00 | 5,491.07 | 5,457.57 | 5,443.01 | 14.26 | 14.76 | 86.95 | -72.35 | 362.81 | 559.58 | 531.39 | 28.19 | 19.853 | |
| 5,600.00 | 5,591.07 | 5,557.19 | 5,542.25 | 14.32 | 14.84 | 87.18 | -74.19 | 371.29 | 567.99 | 539.70 | 28.30 | 20.073 | |
| 5,700.00 | 5,691.07 | 5,656.81 | 5,641.49 | 14.38 | 14.92 | 87.41 | -76.04 | 379.78 | 576.41 | 547.99 | 28.42 | 20.280 | |
| 5,800.00 | 5,791.07 | 5,756.43 | 5,740.74 | 14.45 | 15.02 | 87.63 | -77.88 | 388.26 | 584.84 | 556.28 | 28.57 | 20.473 | |
| 5,900.00 | 5,891.07 | 5,856.04 | 5,839.98 | 14.53 | 15.13 | 87.84 | -79.73 | 396.74 | 593.28 | 564.55 | 28.73 | 20.651 | |
| 6,000.00 | 5,991.07 | 5,955.66 | 5,939.22 | 14.62 | 15.24 | 88.05 | -81.57 | 405.23 | 601.73 | 572.82 | 28.91 | 20.816 | |
| 6,100.00 | 6,091.07 | 6,055.28 | 6,038.46 | 14.72 | 15.36 | 88.25 | -83.42 | 413.71 | 610.18 | 581.08 | 29.10 | 20.967 | |
| 6,200.00 | 6,191.07 | 6,154.90 | 6,137.70 | 14.82 | 15.50 | 88.44 | -85.26 | 422.20 | 618.64 | 589.33 | 29.31 | 21.104 | |
| 6,300.00 | 6,291.07 | 6,254.52 | 6,236.94 | 14.93 | 15.63 | 88.63 | -87.10 | 430.68 | 627.11 | 597.57 | 29.54 | 21.228 | |
| 6,400.00 | 6,391.07 | 6,354.14 | 6,336.18 | 15.05 | 15.78 | 88.82 | -88.95 | 439.17 | 635.59 | 605.80 | 29.79 | 21.339 | |
| 6,500.00 | 6,491.07 | 6,456.58 | 6,438.23 | 15.18 | 15.94 | 89.00 | -90.83 | 447.83 | 644.02 | 613.97 | 30.05 | 21.429 | |
| 6,600.00 | 6,591.07 | 6,568.65 | 6,550.00 | 15.31 | 16.11 | 89.17 | -92.57 | 455.82 | 651.12 | 620.75 | 30.37 | 21.442 | |
| 6,700.00 | 6,691.07 | 6,681.00 | 6,662.19 | 15.46 | 16.29 | 89.29 | -93.84 | 461.68 | 656.32 | 625.63 | 30.69 | 21.387 | |
| 6,800.00 | 6,791.07 | 6,793.54 | 6,774.66 | 15.61 | 16.46 | 89.36 | -94.65 | 465.39 | 659.61 | 628.60 | 31.02 | 21.266 | |
| 6,900.00 | 6,891.07 | 6,906.19 | 6,887.30 | 15.76 | 16.64 | 89.39 | -94.99 | 466.95 | 660.99 | 629.64 | 31.35 | 21.082 | |
| 7,000.00 | 6,991.07 | 7,008.96 | 6,990.07 | 15.92 | 16.79 | 89.39 | -95.00 | 467.00 | 661.04 | 629.36 | 31.68 | 20.869 | |
| 7,100.00 | 7,091.07 | 7,108.96 | 7,090.07 | 16.09 | 16.94 | 89.39 | -95.00 | 467.00 | 661.04 | 629.03 | 32.00 | 20.655 | |
| 7,200.00 | 7,191.07 | 7,208.96 | 7,190.07 | 16.27 | 17.10 | 89.39 | -95.00 | 467.00 | 661.04 | 628.69 | 32.35 | 20.437 | |
| 7,300.00 | 7,291.07 | 7,308.96 | 7,290.07 | 16.45 | 17.26 | 89.39 | -95.00 | 467.00 | 661.04 | 628.34 | 32.70 | 20.216 | |
| 7,400.00 | 7,391.07 | 7,408.96 | 7,390.07 | 16.63 | 17.43 | 89.39 | -95.00 | 467.00 | 661.04 | 627.97 | 33.06 | 19.992 | |
| 7,500.00 | 7,491.07 | 7,508.96 | 7,490.07 | 16.83 | 17.61 | 89.39 | -95.00 | 467.00 | 661.04 | 627.60 | 33.44 | 19.767 | |
| 7,600.00 | 7,591.07 | 7,608.96 | 7,590.07 | 17.02 | 17.79 | 89.39 | -95.00 | 467.00 | 661.04 | 627.21 | 33.83 | 19.540 | |
| 7,700.00 | 7,691.07 | 7,708.96 | 7,690.07 | 17.23 | 17.97 | 89.39 | -95.00 | 467.00 | 661.04 | 626.81 | 34.23 | 19.313 | |
| 7,800.00 | 7,791.07 | 7,808.96 | 7,790.07 | 17.43 | 18.17 | 89.39 | -95.00 | 467.00 | 661.04 | 626.40 | 34.64 | 19.085 | |
| 7,900.00 | 7,891.07 | 7,908.96 | 7,890.07 | 17.65 | 18.36 | 89.39 | -95.00 | 467.00 | 661.04 | 625.98 | 35.05 | 18.857 | |
| 8,000.00 | 7,991.07 | 8,008.96 | 7,990.07 | 17.86 | 18.56 | 89.39 | -95.00 | 467.00 | 661.04 | 625.55 | 35.48 | 18.630 | |
| 8,100.00 | 8,091.07 | 8,108.96 | 8,090.07 | 18.08 | 18.77 | 89.39 | -95.00 | 467.00 | 661.04 | 625.12 | 35.92 | 18.403 | |
| 8,200.00 | 8,191.07 | 8,208.96 | 8,190.07 | 18.31 | 18.98 | 89.39 | -95.00 | 467.00 | 661.04 | 624.67 | 36.37 | 18.177 | |
| 8,300.00 | 8,291.07 | 8,308.96 | 8,290.07 | 18.54 | 19.19 | 89.39 | -95.00 | 467.00 | 661.04 | 624.22 | 36.82 | 17.953 | |
| 8,400.00 | 8,391.07 | 8,408.96 | 8,390.07 | 18.77 | 19.41 | 89.39 | -95.00 | 467.00 | 661.04 | 623.75 | 37.28 | 17.730 | |
| 8,500.00 | 8,491.07 | 8,508.96 | 8,490.07 | 19.01 | 19.64 | 89.39 | -95.00 | 467.00 | 661.04 | 623.28 | 37.75 | 17.509 | |
| 8,600.00 | 8,591.07 | 8,608.96 | 8,590.07 | 19.25 | 19.86 | 89.39 | -95.00 | 467.00 | 661.04 | 622.80 | 38.23 | 17.290 | |
| 8,700.00 | 8,691.07 | 8,708.96 | 8,690.07 | 19.50 | 20.10 | 89.39 | -95.00 | 467.00 | 661.04 | 622.32 | 38.72 | 17.073 | |
| 8,800.00 | 8,791.07 | 8,808.96 | 8,790.07 | 19.75 | 20.33 | 89.39 | -95.00 | 467.00 | 661.04 | 621.83 | 39.21 | 16.858 | |
| 8,900.00 | 8,891.07 | 8,908.96 | 8,890.07 | 20.00 | 20.57 | 89.39 | -95.00 | 467.00 | 661.04 | 621.33 | 39.71 | 16.645 | |
| 9,000.00 | 8,991.07 | 9,008.96 | 8,990.07 | 20.26 | 20.81 | 89.39 | -95.00 | 467.00 | 661.04 | 620.82 | 40.22 | 16.436 | |
| 9,100.00 | 9,091.07 | 9,108.96 | 9,090.07 | 20.51 | 21.05 | 89.39 | -95.00 | 467.00 | 661.04 | 620.31 | 40.73 | 16.229 | |
| 9,200.00 | 9,191.07 | 9,208.96 | 9,190.07 | 20.78 | 21.30 | 89.39 | -95.00 | 467.00 | 661.04 | 619.79 | 41.25 | 16.025 | |
| 9,300.00 | 9,291.07 | 9,308.96 | 9,290.07 | 21.04 | 21.55 | 89.39 | -95.00 | 467.00 | 661.04 | 619.26 | 41.77 | 15.824 | |
| 9,400.00 | 9,391.07 | 9,408.96 | 9,390.07 | 21.31 | 21.81 | 89.39 | -95.00 | 467.00 | 661.04 | 618.73 | 42.30 | 15.626 | |
| 9,500.00 | 9,491.07 | 9,508.96 | 9,490.07 | 21.58 | 22.07 | 89.39 | -95.00 | 467.00 | 661.04 | 618.20 | 42.84 | 15.430 | |
| 9,600.00 | 9,591.07 | 9,608.96 | 9,590.07 | 21.85 | 22.33 | 89.39 | -95.00 | 467.00 | 661.04 | 617.66 | 43.38 | 15.238 | |
| 9,700.00 | 9,691.07 | 9,708.96 | 9,690.07 | 22.12 | 22.59 | 89.39 | -95.00 | 467.00 | 661.04 | 617.11 | 43.93 | 15.049 | |
| 9,800.00 | 9,791.07 | 9,808.96 | 9,790.07 | 22.40 | 22.85 | 89.39 | -95.00 | 467.00 | 661.04 | 616.56 | 44.48 | 14.862 | |
| 9,900.00 | 9,891.07 | 9,908.96 | 9,890.07 | 22.68 | 23.12 | 89.39 | -95.00 | 467.00 | 661.04 | 616.00 | 45.03 | 14.679 | |
| 10,000.00 | 9,991.07 | 10,008.96 | 9,990.07 | 22.96 | 23.39 | 89.39 | -95.00 | 467.00 | 661.04 | 615.44 | 45.59 | 14.499 | |
| 10,100.00 | 10,091.07 | 10,108.96 | 10,090.07 | 23.25 | 23.67 | 89.39 | -95.00 | 467.00 | 661.04 | 614.88 | 46.16 | 14.321 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Nina Cortell Fed Com - No. 203H - OH - Prelim Plan B — Offset Site Error: 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM, 12329-MWD+HDGM — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,200.00 | 10,191.07 | 10,208.96 | 10,190.07 | 23.53 | 23.94 | 89.39 | -95.00 | 467.00 | 661.04 | 614.31 | 46.73 | 14.147 | |
| 10,300.00 | 10,291.07 | 10,308.96 | 10,290.07 | 23.82 | 24.22 | 89.39 | -95.00 | 467.00 | 661.04 | 613.74 | 47.30 | 13.976 | |
| 10,400.00 | 10,391.07 | 10,408.96 | 10,390.07 | 24.11 | 24.50 | 89.39 | -95.00 | 467.00 | 661.04 | 613.16 | 47.88 | 13.808 | |
| 10,500.00 | 10,491.07 | 10,508.96 | 10,490.07 | 24.40 | 24.78 | 89.39 | -95.00 | 467.00 | 661.04 | 612.58 | 48.46 | 13.642 | |
| 10,600.00 | 10,591.07 | 10,608.96 | 10,590.07 | 24.69 | 25.06 | 89.39 | -95.00 | 467.00 | 661.04 | 612.00 | 49.04 | 13.480 | |
| 10,700.00 | 10,691.07 | 10,708.96 | 10,690.07 | 24.99 | 25.35 | 89.39 | -95.00 | 467.00 | 661.04 | 611.41 | 49.63 | 13.320 | |
| 10,800.00 | 10,791.07 | 10,808.96 | 10,790.07 | 25.28 | 25.63 | 89.39 | -95.00 | 467.00 | 661.04 | 610.82 | 50.22 | 13.164 | |
| 10,900.00 | 10,891.07 | 10,908.96 | 10,890.07 | 25.58 | 25.92 | 89.39 | -95.00 | 467.00 | 661.04 | 610.23 | 50.81 | 13.010 | |
| 11,000.00 | 10,991.07 | 11,008.96 | 10,990.07 | 25.88 | 26.21 | 89.39 | -95.00 | 467.00 | 661.04 | 609.63 | 51.41 | 12.859 | |
| 11,100.00 | 11,091.07 | 11,108.96 | 11,090.07 | 26.18 | 26.50 | 89.39 | -95.00 | 467.00 | 661.04 | 609.03 | 52.01 | 12.710 | |
| 11,200.00 | 11,191.07 | 11,208.96 | 11,190.07 | 26.49 | 26.80 | 89.39 | -95.00 | 467.00 | 661.04 | 608.43 | 52.61 | 12.565 | |
| 11,300.00 | 11,291.07 | 11,308.96 | 11,290.07 | 26.79 | 27.09 | 89.39 | -95.00 | 467.00 | 661.04 | 607.82 | 53.22 | 12.422 | |
| 11,379.97 | 11,371.04 | 11,388.93 | 11,370.04 | 27.03 | 27.33 | 89.39 | -95.00 | 467.00 | 661.04 | 607.33 | 53.70 | 12.309 | |
| 11,400.00 | 11,391.06 | 11,408.95 | 11,390.06 | 27.09 | 27.39 | 89.95 | -95.00 | 467.00 | 661.04 | 607.21 | 53.83 | 12.281 | |
| 11,412.04 | 11,403.08 | 11,420.98 | 11,402.08 | 27.13 | 27.43 | 90.00 | -95.00 | 467.00 | 661.04 | 607.14 | 53.90 | 12.265 | |
| 11,450.00 | 11,440.89 | 11,458.78 | 11,439.89 | 27.24 | 27.54 | 90.29 | -95.00 | 467.00 | 661.05 | 606.92 | 54.13 | 12.213 | |
| 11,500.00 | 11,490.19 | 11,508.08 | 11,489.19 | 27.39 | 27.69 | 90.99 | -95.00 | 467.00 | 661.14 | 606.72 | 54.42 | 12.149 | |
| 11,550.00 | 11,538.58 | 11,558.15 | 11,539.22 | 27.53 | 27.83 | 91.92 | -93.51 | 466.99 | 661.43 | 606.72 | 54.71 | 12.090 | |
| 11,600.00 | 11,585.70 | 11,609.43 | 11,590.14 | 27.67 | 27.98 | 92.86 | -87.53 | 466.93 | 661.90 | 606.91 | 54.99 | 12.036 | |
| 11,650.00 | 11,631.18 | 11,661.82 | 11,641.39 | 27.80 | 28.13 | 93.78 | -76.74 | 466.83 | 662.55 | 607.28 | 55.27 | 11.987 | |
| 11,700.00 | 11,674.68 | 11,715.35 | 11,692.51 | 27.92 | 28.28 | 94.68 | -60.94 | 466.68 | 663.35 | 607.81 | 55.54 | 11.943 | |
| 11,750.00 | 11,715.88 | 11,770.06 | 11,743.00 | 28.04 | 28.42 | 95.56 | -39.93 | 466.49 | 664.30 | 608.49 | 55.81 | 11.903 | |
| 11,800.00 | 11,754.44 | 11,825.98 | 11,792.30 | 28.14 | 28.55 | 96.41 | -13.58 | 466.25 | 665.35 | 609.28 | 56.07 | 11.867 | |
| 11,850.00 | 11,790.09 | 11,883.12 | 11,839.77 | 28.25 | 28.68 | 97.20 | 18.17 | 465.95 | 666.47 | 610.14 | 56.32 | 11.833 | |
| 11,900.00 | 11,822.55 | 11,941.46 | 11,884.74 | 28.37 | 28.80 | 97.95 | 55.30 | 465.61 | 667.63 | 611.05 | 56.58 | 11.800 | |
| 11,950.00 | 11,851.58 | 12,000.97 | 11,926.48 | 28.49 | 28.91 | 98.63 | 97.69 | 465.22 | 668.77 | 611.94 | 56.83 | 11.768 | |
| 12,000.00 | 11,876.94 | 12,061.60 | 11,964.24 | 28.62 | 29.01 | 99.24 | 145.07 | 464.78 | 669.87 | 612.79 | 57.09 | 11.734 | |
| 12,050.00 | 11,898.46 | 12,123.23 | 11,997.29 | 28.75 | 29.12 | 99.77 | 197.06 | 464.30 | 670.88 | 613.53 | 57.35 | 11.697 | |
| 12,100.00 | 11,915.96 | 12,185.76 | 12,024.91 | 28.89 | 29.25 | 100.21 | 253.13 | 463.78 | 671.75 | 614.12 | 57.63 | 11.656 | |
| 12,150.00 | 11,929.32 | 12,249.04 | 12,046.48 | 29.04 | 29.40 | 100.55 | 312.57 | 463.23 | 672.45 | 614.53 | 57.92 | 11.609 | |
| 12,200.00 | 11,938.43 | 12,312.88 | 12,061.46 | 29.19 | 29.58 | 100.79 | 374.59 | 462.66 | 672.95 | 614.71 | 58.24 | 11.555 | |
| 12,250.00 | 11,943.21 | 12,366.99 | 12,070.54 | 29.35 | 34.88 | 101.06 | 427.94 | 462.16 | 673.64 | 615.15 | 58.49 | 11.517 | |
| 12,279.97 | 11,944.00 | 12,401.55 | 12,075.02 | 29.44 | 34.90 | 101.30 | 462.20 | 461.85 | 674.25 | 615.61 | 58.63 | 11.499 | |
| 12,300.00 | 11,944.00 | 12,424.72 | 12,077.33 | 29.51 | 34.92 | 101.49 | 485.26 | 461.63 | 674.64 | 615.90 | 58.74 | 11.485 | |
| 12,400.00 | 11,944.00 | 12,536.63 | 12,081.00 | 29.88 | 35.00 | 101.79 | 597.05 | 460.60 | 675.28 | 615.90 | 59.38 | 11.372 | |
| 12,500.00 | 11,944.00 | 12,636.63 | 12,081.00 | 30.32 | 35.09 | 101.79 | 697.05 | 459.68 | 675.28 | 615.11 | 60.17 | 11.224 | |
| 12,600.00 | 11,944.00 | 12,736.63 | 12,081.00 | 30.81 | 35.18 | 101.79 | 797.05 | 458.75 | 675.28 | 614.21 | 61.07 | 11.057 | |
| 12,700.00 | 11,944.00 | 12,836.63 | 12,081.00 | 31.37 | 35.28 | 101.79 | 897.04 | 457.83 | 675.28 | 613.19 | 62.09 | 10.876 | |
| 12,800.00 | 11,944.00 | 12,936.63 | 12,081.00 | 31.98 | 35.40 | 101.79 | 997.04 | 456.91 | 675.28 | 612.06 | 63.22 | 10.681 | |
| 12,900.00 | 11,944.00 | 13,036.63 | 12,081.00 | 32.64 | 35.55 | 101.79 | 1,097.03 | 455.99 | 675.28 | 610.82 | 64.46 | 10.476 | |
| 13,000.00 | 11,944.00 | 13,136.63 | 12,081.00 | 33.35 | 35.73 | 101.79 | 1,197.03 | 455.06 | 675.28 | 609.48 | 65.80 | 10.263 | |
| 13,100.00 | 11,944.00 | 13,236.63 | 12,081.00 | 34.11 | 35.97 | 101.79 | 1,297.02 | 454.14 | 675.28 | 608.05 | 67.23 | 10.044 | |
| 13,200.00 | 11,944.00 | 13,336.63 | 12,081.00 | 34.91 | 36.30 | 101.79 | 1,397.02 | 453.22 | 675.28 | 606.53 | 68.75 | 9.822 | |
| 13,300.00 | 11,944.00 | 13,436.63 | 12,081.00 | 35.75 | 36.72 | 101.79 | 1,497.02 | 452.29 | 675.28 | 604.93 | 70.35 | 9.599 | |
| 13,400.00 | 11,944.00 | 13,536.63 | 12,081.00 | 36.63 | 37.27 | 101.79 | 1,597.01 | 451.37 | 675.28 | 603.26 | 72.03 | 9.375 | |
| 13,500.00 | 11,944.00 | 13,636.63 | 12,081.00 | 37.54 | 37.93 | 101.79 | 1,697.01 | 450.45 | 675.28 | 601.51 | 73.78 | 9.153 | |
| 13,600.00 | 11,944.00 | 13,736.63 | 12,081.00 | 38.48 | 38.69 | 101.79 | 1,797.00 | 449.53 | 675.28 | 599.69 | 75.59 | 8.933 | |
| 13,700.00 | 11,944.00 | 13,836.63 | 12,081.00 | 39.46 | 39.52 | 101.79 | 1,897.00 | 448.60 | 675.28 | 597.82 | 77.47 | 8.717 | |
| 13,800.00 | 11,944.00 | 13,936.63 | 12,081.00 | 40.46 | 40.41 | 101.79 | 1,996.99 | 447.68 | 675.28 | 595.88 | 79.40 | 8.504 | |
| 13,900.00 | 11,944.00 | 14,036.63 | 12,081.00 | 41.49 | 41.35 | 101.79 | 2,096.99 | 446.76 | 675.29 | 593.89 | 81.39 | 8.297 | |
| 14,000.00 | 11,944.00 | 14,136.63 | 12,081.00 | 42.55 | 42.33 | 101.79 | 2,196.99 | 445.84 | 675.29 | 591.86 | 83.43 | 8.094 | |
| 14,100.00 | 11,944.00 | 14,236.63 | 12,081.00 | 43.62 | 43.33 | 101.79 | 2,296.98 | 444.91 | 675.29 | 589.77 | 85.51 | 7.897 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

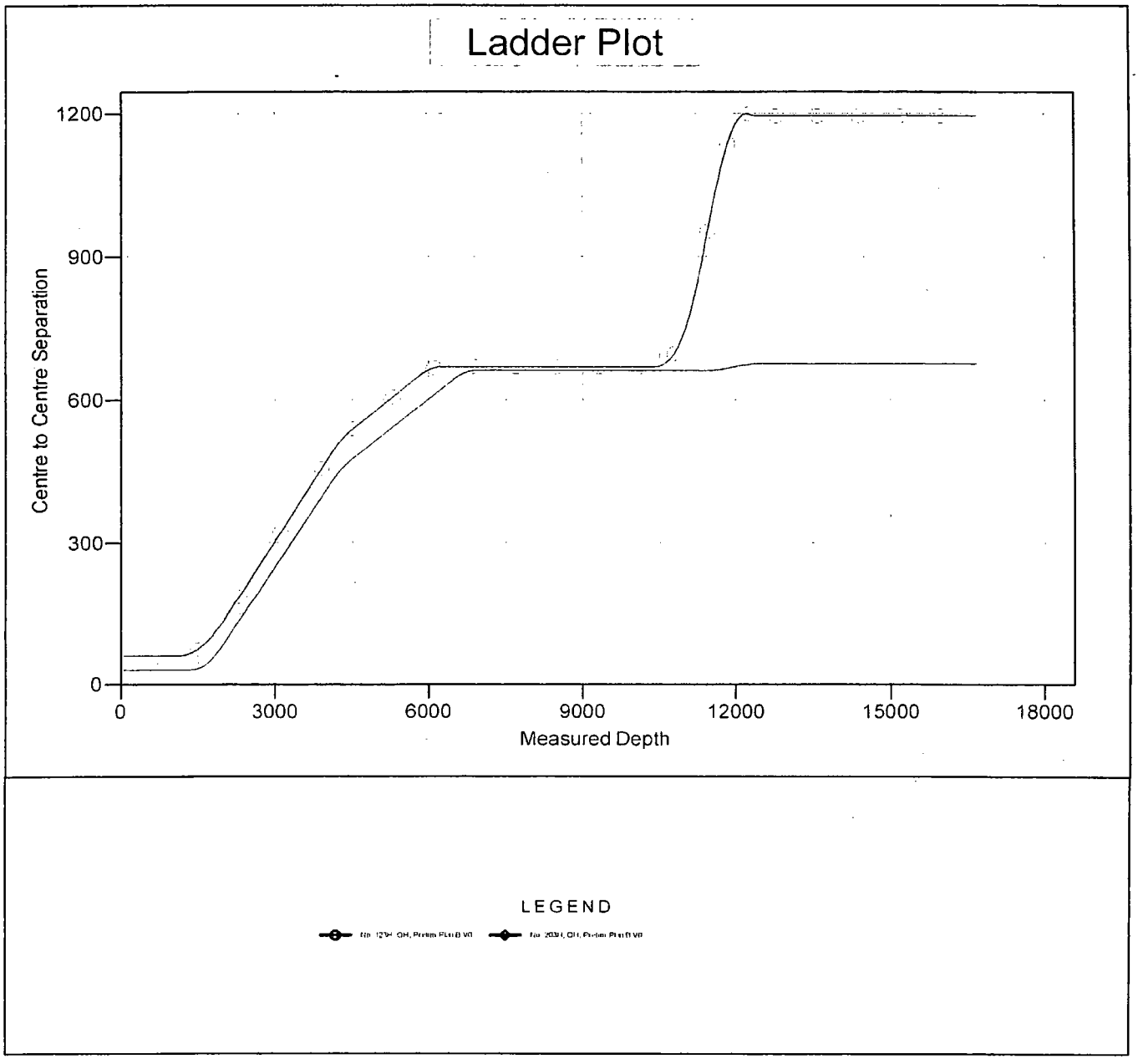
**Offset Design** Nina Cortell Fed Com - No. 203H - OH - Prelim Plan B — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM, 12329-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14,200.00 | 11,944.00 | 14,336.63 | 12,081.00 | 44.72 | 44.37 | 101.79 | 2,396.98 | 443.99 | 675.29 | 587.65 | 87.64 | 7.705 | |
| 14,300.00 | 11,944.00 | 14,436.63 | 12,081.00 | 45.84 | 45.44 | 101.79 | 2,496.97 | 443.07 | 675.29 | 585.48 | 89.81 | 7.519 | |
| 14,400.00 | 11,944.00 | 14,536.63 | 12,081.00 | 46.97 | 46.52 | 101.79 | 2,596.97 | 442.14 | 675.29 | 583.28 | 92.01 | 7.339 | |
| 14,500.00 | 11,944.00 | 14,636.63 | 12,081.00 | 48.12 | 47.63 | 101.79 | 2,696.96 | 441.22 | 675.29 | 581.04 | 94.25 | 7.165 | |
| 14,600.00 | 11,944.00 | 14,736.63 | 12,081.00 | 49.28 | 48.76 | 101.79 | 2,796.96 | 440.30 | 675.29 | 578.77 | 96.51 | 6.997 | |
| 14,700.00 | 11,944.00 | 14,836.63 | 12,081.00 | 50.46 | 49.91 | 101.79 | 2,896.96 | 439.38 | 675.29 | 576.48 | 98.81 | 6.834 | |
| 14,800.00 | 11,944.00 | 14,936.63 | 12,081.00 | 51.66 | 51.07 | 101.79 | 2,996.95 | 438.45 | 675.29 | 574.15 | 101.14 | 6.677 | |
| 14,900.00 | 11,944.00 | 15,036.63 | 12,081.00 | 52.86 | 52.24 | 101.79 | 3,096.95 | 437.53 | 675.29 | 571.80 | 103.49 | 6.525 | |
| 15,000.00 | 11,944.00 | 15,136.63 | 12,081.00 | 54.08 | 53.44 | 101.79 | 3,196.94 | 436.61 | 675.29 | 569.42 | 105.87 | 6.379 | |
| 15,100.00 | 11,944.00 | 15,236.63 | 12,081.00 | 55.31 | 54.64 | 101.79 | 3,296.94 | 435.68 | 675.29 | 567.02 | 108.27 | 6.237 | |
| 15,200.00 | 11,944.00 | 15,336.63 | 12,081.00 | 56.55 | 55.85 | 101.79 | 3,396.93 | 434.76 | 675.29 | 564.60 | 110.69 | 6.101 | |
| 15,300.00 | 11,944.00 | 15,436.63 | 12,081.00 | 57.80 | 57.08 | 101.79 | 3,496.93 | 433.84 | 675.29 | 562.17 | 113.13 | 5.969 | |
| 15,400.00 | 11,944.00 | 15,536.63 | 12,081.00 | 59.05 | 58.31 | 101.79 | 3,596.93 | 432.92 | 675.29 | 559.71 | 115.58 | 5.842 | |
| 15,500.00 | 11,944.00 | 15,636.63 | 12,081.00 | 60.32 | 59.56 | 101.79 | 3,696.92 | 431.99 | 675.29 | 557.23 | 118.06 | 5.720 | |
| 15,600.00 | 11,944.00 | 15,736.63 | 12,081.00 | 61.59 | 60.81 | 101.79 | 3,796.92 | 431.07 | 675.29 | 554.74 | 120.55 | 5.602 | |
| 15,700.00 | 11,944.00 | 15,836.63 | 12,081.00 | 62.87 | 62.08 | 101.79 | 3,896.91 | 430.15 | 675.29 | 552.24 | 123.06 | 5.488 | |
| 15,800.00 | 11,944.00 | 15,936.63 | 12,081.00 | 64.16 | 63.35 | 101.79 | 3,996.91 | 429.22 | 675.29 | 549.72 | 125.58 | 5.377 | |
| 15,900.00 | 11,944.00 | 16,036.63 | 12,081.00 | 65.45 | 64.63 | 101.79 | 4,096.91 | 428.30 | 675.29 | 547.18 | 128.11 | 5.271 | |
| 16,000.00 | 11,944.00 | 16,136.63 | 12,081.00 | 66.75 | 65.91 | 101.79 | 4,196.90 | 427.38 | 675.29 | 544.63 | 130.66 | 5.168 | |
| 16,100.00 | 11,944.00 | 16,236.63 | 12,081.00 | 68.06 | 67.20 | 101.79 | 4,296.90 | 426.46 | 675.29 | 542.08 | 133.22 | 5.069 | |
| 16,200.00 | 11,944.00 | 16,336.63 | 12,081.00 | 69.37 | 68.50 | 101.79 | 4,396.89 | 425.53 | 675.29 | 539.51 | 135.79 | 4.973 | |
| 16,300.00 | 11,944.00 | 16,436.63 | 12,081.00 | 70.68 | 69.81 | 101.79 | 4,496.89 | 424.61 | 675.29 | 536.93 | 138.37 | 4.880 | |
| 16,400.00 | 11,944.00 | 16,536.63 | 12,081.00 | 72.00 | 71.11 | 101.79 | 4,596.88 | 423.69 | 675.30 | 534.33 | 140.96 | 4.791 | |
| 16,500.00 | 11,944.00 | 16,636.63 | 12,081.00 | 73.33 | 72.43 | 101.79 | 4,696.88 | 422.76 | 675.30 | 531.73 | 143.56 | 4.704 | |
| 16,600.00 | 11,944.00 | 16,736.63 | 12,081.00 | 74.66 | 73.75 | 101.79 | 4,796.88 | 421.84 | 675.30 | 529.13 | 146.17 | 4.620 | |
| 16,689.23 | 11,944.00 | 16,825.86 | 12,081.00 | 75.85 | 74.93 | 101.79 | 4,886.10 | 421.02 | 675.30 | 526.79 | 148.51 | 4.547 | |

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

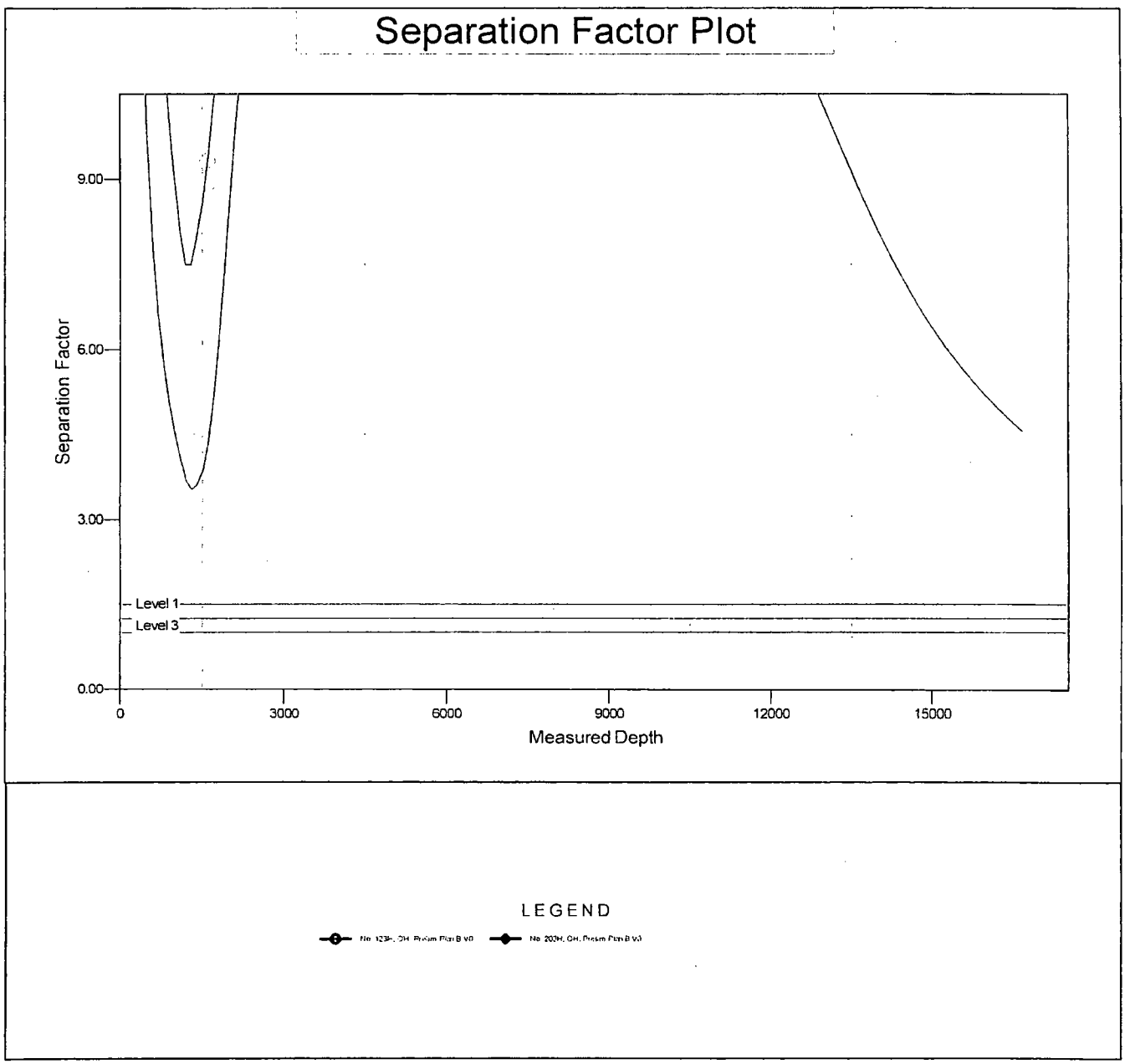
| | |
|---|---|
| Reference Depths are relative to Well @ 3835.00usft | Coordinates are relative to: No. 133H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 |
| Central Meridian is 104.333334°W | Grid Convergence at Surface is: 0.36° |




CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well No. 133H |
| **Project:** | Lea County, NM | **TVD Reference:** | Well @ 3835.00usft |
| **Reference Site:** | Nina Cortell Fed Com | **MD Reference:** | Well @ 3835.00usft |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | No. 133H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan B | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| Reference Depths are relative to Well @ 3835.00usft | Coordinates are relative to: No. 133H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 |
| Central Meridian is 104.333334°W | Grid Convergence at Surface is: 0.36° |




CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Matador Production Company
Nina Cortell Fed 133H
SHL 150' FSL & 2118' FEL
BHL 240' FNL & 2313' FEL
Sec. 3, T. 22 S., R. 32 E., Lea County, NM



Drilling Program

1. ESTIMATED TOPS

| Formation Name | TVD | MD | Bearing |
|---|---|---|---|
| Quaternary | 000' | 000' | water |
| Dewey Lake sandstone | 383' | 383' | water |
| Rustler anhydrite | 979' | 979' | N/A |
| Top salt | 1353' | 1353' | N/A |
| Castile anhydrite | 3487' | 3493' | N/A |
| Base salt | 4861' | 4870' | N/A |
| Bell Canyon sandstone | 4925' | 4934' | hydrocarbons |
| Cherry Canyon sandstone | 5915' | 5924' | hydrocarbons |
| Brushy Canyon sandstone | 6878' | 6886' | hydrocarbons |
| Bone Spring limestone | 8874' | 8883' | hydrocarbons |
| 1st Bone Spring carbonate | 9583' | 9592' | hydrocarbons |
| 1st Bone Spring sandstone | 9936' | 9945' | hydrocarbons |
| 2nd Bone Spring carbonate | 10221' | 10230' | hydrocarbons |
| 2nd Bone Spring sandstone | 10494' | 10503' | hydrocarbons |
| 3rd Bone Spring carbonate | 11034' | 11043' | |
| (KOP | 11391' | 11400' | hydrocarbons) |
| 3rd Bone Spring sandstone (& goal) | 11572' | 11585' | |
| TD | 11944' | 16689' | hydrocarbons |

2. NOTABLE ZONES

Third Bone Spring sand is the goal. Hole will extend north of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. Closest water well (C 03717) is 6461' west. Water bearing strata were found at 620'-630' in this 650' deep well.

3. PRESSURE CONTROL

A 12,000' 5000-psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attached BOP, choke manifold, co-flex hose, and speed head diagrams.

An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required in Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

Surface casing will be pressure tested to 250 psi low and 2000 psi high. Intermediate casing pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing and tested to 250 psi low and 2500 psi high on the intermediate casing.

In the case of running a speed head with landing mandrel for 9.625" casing, initial surface casing test pressures will be 250 psi low and 3000 psi high and the annular will be tested to 250 psi low and 2500 psi high. Wellhead seals will be tested to 5000 psi once the 9.625" casing has been landed and cemented. Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 5.5" x 2.875".

Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. Manufacturer does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

4. CASING & CEMENT

All casing will be API and new. See attached casing assumption worksheet.

| Hole O. D. | Set MD | Set TVD | Casing O. D. | Weight (lb/ft) | Grade | Joint | Collapse | Burst | Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' - 1200' | 0' - 1200' | Surface 13.375" | 54.5 | J-55 | BTC | 1.125 | 1.125 | 1.8 |
| 12.25" | 0' - 5000' | 0' - 4986' | Inter. 9.625" | 40 | J-55 | BTC | 1.125 | 1.125 | 1.8 |
| 8.75" | 0' - 16689' | 0' – 11944' | Product. 5.5" | 20 | P-110 | BTC/TXP | 1.125 | 1.125 | 1.8 |

| Casing Name | Type | Sacks | Yield | Cu. Ft. | Weight | Blend |
|---|---|---|---|---|---|---|
| Surface | Lead | 250 | 1.82 | 455 | 12.8 | Class C + bentonite + 2% $CaCl_2$ + 3% NaCl + LCM |
| | Tail | 889 | 1.38 | 1226 | 14.8 | Class C + 5% NaCl + LCM |
| TOC = GL | | 100% Excess | | | Centralizers per Onshore Order 2 | |
| Intermediate | Lead | 1044 | 2.13 | 2223 | 12.6 | Class C + Bentonite + 1% $CaCl_2$ + 8% NaCl + LCM |
| | Tail | 554 | 1.38 | 764 | 14.8 | Class C + 5% NaCl + LCM |
| TOC = GL | | 100% Excess | | | 2 on btm jt, 1 on 2nd jt, 1 every 4th jt to GL | |
| Production | Lead | 966 | 2.35 | 2270 | 11.5 | TXI + Fluid Loss + Dispersant + Retarder + LCM |
| | Tail | 1670 | 1.39 | 2321 | 13.2 | TXI + Fluid Loss + Dispersant + Retarder + LCM |
| TOC = 4000' | | 35% Excess | | | 2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC) | |

5. MUD PROGRAM

An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

| Type | Interval (MD) | lb/gal | Viscosity | Fluid Loss |
|---|---|---|---|---|
| fresh water spud | 0' - 1200' | 8.3 | 28 | NC |
| brine water | 1200' - 5000' | 10.0 | 30-32 | NC |
| fresh water & cut brine | 5000' - 16689' | 9.0 | 30-32 | NC |

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud logging program will be used from ≈5000' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈6500 psi. Expected bottom hole temperature is ≈16p5° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough $H_2S$ from the surface to the Bone Spring to meet the BLM's minimum requirements for the submission of an "$H_2S$ Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an $H_2S$ safety package on all wells, an "$H_2S$ Drilling Operations Plan" is attached.

Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈3 months to drill and complete the well.

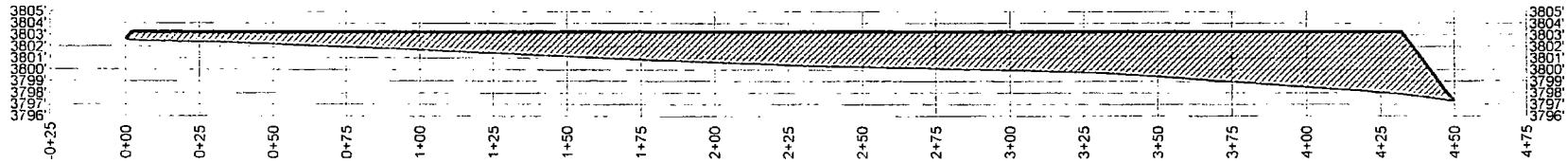
TOP OF PAD ELEVATION: 3803.2634
CUT SLOPE: 33.33% 3.000:1 18.43°
FILL SLOPE: 33.33% 3.000:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT . 157,534.0 C.F., 5,834.59 C.Y.
FILL: 157,534.0 C.F., 5,834.59 C.Y.
AREA: 173572.3 SQ.FT., 3 985 ACRES

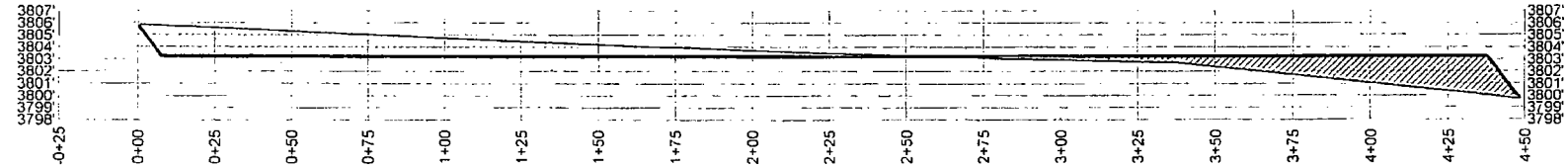
# SECTION 3, TOWNSHIP 22-S, RANGE 32-E, N.M.P.M.
# LEA COUNTY, NEW MEXICO

Matador PRODUCTION COMPANY

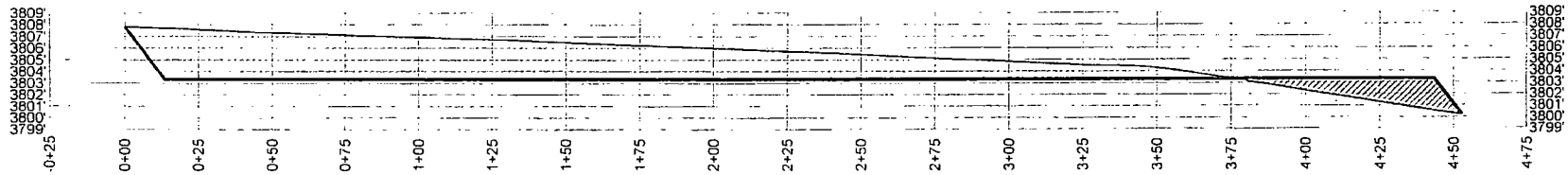
A-A'




B-B'




C-C'




Horizontal Scale = 1:60
Vertical Scale = 1:5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TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM


| NINA CORTELL FED 203H SURFACE PAD SITE PROFILE | REVISION: | |
|---|---|---|
| | GLH | 05/01/17 |
| | | |
| DATE: 04/18/17 | | |
| FILE: CD_NINA_CORTELL_FED_203H_SURFACE_PAD_SITE_REV1 | | |
| DRAWN BY: GJU | | |
| SHEET: 2 OF 2 | | |

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

MAP 12

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

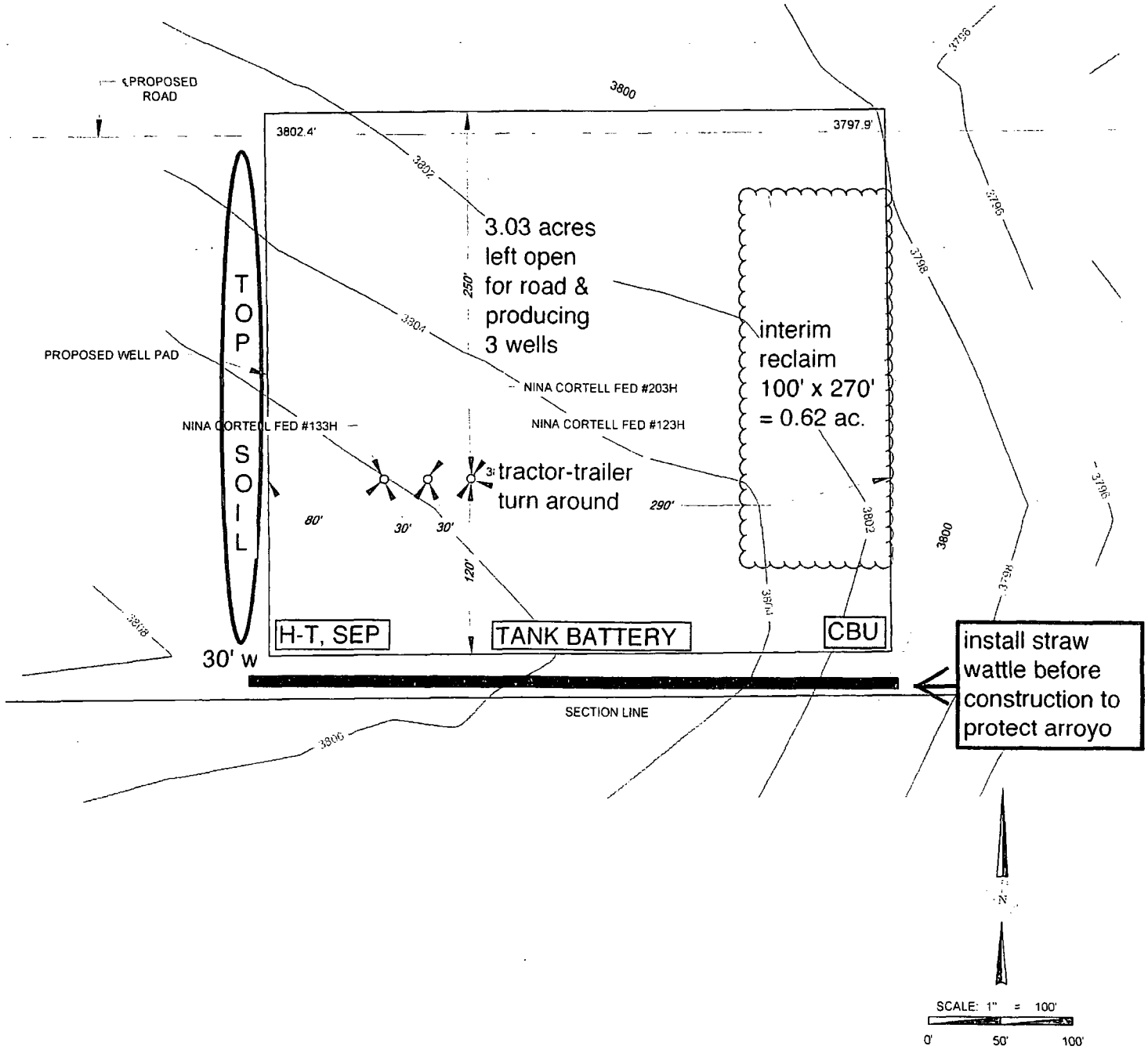
Michael Blake Brown, P.S. No. 18329
MAY 01, 2017
Field note description of even date accompanies this plat.

S:\SURVEY\MATADOR_RESOURCES\NINA_CORTELL_FED_203H_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_NINA_CORTELL_FED_203H_SURFACE_PAD_SITE_REV1.DWG 5/1/2017 3:25:46 PM ccasion

MAP 10

SECTION 3, TOWNSHIP 22-S, RANGE 32-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'




ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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Matador Production Company
Nina Cortell Fed 133H
SHL 150' FSL & 2118' FEL
BHL 240' FNL & 2313' FEL
Sec. 3, T. 22 S., R. 32 E., Lea County, NM

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 - 6)

From the junction of US 285 and US 62/180 in Carlsbad...
Go E 29.75 miles on US 62/180 to the equivalent of Mile Post 66.6
Then turn right and go South 9.0 miles on paved Lea County Road 29
(It transitions into Eddy County Road 798)
Then turn left at a very large oil tank and go E 2/3 mile on a caliche road
Then turn left and go N 0.5 mile on a caliche road
Then turn right and go East 1.4 mile on a caliche road
Then turn right and go South 0.6 mile on a caliche road
Then turn left and go East 0.3 mile on a caliche road
Then turn right and go South 0.9 mile on a caliche road
Then turn left and go Northeast 1.2 mile on a caliche road
Then turn right and go SE 0.4 mile on caliche road to SW corner of a P&A pad
Then turn left and go East 808.35' cross-country to the NW pad corner

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed.

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 4 - 6)

The 808.35' of new resource road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 5%. Maximum cut or fill = 3'. No culvert, cattle guard, or vehicle turn out is needed.

Upgrading will consist of draining and/or patching ten potholes with caliche. The potholes are located (from east to west and in NAD 83) at:
32.41494°, -103.67654°

32.41504°, -103.67879°
32.41512°, -103.68060°
32.41702°, -103.68328°
32.41873°, -103.68333°
32.42312°, -103.68326°
32.42402°, -103.68326°
32.42804°, -103.68354°
32.43641°, -103.68974°
32.43644°, -103.69497°

3. EXISTING WELLS (See MAP 3)

Existing oil, gas, SWD, and P & A wells are within a mile. No water or injection wells are within a mile radius.

4. PROPOSED PRODUCTION FACILITIES

No pipeline or power line plans have been finalized at this time. Production equipment will be located on the south side of the pad.

5. WATER SUPPLY (See MAP 7)

Water will be trucked from existing water stations on private land. Berry's water station (CP 00802) is in NWNE 2-21s-33e.

6. CONSTRUCTION MATERIALS & METHODS (See MAPS 8 & 9)

NM One Call (811) will be notified before construction starts. A straw wattle will be installed south of the pad before moving earth to protect an arroyo. Top ≈6" of soil and brush will be stockpiled west of the pad. V-door will face south.

Closed loop drilling system will be used. Caliche will be hauled from an existing caliche pit on private (Mills) land in E2NE4 3-22s-32e.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Lea County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Hobbs wastewater treatment plant.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, and mud logger.

9. WELL SITE LAYOUT (See MAP 8)

Also see Rig Layout diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION (See MAPS 10 - 12)

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad ≈17% (0.62 acre) by removing caliche and reclaiming a 100' x 270' area on the east side of the pad. This will leave 3.03 acres for the through road, production equipment (e. g., tank battery, heater-treaters, separators, flare/CBU, pump jacks), and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed

on the contour. Disturbed areas will be seeded in accordance with the State Land Office's requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the last well is plugged, then the rest of the pad and 808.35' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

Land use:

808.35' x 30' road = 0.56 acre
+ 370' x 430' pad = 3.65 acres
4.21 acres short term
- 0.62 acre interim reclamation
3.59 acres long term (0.56 ac. road + 3.03 ac. pad)

11. SURFACE OWNER

The west 362.85' of road construction will be on NM State Land Office land (SESW 3-22s-32e). Their address is PO Box 1148, Santa Fe, NM 87504. Phone is 505 827-5760. Matador will file for a road right-of-way with the State.

All remaining construction will be on fee land owned by the Jimmy Mills Trust, 1602 Ave. J., Abernathy TX 79311. Phone number is (806) 298-2752. The Trust has leased the land to Slash 46, Inc.; 16 Mills Ranch Road, Loving NM 88256. Their phone is (575) 390-2779. Matador has entered into negotiations.

12. OTHER INFORMATION

On site inspection was held with Vance Wolf (BLM) on June 2, 2017. Lone Mountain will inspect and file an archaeology report.

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. Executed this 21st day of November, 2017.

Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop, Santa Fe, NM 87508
(505) 466-8120 FAX: (505) 466-9682 Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman
Matador Production Company
5400 LBJ Freeway, Suite 1500
Dallas TX 75240
Phone: (972) 371-5241
FAX: (214) 866-4841

November 21, 2017

To Who It May Concern:

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Brian Wood

PERMITS WEST, INC.
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120

January 12, 2018

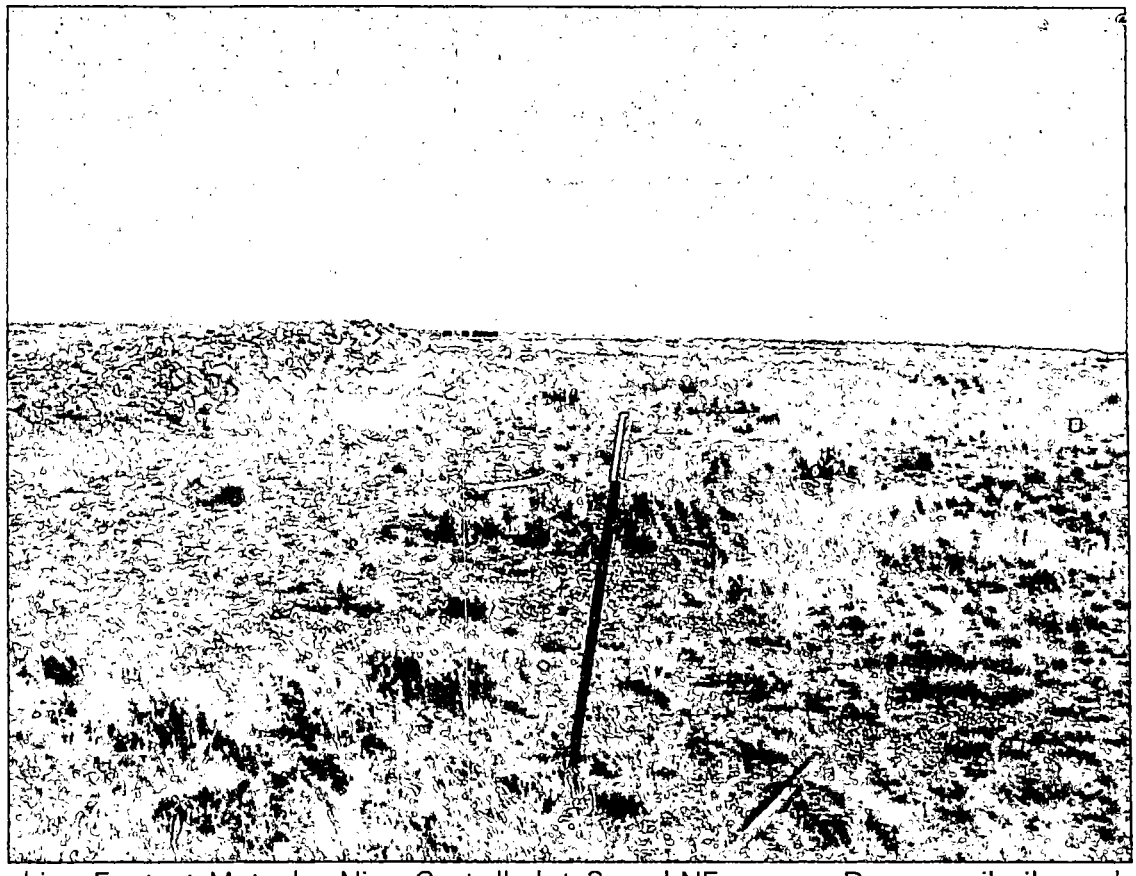
To Whom It May Concern:

I inspected the proposed access route to Matador's Nine Cortell slot 3 and 4 pads (3-22s-32e, Lea County, NM) on January 8, 2018. The access route is adjacent to, but not in, the topsoil pile for Devon's Divide 3 State Com 1 (30-025-40999) pad (see attached photos).

Devon's well was plugged and abandoned on October 21, 2017. The east half of the topsoil pile has now been used to reclaim the east half of the pad (see attached photos).

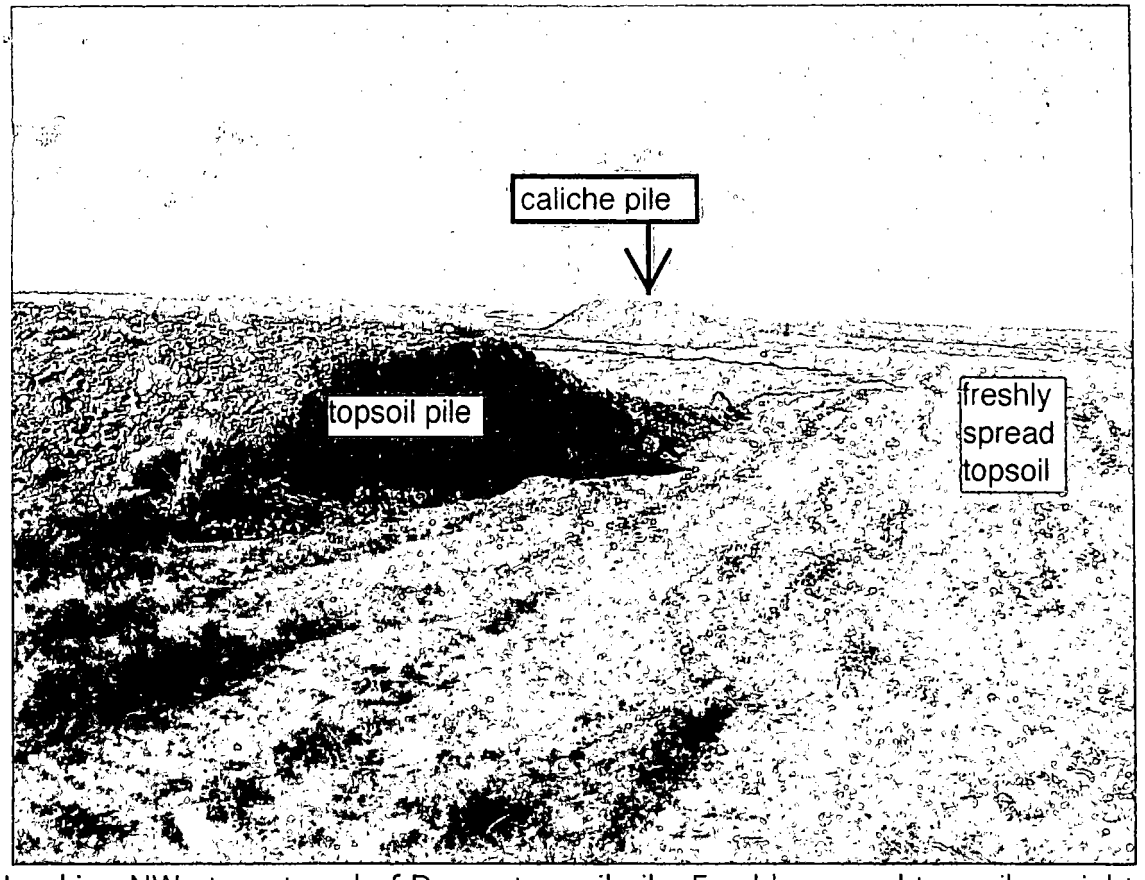
The west half of the topsoil pile will be used in reclaiming the remainder of the pad. A bulldozer was on location (see attached photos). A pile of caliche was awaiting loading and transport off-location for reuse. Once the caliche is removed, then the remainder of the topsoil will be spread.

Brian Wood

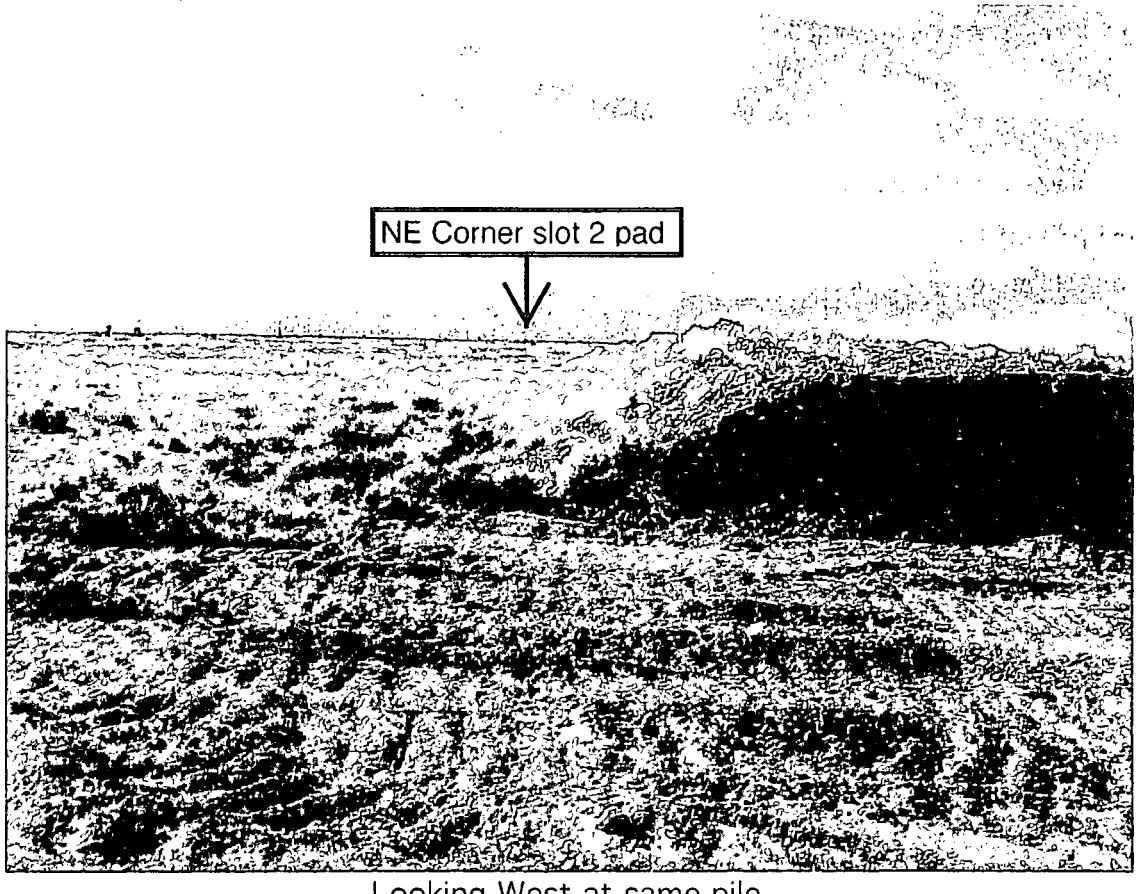


Looking East at Matador Nina Cortell slot 2 pad NE corner. Devon soil pile on left.

Looking North at same corner. Bulldozer & caliche pile on Devon pad.



Looking NW at east end of Devon topsoil pile. Freshly spread topsoil on right.



Looking West at same pile.

## Section 1 - General

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

## Section 2 - Lined Pits

**Would you like to utilize Lined Pit PWD options?** NO

**Produced Water Disposal (PWD) Location:**

**PWD surface owner:**

**PWD disturbance (acres):**

**Lined pit PWD on or off channel:**

**Lined pit PWD discharge volume (bbl/day):**

**Lined pit specifications:**

**Pit liner description:**

**Pit liner manufacturers information:**

**Precipitated solids disposal:**

**Decribe precipitated solids disposal:**

**Precipitated solids disposal permit:**

**Lined pit precipitated solids disposal schedule:**

**Lined pit precipitated solids disposal schedule attachment:**

**Lined pit reclamation description:**

**Lined pit reclamation attachment:**

**Leak detection system description:**

**Leak detection system attachment:**

**Lined pit Monitor description:**

**Lined pit Monitor attachment:**

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

**Is the reclamation bond a rider under the BLM bond?**

**Lined pit bond number:**

**Lined pit bond amount:**

**Additional bond information attachment:**