

**PECOS DISTRICT  
DRILLING OPERATIONS  
CONDITIONS OF APPROVAL**

**HOBBS OCD  
FEB 28 2018  
RECEIVED**

OPERATOR'S NAME:	Matador Prod Co
LEASE NO.:	NM135247
WELL NAME & NO.:	203H – Nina Cortell Fed Com
SURFACE HOLE FOOTAGE:	150'S & 2088'E
BOTTOM HOLE FOOTAGE:	240'N & 1652'E
LOCATION:	Sec. 3, T. 22 S, R. 32 E
COUNTY:	Lea County

Potash	<input type="radio"/> None	<input checked="" type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input checked="" type="radio"/> Multibowl	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

**A. Hydrogen Sulfide**

1. Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 first 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 7 inch second intermediate casing is:
  - Cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.
4. The minimum required fill of cement behind the 4 1/2 inch production casing is:
  - Cement as proposed. 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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

**Option 1:**

- i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9 5/8 inch first intermediate casing shoe shall be **3000 (3M)** psi.
- ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 7 inch second intermediate casing shoe shall be **10,000 (10M)** psi.

**Option 2:**

- i. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the first intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the first casing shoe shall be **10,000 (10M) 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. **After the 7" casing is set in the speed head, the BOP will then be lifted to install another casing head section for setting the production casing. Therefore, per Onshore Oil and Gas Order No. 2, the entire BOP/BOPE shall be tested prior to drilling out the second intermediate casing shoe.**
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - f. 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.

**A 5M Annular variance sundry along with a 'well control plan' and 10M BOP/BOPE diagram must be submitted, in order to use a 5M Annular on top of a 10M BOP stack.**

**D. SPECIAL REQUIREMENT(S)**

**Communitization Agreement**

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

**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 2<sup>nd</sup> 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.

Matador Production Company  
Nina Cortell Fed Com 203H  
SHL 150' FSL & 2088' FEL  
BHL 240' FNL & 1652' FEL  
Sec. 3, T. 22 S., R. 32 E., Lea County, NM

DRILL PLAN PAGE 2

### 3. PRESSURE CONTROL

A 12,000' <sup>10,000</sup>~~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.

After setting the surface casing, and before drilling the surface casing shoe, a minimum 2M BOPE system will be installed. It will be tested to 250 psi low and 2000 psi high. Annular will be tested to 250 psi low and 1000 psi high.

After setting intermediate 1 casing, a minimum 3M BOPE system will be installed and tested to 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high.

After setting intermediate 2 casing, a minimum <sup>10M</sup>~~5M~~ BOPE system will be installed and tested to 250 psi low and <sup>10,000</sup>~~5000~~ psi high. Annular will be tested to 250 psi low and <sup>5000</sup>~~2500~~ psi high.

Matador requests a variance to have the option of running a speed head for setting the intermediate 1 and 2 strings. In the case of running a speed head with landing mandrel for 9.625" and 7" casing, a minimum 3M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high before drilling below the surface shoe. After 7" casing is set in the speed head,

**PERMITS WEST** INC.  
PROVIDING PERMITS for LAND USERS

Approval Date: 02/16/2018

Matador Production Company  
 Nina Cortell Fed Com 203H  
 SHL 150' FSL & 2088' FEL  
 BHL 240' FNL & 1652' FEL  
 Sec. 3, T. 22 S., R. 32 E., Lea County, NM

the BOP will then be lifted to install another casing head section for setting the production casing. Matador will nipple up the casing head and BOP and a minimum 5M BOPE system will be installed. Pressure tests will be made to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high. A diagram of the speed head is attached.

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.

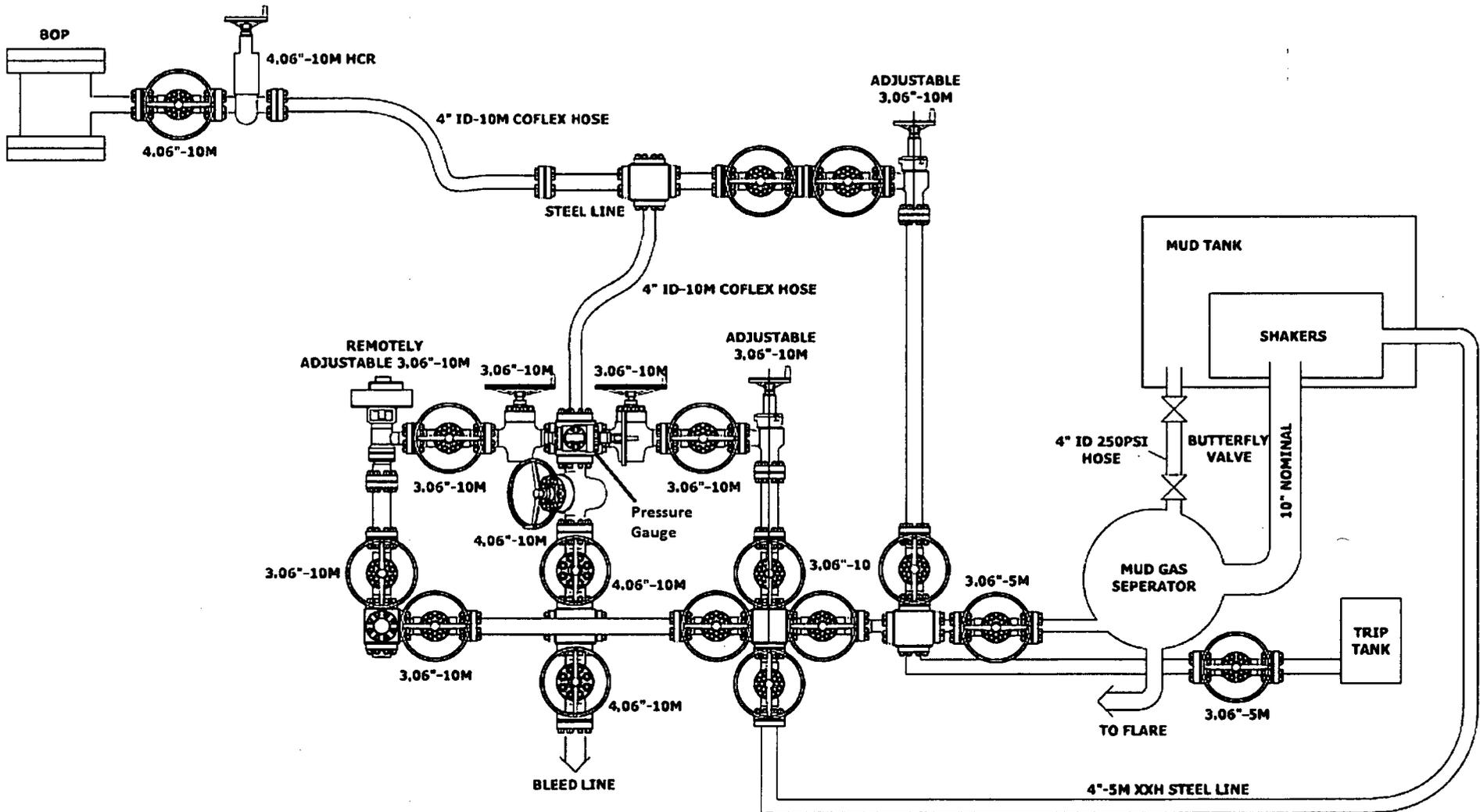
4. CASING & CEMENT

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'	13.375" surface	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	0' - 5000'	0' - 4987'	9.625" inter. 1	40	J-55	BTC	1.125	1.125	1.8
8.75"	0' - 12330'	0' - 12075'	7.0" inter. 2	29	P-110	BTC	1.125	1.125	1.8
6.125"	0' - 16841'	0' - 12094'	4.5" product.	13.5	P-110	BTC/TXP	1.125	1.125	1.8



Approval Date: 07/16/2018



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

**GENERAL WELDING NOTE:**  
 ALL ACCESSIBLE CONTACT SURFACES SHALL BE JOINED WITH CONTINUOUS 45 DEGREE FILLET WELD. WELD SIZE TO BE 1/4 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 1/8 INCH THICKNESS AND 1/8 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 3/4 INCH THICKNESS. WELDMENT TO ENFACE IS 1/16

**MACHINING TOLERANCES**  
 1 PLACE DECIMAL = .1  
 2 PLACE DECIMAL = .01  
 3 PLACE DECIMAL = .005  
 FRACTIONAL TOLERANCES = 1/64  
 INSIDE MACHINED CORNERS RADIUS = .031  
 CHAMFER OUTSIDE CORNERS 25 X 45 DEG  
 ANGLE TOLERANCES = ±1 DEGREE  
 MACHINED SURFACE FINISH 125 RMS  
 ALL UNSPECIFIED DIMENSIONS ARE IN INCHES

REV	DATE	DESCRIPTION	DRN BY	CHK BY	APP'D ENGR
02	4-15	ISSUED FOR INFORMATION		CP	COL
01	1-14-12	ISSUED FOR INFORMATION		COL	

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**CHOKE MANIFOLD**  
 10M CHOKE ARRANGEMENT  
 RIG 297

DRW NO: R0297-D.001.LAY.00

SCALE	1" = 1'
SHEET	03

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

**HOBBS OCD  
FEB 28 2018  
RECEIVED**

OPERATOR'S NAME:	Matador Prod Co
LEASE NO.:	NM135247
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LOCATION:	Section 3, T. 22 S., R. 32 E.
COUNTY:	Lea County, New Mexico

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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.

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- 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**

## **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.

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.

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**

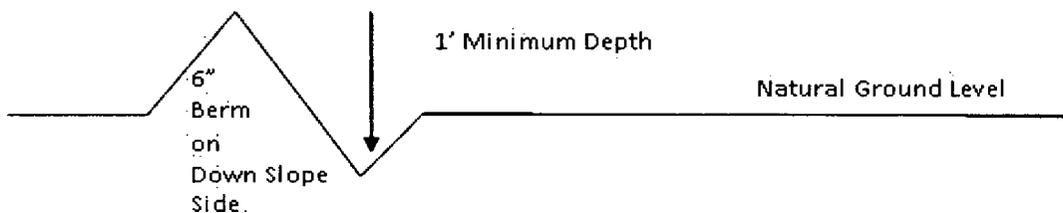
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outloping 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:

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

#### Cattle guards

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

#### Fence Requirement

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

#### Public Access

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

**Construction Steps**

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

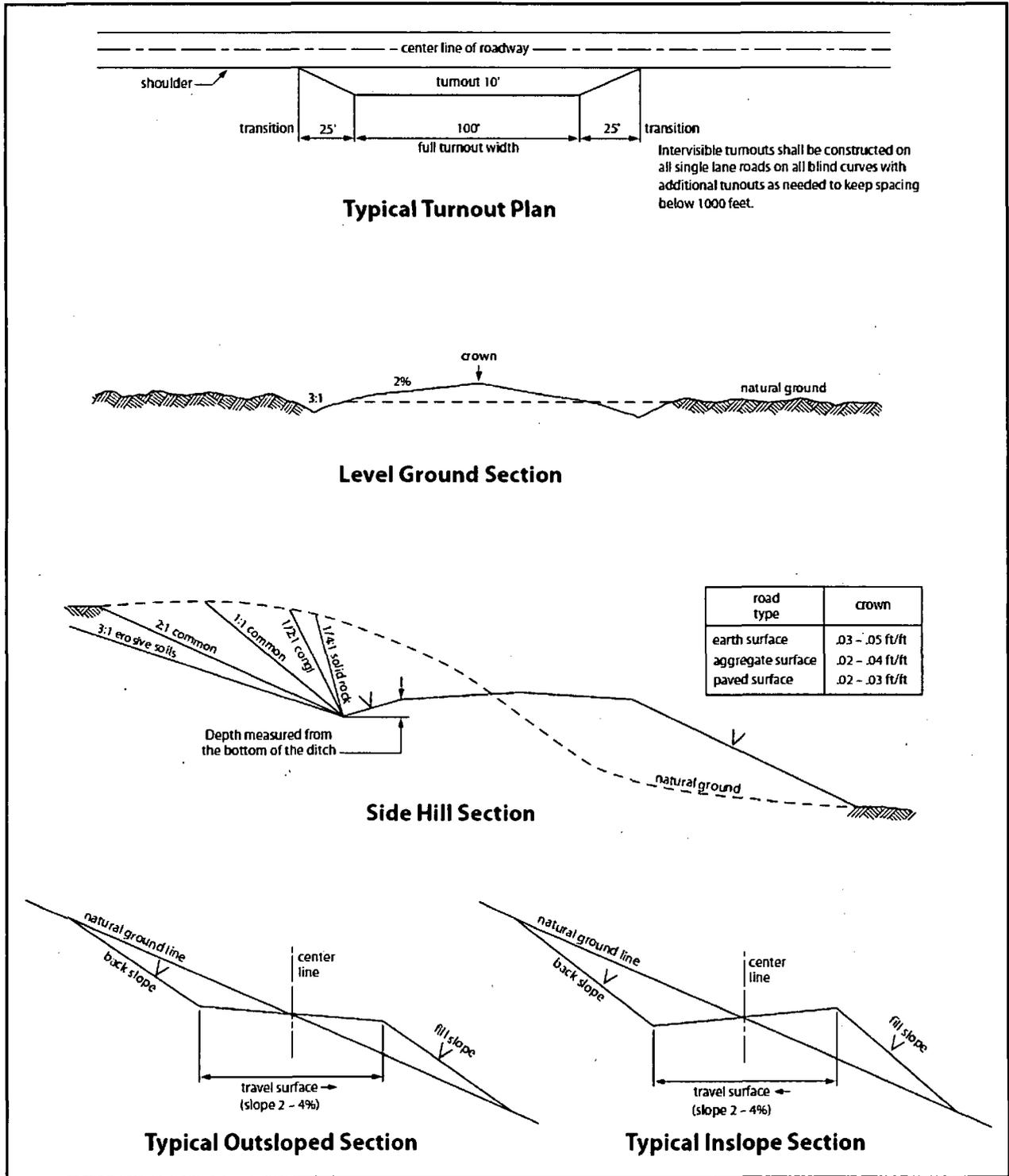


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## VII. PRODUCTION (POST DRILLING)

### A. WELL STRUCTURES & FACILITIES

#### **Placement of Production Facilities**

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

#### **Exclosure Netting (Open-top Tanks)**

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

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

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

#### **Open-Vent Exhaust Stack Exclosures**

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

### **Containment Structures**

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

### **Painting Requirement**

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

### **VRM Facility Requirement**

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).

## **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

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

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:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Matador Prod Co
LEASE NO.:	NM135247
WELL NAME & NO.:	203H-Nina Cortell Fed
SURFACE HOLE FOOTAGE:	150'/S & 2088'/E
BOTTOM HOLE FOOTAGE:	240'/N & 1652'/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**

## **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.

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### **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.

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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.

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Tanks are required for drilling operations: No Pits.

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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.

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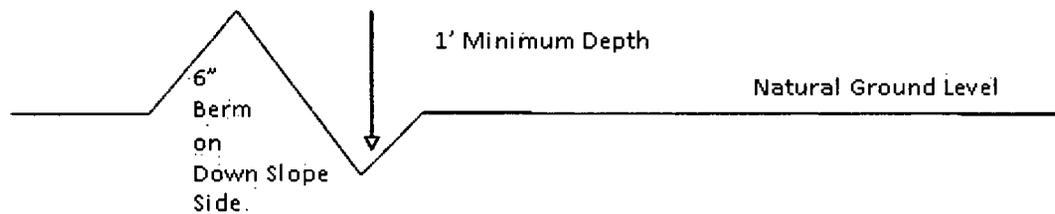
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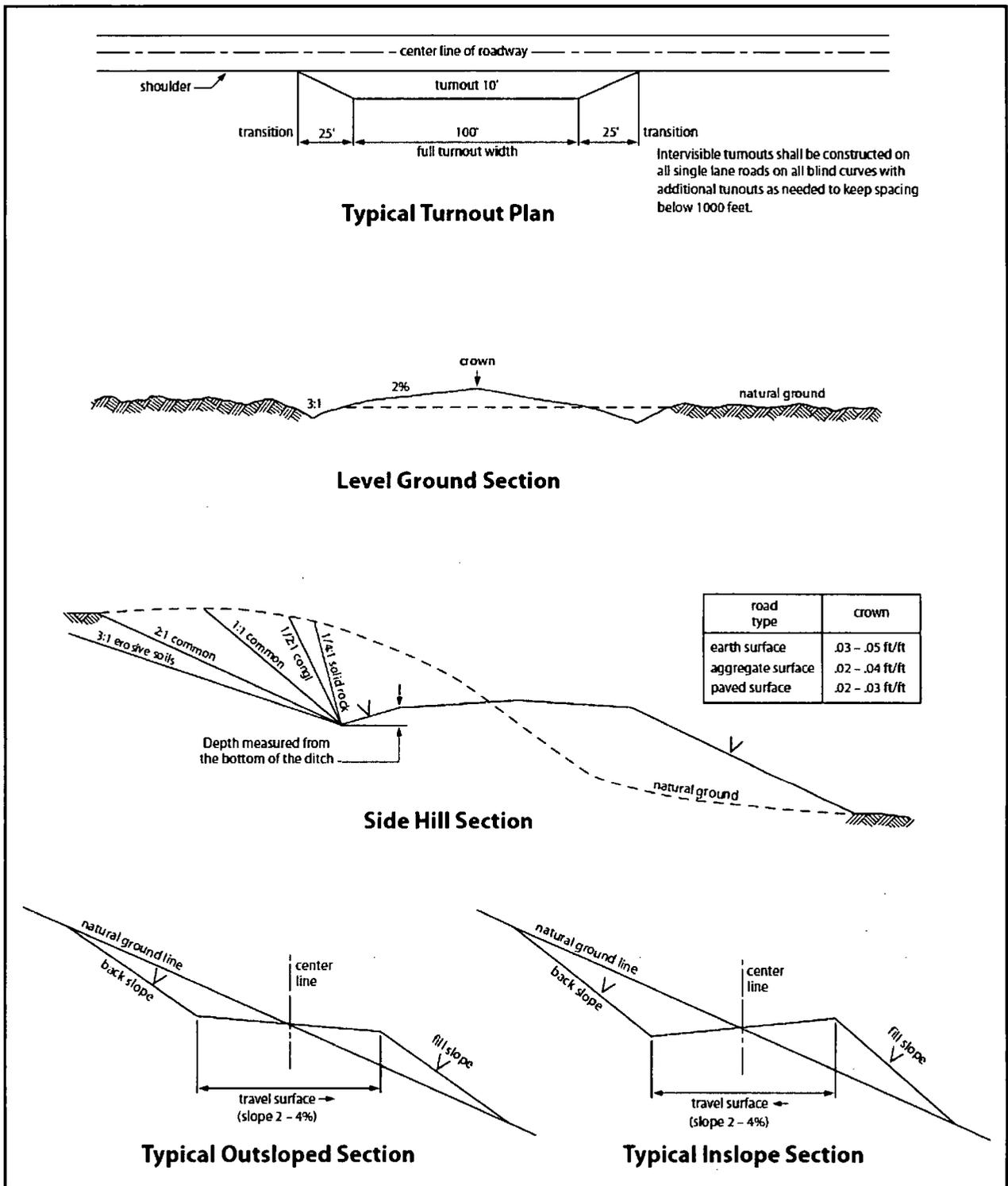


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Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity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

#### **Chemical and Fuel Secondary Containment and Exclosure Screening**

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

#### **Open-Vent Exhaust Stack Exclosures**

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

### **Containment Structures**

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

### **Painting Requirement**

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

### **VRM Facility Requirement**

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).

## **IX. FINAL ABANDONMENT & RECLAMATION**

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

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

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

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

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

### 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:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

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



## 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.

- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft) which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

### **Production Casing**

Collapse:  $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (12.5 ppg).

## Casing Design Criteria and Load Case Assumptions

### Surface Casing

Collapse:  $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

### Intermediate #1 Casing

Collapse:  $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

### Intermediate #2 Casing

Collapse:  $DF_c=1.125$

- Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft) which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

### Production Casing

Collapse:  $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst:  $DF_b=1.125$

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.

Tensile:  $DF_t=1.8$

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (12.5 ppg).



#### 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 H<sub>2</sub>S has on tubulars good and other mechanical equipment.

9 If H<sub>2</sub>S 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 H<sub>2</sub>S scavengers if necessary.

#### 11 Emergency Contacts

- See following page

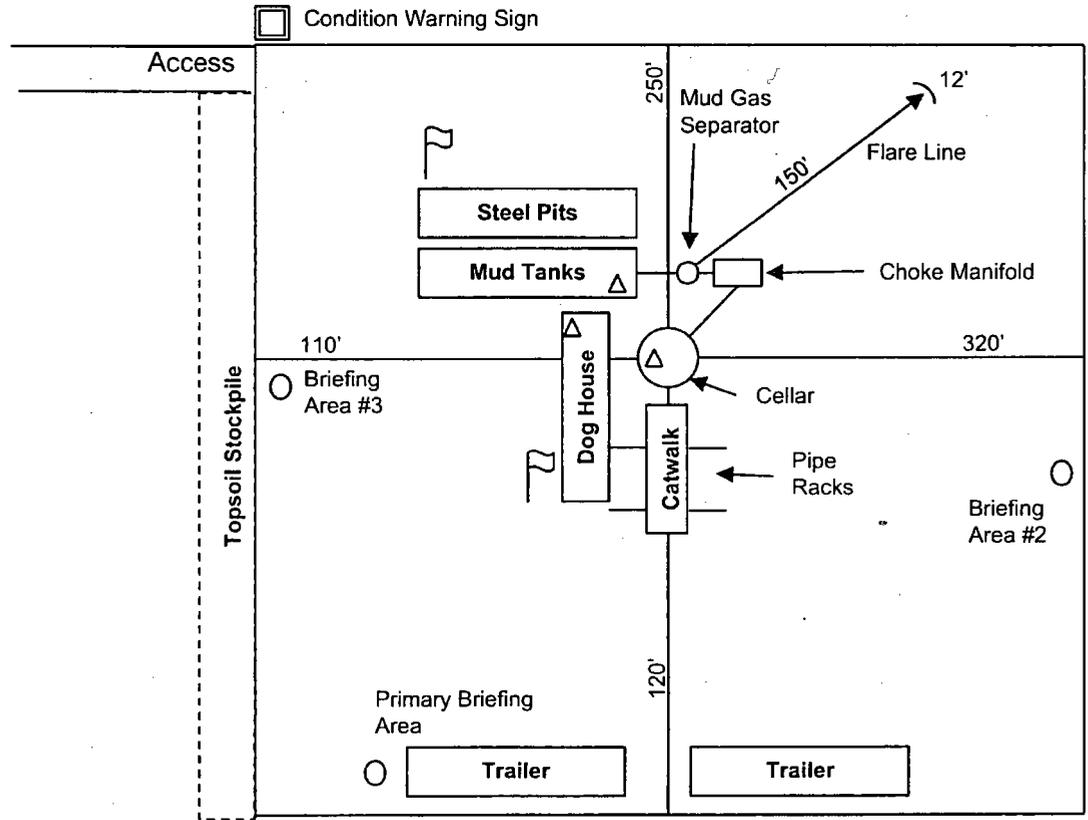
H2S Contingency Plan Emergency Contacts  
 Nina Cortell wells  
 Matador Production Company  
 Sec. 3, T22S, R32E Lea County, NM

<b>Company Office</b>			
Matador Production Company		(972)-371-5200	
<b>Key Personnel</b>			
<b>Name</b>	<b>Title</b>	<b>Office</b>	<b>Mobile</b>
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
<b>Lea County</b>			
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	
<b>Carlsbad</b>			
BLM		575-234-5972	
<b>Santa Fe</b>			
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	
<b>National</b>			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<b>Medical</b>			
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	
<b>Other</b>			
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	

# Rig Diagram

Nina Cortell Fed Com 203H  
 SHL 150' FSL & 2088' FEL  
 3-22S-32E Lea County, NM

-  Wind Direction Indicator
-  H2S Monitors
-  Briefing Areas



North  
  
 Prevailing Winds Out Of South

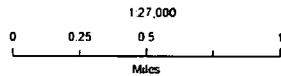


# Matador Production Company

Nina Cortell Fed #203H  
H,S Contingency Plan:  
2 Mile Radius Map

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

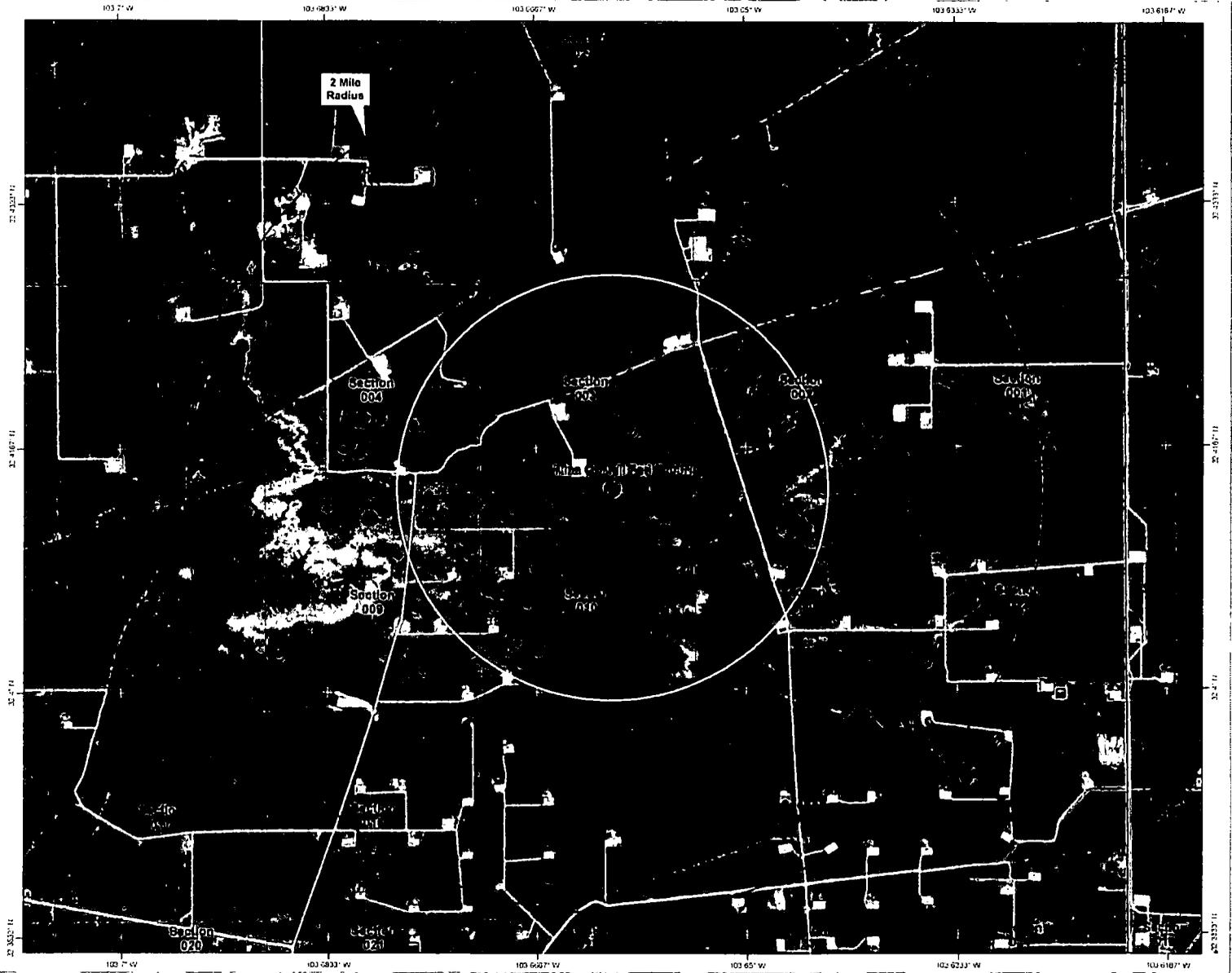
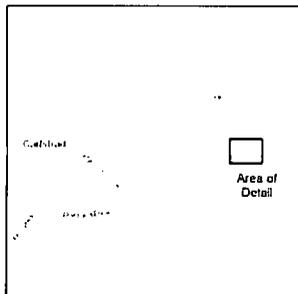
 Surface Hole Location



NAD 1983 New Mexico State Plane East  
FIPS 3001 Feet

**PERMITS WEST**  
PROFESSIONAL ENGINEERS

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

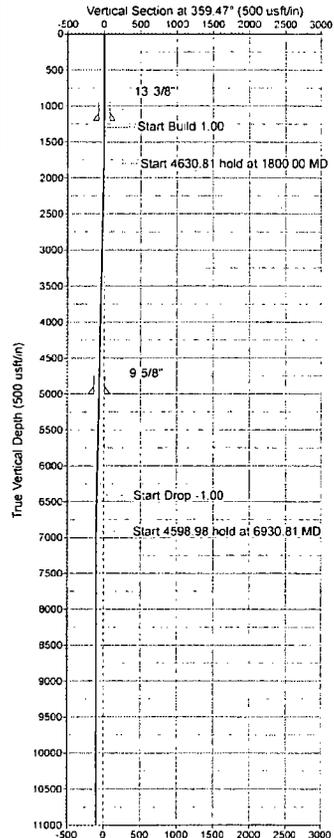




Matador Resources  
Lea County, NM  
Nina Cortell Fed Com  
No. 203H  
Prelim Plan B



US State Plane 1927 (Exact solution)  
NAD 1983 (GARCON) CONUS  
Clark's 1866  
New Mexico East 3301  
Mean Sea Level

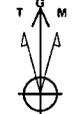


RKB Elevation: Well @ 3834.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	514903.00	707699.00	32 413785°N	103.650292°W	

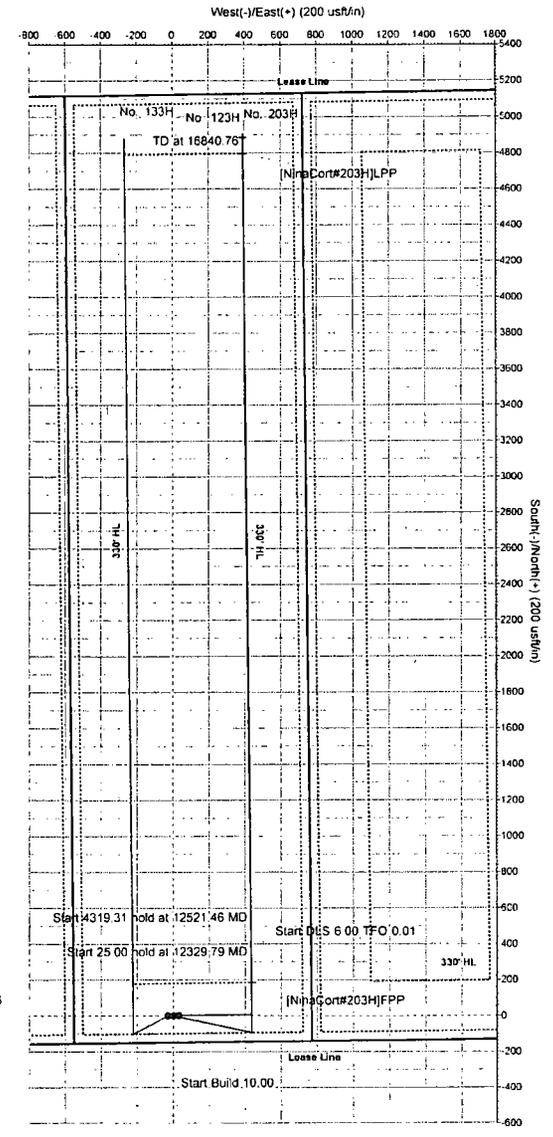
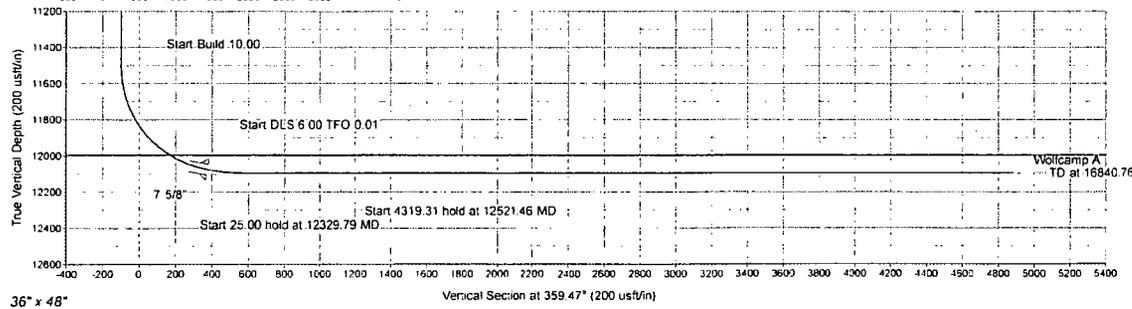
SECTION DETAILS- Lateral

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	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00
3	1800.00	5.00	102.26	1799.37	-4.63	21.31	1.00	-4.83
4	6430.81	5.00	102.26	6412.55	-90.37	415.69	0.00	-94.21
5	6930.81	0.00	0.00	6911.82	-95.00	437.00	1.00	-99.04
6	11228.79	0.00	0.00	11510.80	-95.00	437.00	0.00	-99.04
7	12329.79	80.00	359.47	12075.15	378.64	432.62	10.00	374.43
8	12354.79	80.00	359.47	12079.49	403.06	432.39	0.00	399.05
9	12521.46	90.00	359.47	12094.00	568.88	430.86	6.00	564.87
10	16840.76	90.00	359.47	12094.00	4889.00	391.00	0.00	4884.17



Azimuths to Grid North  
True North -0.36°  
Magnetic North 6.57°  
Magnetic Field  
Strength: 48279.7nT  
Dip Angle: 60.30°  
Date: 7/31/2017  
Model: IIGCM

Azimuth Corrections  
Total Magnetic Corr. (M to G): 6.57°  
Distortion (M to T): 6.93° East



36" x 48"

Vertical Section at 359.47° (200 usft/in)

## Pro Directional Survey Report

Company: Matador Resources	Local Co-ordinate Reference: Well No. 203H	Well No. 203H
Project: Lea County, NM	TVD Reference: Well @ 3834.00usft	Well @ 3834.00usft
Site: Nina Cortell Fed Com	MD Reference: Well @ 3834.00usft	Well @ 3834.00usft
Well: No. 203H	North Reference: Grid	Grid
Wellbore: OH	Survey Calculation Method: Minimum Curvature	Minimum Curvature
Design: Prelim Plan B	Database: WellPlanner1	WellPlanner1

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

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

<b>Well</b>	No. 203H					
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	514,903.00 usft	<b>Latitude:</b>	32.413785°N
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	707,699.00 usft	<b>Longitude:</b>	103.660292°W
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	3,805.00 usft	

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

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

<b>Survey Tool Program</b>	<b>Date</b> 8/11/2017			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
(usft)	(usft)			
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	12,329.00	Prelim Plan B (OH)	MWD+HDGM	OWSG MWD + HRGM
12,329.00	16,840.76	Prelim Plan B (OH)	MWD+HDGM	OWSG MWD + HRGM

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

## Pro Directional Survey Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Site:** Nina Cortell Fed Com  
**Well:** No. 203H  
**Wellbore:** OH  
**Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**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)
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
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
<b>13 3/8"</b>									
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	1.00	102.26	1,399.99	-0.19	0.85	-0.19	1.00	1.00	0.00
1,500.00	2.00	102.26	1,499.96	-0.74	3.41	-0.77	1.00	1.00	0.00
1,600.00	3.00	102.26	1,599.86	-1.67	7.67	-1.74	1.00	1.00	0.00
1,700.00	4.00	102.26	1,699.68	-2.96	13.64	-3.09	1.00	1.00	0.00
1,800.00	5.00	102.26	1,799.37	-4.63	21.31	-4.83	1.00	1.00	0.00
1,900.00	5.00	102.26	1,898.99	-6.48	29.82	-6.76	0.00	0.00	0.00
2,000.00	5.00	102.26	1,998.60	-8.33	38.34	-8.69	0.00	0.00	0.00
2,100.00	5.00	102.26	2,098.22	-10.19	46.86	-10.62	0.00	0.00	0.00
2,200.00	5.00	102.26	2,197.84	-12.04	55.37	-12.55	0.00	0.00	0.00
2,300.00	5.00	102.26	2,297.46	-13.89	63.89	-14.48	0.00	0.00	0.00
2,400.00	5.00	102.26	2,397.08	-15.74	72.41	-16.41	0.00	0.00	0.00
2,500.00	5.00	102.26	2,496.70	-17.59	80.92	-18.34	0.00	0.00	0.00
2,600.00	5.00	102.26	2,596.32	-19.44	89.44	-20.27	0.00	0.00	0.00
2,700.00	5.00	102.26	2,695.94	-21.29	97.96	-22.20	0.00	0.00	0.00
2,800.00	5.00	102.26	2,795.56	-23.15	106.47	-24.13	0.00	0.00	0.00
2,900.00	5.00	102.26	2,895.18	-25.00	114.99	-26.06	0.00	0.00	0.00
3,000.00	5.00	102.26	2,994.80	-26.85	123.50	-27.99	0.00	0.00	0.00
3,100.00	5.00	102.26	3,094.42	-28.70	132.02	-29.92	0.00	0.00	0.00
3,200.00	5.00	102.26	3,194.04	-30.55	140.54	-31.85	0.00	0.00	0.00
3,300.00	5.00	102.26	3,293.66	-32.40	149.05	-33.78	0.00	0.00	0.00
3,400.00	5.00	102.26	3,393.28	-34.25	157.57	-35.71	0.00	0.00	0.00
3,500.00	5.00	102.26	3,492.90	-36.11	166.09	-37.64	0.00	0.00	0.00
3,600.00	5.00	102.26	3,592.52	-37.96	174.60	-39.57	0.00	0.00	0.00
3,700.00	5.00	102.26	3,692.14	-39.81	183.12	-41.50	0.00	0.00	0.00
3,800.00	5.00	102.26	3,791.76	-41.66	191.64	-43.43	0.00	0.00	0.00
3,900.00	5.00	102.26	3,891.37	-43.51	200.15	-45.36	0.00	0.00	0.00
4,000.00	5.00	102.26	3,990.99	-45.36	208.67	-47.29	0.00	0.00	0.00
4,100.00	5.00	102.26	4,090.61	-47.21	217.19	-49.22	0.00	0.00	0.00
4,200.00	5.00	102.26	4,190.23	-49.07	225.70	-51.15	0.00	0.00	0.00
4,300.00	5.00	102.26	4,289.85	-50.92	234.22	-53.08	0.00	0.00	0.00
4,400.00	5.00	102.26	4,389.47	-52.77	242.74	-55.01	0.00	0.00	0.00
4,500.00	5.00	102.26	4,489.09	-54.62	251.25	-56.94	0.00	0.00	0.00
4,600.00	5.00	102.26	4,588.71	-56.47	259.77	-58.87	0.00	0.00	0.00
4,700.00	5.00	102.26	4,688.33	-58.32	268.29	-60.80	0.00	0.00	0.00
4,800.00	5.00	102.26	4,787.95	-60.17	276.80	-62.73	0.00	0.00	0.00
4,900.00	5.00	102.26	4,887.57	-62.03	285.32	-64.66	0.00	0.00	0.00

## Pro Directional Survey Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Site:** Nina Cortell Fed Com  
**Well:** No. 203H  
**Wellbore:** OH  
**Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**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)
5,000.00	5.00	102.26	4,987.19	-63.88	293.84	-66.59	0.00	0.00	0.00
5,012.86	5.00	102.26	5,000.00	-64.12	294.93	-66.84	0.00	0.00	0.00
9 5/8"									
5,100.00	5.00	102.26	5,086.81	-65.73	302.35	-68.52	0.00	0.00	0.00
5,200.00	5.00	102.26	5,186.43	-67.58	310.87	-70.45	0.00	0.00	0.00
5,300.00	5.00	102.26	5,286.05	-69.43	319.39	-72.38	0.00	0.00	0.00
5,400.00	5.00	102.26	5,385.67	-71.28	327.90	-74.31	0.00	0.00	0.00
5,500.00	5.00	102.26	5,485.29	-73.14	336.42	-76.24	0.00	0.00	0.00
5,600.00	5.00	102.26	5,584.91	-74.99	344.94	-78.17	0.00	0.00	0.00
5,700.00	5.00	102.26	5,684.53	-76.84	353.45	-80.10	0.00	0.00	0.00
5,800.00	5.00	102.26	5,784.14	-78.69	361.97	-82.03	0.00	0.00	0.00
5,900.00	5.00	102.26	5,883.76	-80.54	370.49	-83.96	0.00	0.00	0.00
6,000.00	5.00	102.26	5,983.38	-82.39	379.00	-85.89	0.00	0.00	0.00
6,100.00	5.00	102.26	6,083.00	-84.24	387.52	-87.82	0.00	0.00	0.00
6,200.00	5.00	102.26	6,182.62	-86.10	396.04	-89.75	0.00	0.00	0.00
6,300.00	5.00	102.26	6,282.24	-87.95	404.55	-91.69	0.00	0.00	0.00
6,400.00	5.00	102.26	6,381.86	-89.80	413.07	-93.62	0.00	0.00	0.00
6,430.81	5.00	102.26	6,412.55	-90.37	415.69	-94.21	0.00	0.00	0.00
6,500.00	4.31	102.26	6,481.52	-91.56	421.18	-95.45	1.00	-1.00	0.00
6,600.00	3.31	102.26	6,581.29	-92.97	427.67	-96.92	1.00	-1.00	0.00
6,700.00	2.31	102.26	6,681.17	-94.01	432.46	-98.01	1.00	-1.00	0.00
6,800.00	1.31	102.26	6,781.12	-94.68	435.54	-98.71	1.00	-1.00	0.00
6,900.00	0.31	102.26	6,881.11	-94.98	436.92	-99.02	1.00	-1.00	0.00
6,930.81	0.00	0.00	6,911.92	-95.00	437.00	-99.04	1.00	-1.00	0.00
7,000.00	0.00	0.00	6,981.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,100.00	0.00	0.00	7,081.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,200.00	0.00	0.00	7,181.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,300.00	0.00	0.00	7,281.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,400.00	0.00	0.00	7,381.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,500.00	0.00	0.00	7,481.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,600.00	0.00	0.00	7,581.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,700.00	0.00	0.00	7,681.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,800.00	0.00	0.00	7,781.11	-95.00	437.00	-99.04	0.00	0.00	0.00
7,900.00	0.00	0.00	7,881.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,000.00	0.00	0.00	7,981.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,100.00	0.00	0.00	8,081.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,200.00	0.00	0.00	8,181.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,300.00	0.00	0.00	8,281.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,400.00	0.00	0.00	8,381.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,500.00	0.00	0.00	8,481.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,600.00	0.00	0.00	8,581.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,700.00	0.00	0.00	8,681.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,800.00	0.00	0.00	8,781.11	-95.00	437.00	-99.04	0.00	0.00	0.00
8,900.00	0.00	0.00	8,881.11	-95.00	437.00	-99.04	0.00	0.00	0.00

## Pro Directional Survey Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Site:** Nina Cortell Fed Com  
**Well:** No. 203H  
**Wellbore:** OH  
**Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**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)
9,000.00	0.00	0.00	8,981.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,100.00	0.00	0.00	9,081.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,200.00	0.00	0.00	9,181.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,300.00	0.00	0.00	9,281.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,400.00	0.00	0.00	9,381.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,500.00	0.00	0.00	9,481.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,600.00	0.00	0.00	9,581.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,700.00	0.00	0.00	9,681.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,800.00	0.00	0.00	9,781.11	-95.00	437.00	-99.04	0.00	0.00	0.00
9,900.00	0.00	0.00	9,881.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,000.00	0.00	0.00	9,981.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,100.00	0.00	0.00	10,081.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,200.00	0.00	0.00	10,181.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,300.00	0.00	0.00	10,281.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,400.00	0.00	0.00	10,381.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,500.00	0.00	0.00	10,481.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,600.00	0.00	0.00	10,581.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,700.00	0.00	0.00	10,681.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,800.00	0.00	0.00	10,781.11	-95.00	437.00	-99.04	0.00	0.00	0.00
10,900.00	0.00	0.00	10,881.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,000.00	0.00	0.00	10,981.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,100.00	0.00	0.00	11,081.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,200.00	0.00	0.00	11,181.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,300.00	0.00	0.00	11,281.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,400.00	0.00	0.00	11,381.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,500.00	0.00	0.00	11,481.11	-95.00	437.00	-99.04	0.00	0.00	0.00
11,529.79	0.00	0.00	11,510.90	-95.00	437.00	-99.04	0.00	0.00	0.00
11,550.00	2.02	359.47	11,531.11	-94.64	437.00	-98.68	10.00	10.00	0.00
11,600.00	7.02	359.47	11,580.93	-90.70	436.96	-94.74	10.00	10.00	0.00
11,650.00	12.02	359.47	11,630.23	-82.44	436.88	-86.47	10.00	10.00	0.00
11,700.00	17.02	359.47	11,678.62	-69.90	436.77	-73.94	10.00	10.00	0.00
11,750.00	22.02	359.47	11,725.73	-53.20	436.61	-57.24	10.00	10.00	0.00
11,800.00	27.02	359.47	11,771.20	-32.46	436.42	-36.49	10.00	10.00	0.00
11,850.00	32.02	359.47	11,814.70	-7.83	436.19	-11.87	10.00	10.00	0.00
11,900.00	37.02	359.47	11,855.88	20.49	435.93	16.46	10.00	10.00	0.00
11,950.00	42.02	359.47	11,894.44	52.30	435.64	48.27	10.00	10.00	0.00
12,000.00	47.02	359.47	11,930.08	87.35	435.31	83.32	10.00	10.00	0.00
12,050.00	52.02	359.47	11,962.53	125.37	434.96	121.34	10.00	10.00	0.00
12,100.00	57.02	359.47	11,991.54	166.07	434.59	162.04	10.00	10.00	0.00
12,150.00	62.02	359.47	12,016.89	209.14	434.19	205.12	10.00	10.00	0.00
12,200.00	67.02	359.47	12,038.39	254.26	433.77	250.24	10.00	10.00	0.00
12,250.00	72.02	359.47	12,055.88	301.09	433.34	297.07	10.00	10.00	0.00
12,300.00	77.02	359.47	12,069.22	349.26	432.89	345.24	10.00	10.00	0.00

## Pro Directional Survey Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Site:** Nina Cortell Fed Com  
**Well:** No. 203H  
**Wellbore:** OH  
**Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**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)	
12,328.75	79.90	359.47	12,074.97	377.42	432.63	373.40	10.00	10.00	0.00	
7 5/8"										
12,329.79	80.00	359.47	12,075.15	378.44	432.62	374.43	10.00	10.00	0.00	
12,354.79	80.00	359.47	12,079.49	403.06	432.39	399.05	0.00	0.00	0.00	
12,400.00	82.71	359.47	12,086.29	447.75	431.98	443.74	6.00	6.00	0.00	
12,450.00	85.71	359.47	12,091.33	497.49	431.52	493.48	6.00	6.00	0.00	
12,500.00	88.71	359.47	12,093.76	547.42	431.06	543.41	6.00	6.00	0.00	
12,521.46	90.00	359.47	12,094.00	568.88	430.86	564.87	6.00	6.00	0.00	
12,600.00	90.00	359.47	12,094.00	647.42	430.14	643.41	0.00	0.00	0.00	
12,700.00	90.00	359.47	12,094.00	747.41	429.21	743.41	0.00	0.00	0.00	
12,800.00	90.00	359.47	12,094.00	847.41	428.29	843.41	0.00	0.00	0.00	
12,900.00	90.00	359.47	12,094.00	947.41	427.37	943.41	0.00	0.00	0.00	
13,000.00	90.00	359.47	12,094.00	1,047.40	426.44	1,043.41	0.00	0.00	0.00	
13,100.00	90.00	359.47	12,094.00	1,147.40	425.52	1,143.41	0.00	0.00	0.00	
13,200.00	90.00	359.47	12,094.00	1,247.39	424.60	1,243.41	0.00	0.00	0.00	
13,300.00	90.00	359.47	12,094.00	1,347.39	423.68	1,343.41	0.00	0.00	0.00	
13,400.00	90.00	359.47	12,094.00	1,447.38	422.75	1,443.41	0.00	0.00	0.00	
13,500.00	90.00	359.47	12,094.00	1,547.38	421.83	1,543.41	0.00	0.00	0.00	
13,600.00	90.00	359.47	12,094.00	1,647.38	420.91	1,643.41	0.00	0.00	0.00	
13,700.00	90.00	359.47	12,094.00	1,747.37	419.98	1,743.41	0.00	0.00	0.00	
13,800.00	90.00	359.47	12,094.00	1,847.37	419.06	1,843.41	0.00	0.00	0.00	
13,900.00	90.00	359.47	12,094.00	1,947.36	418.14	1,943.41	0.00	0.00	0.00	
14,000.00	90.00	359.47	12,094.00	2,047.36	417.22	2,043.41	0.00	0.00	0.00	
14,100.00	90.00	359.47	12,094.00	2,147.35	416.29	2,143.41	0.00	0.00	0.00	
14,200.00	90.00	359.47	12,094.00	2,247.35	415.37	2,243.41	0.00	0.00	0.00	
14,300.00	90.00	359.47	12,094.00	2,347.35	414.45	2,343.41	0.00	0.00	0.00	
14,400.00	90.00	359.47	12,094.00	2,447.34	413.52	2,443.41	0.00	0.00	0.00	
14,500.00	90.00	359.47	12,094.00	2,547.34	412.60	2,543.41	0.00	0.00	0.00	
14,600.00	90.00	359.47	12,094.00	2,647.33	411.68	2,643.41	0.00	0.00	0.00	
14,700.00	90.00	359.47	12,094.00	2,747.33	410.76	2,743.41	0.00	0.00	0.00	
14,800.00	90.00	359.47	12,094.00	2,847.32	409.83	2,843.41	0.00	0.00	0.00	
14,900.00	90.00	359.47	12,094.00	2,947.32	408.91	2,943.41	0.00	0.00	0.00	
15,000.00	90.00	359.47	12,094.00	3,047.32	407.99	3,043.41	0.00	0.00	0.00	
15,100.00	90.00	359.47	12,094.00	3,147.31	407.06	3,143.41	0.00	0.00	0.00	
15,200.00	90.00	359.47	12,094.00	3,247.31	406.14	3,243.41	0.00	0.00	0.00	
15,300.00	90.00	359.47	12,094.00	3,347.30	405.22	3,343.41	0.00	0.00	0.00	
15,400.00	90.00	359.47	12,094.00	3,447.30	404.30	3,443.41	0.00	0.00	0.00	
15,500.00	90.00	359.47	12,094.00	3,547.29	403.37	3,543.41	0.00	0.00	0.00	
15,600.00	90.00	359.47	12,094.00	3,647.29	402.45	3,643.41	0.00	0.00	0.00	
15,700.00	90.00	359.47	12,094.00	3,747.29	401.53	3,743.41	0.00	0.00	0.00	
15,800.00	90.00	359.47	12,094.00	3,847.28	400.60	3,843.41	0.00	0.00	0.00	
15,900.00	90.00	359.47	12,094.00	3,947.28	399.68	3,943.41	0.00	0.00	0.00	
16,000.00	90.00	359.47	12,094.00	4,047.27	398.76	4,043.41	0.00	0.00	0.00	
16,100.00	90.00	359.47	12,094.00	4,147.27	397.84	4,143.41	0.00	0.00	0.00	

## Pro Directional Survey Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Site:** Nina Cortell Fed Com  
**Well:** No. 203H  
**Wellbore:** OH  
**Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**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)
16,200.00	90.00	359.47	12,094.00	4,247.26	396.91	4,243.41	0.00	0.00	0.00
16,300.00	90.00	359.47	12,094.00	4,347.26	395.99	4,343.41	0.00	0.00	0.00
16,400.00	90.00	359.47	12,094.00	4,447.26	395.07	4,443.41	0.00	0.00	0.00
16,500.00	90.00	359.47	12,094.00	4,547.25	394.14	4,543.41	0.00	0.00	0.00
16,600.00	90.00	359.47	12,094.00	4,647.25	393.22	4,643.41	0.00	0.00	0.00
16,700.00	90.00	359.47	12,094.00	4,747.24	392.30	4,743.41	0.00	0.00	0.00
16,800.00	90.00	359.47	12,094.00	4,847.24	391.38	4,843.41	0.00	0.00	0.00
16,840.76	90.00	359.47	12,094.00	4,888.00	391.00	4,884.17	0.00	0.00	0.00

### Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[NinaCort#203H]LPP - hit/miss target - Shape - plan misses target center by 4813.99usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	4,798.00	392.00	519,701.00	708,091.00	32.426966°N	103.658924°W
[NinaCort#203H]FPP - plan misses target center by 280.02usft at 11523.89usft MD (11505.00 TVD, -95.00 N, 437.00 E) - Point	0.00	0.00	11,505.00	185.00	434.00	515,088.00	708,133.00	32.414286°N	103.658882°W
[NinaCort#203H]BHL - plan hits target center - Point	0.00	0.00	12,094.00	4,888.00	391.00	519,791.00	708,090.00	32.427214°N	103.658925°W

### 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
5,012.86	5,000.00	9 5/8"	9-5/8	12-1/4
12,328.75	12,074.97	7 5/8"	7-5/8	8-3/4

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
12,104.55	11,994.00	Wolfcamp A		0.00	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

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

<b>Survey Tool Program</b>	Date 8/11/2017			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
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	12,329.00	Prelim Plan B (OH)	MWD+HDGM	OWSG MWD + HRGM
12,329.00	16,840.76	Prelim Plan B (OH)	MWD+HDGM	OWSG MWD + HRGM

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (usft)</b>	<b>Offset Measured Depth (usft)</b>	<b>Distance Between Centres (usft)</b>	<b>Distance Between Ellipses (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
Offset Well - Wellbore - Design						
Nina Cortell Fed Com						
No. 123H - OH - Prelim Plan B	1,100.00	1,101.00	30.02	22.59	4.041	CC, ES
No. 123H - OH - Prelim Plan B	10,400.00	10,398.14	101.04	52.19	2.068	SF
No. 133H - OH - Prelim Plan B	1,300.00	1,301.00	30.00	21.49	3.526	CC, ES, SF

<b>Offset Design</b>													<b>Offset Site Error:</b>	0.00 usft
Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B													<b>Offset Well Error:</b>	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
<b>Reference</b>	<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside</b>		<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation</b>	<b>Separation Factor</b>	<b>Warning</b>	
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>	<b>Toolface (")</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>	<b>(usft)</b>			
0.00	0.00	1.00	1.00	0.00	0.00	88.09	1.00	30.00	30.02					
100.00	100.00	101.00	101.00	0.13	0.13	88.09	1.00	30.00	30.02	29.76	0.26	116.299		
200.00	200.00	201.00	201.00	0.49	0.49	88.09	1.00	30.00	30.02	29.04	0.98	30.785		
300.00	300.00	301.00	301.00	0.84	0.85	88.09	1.00	30.00	30.02	28.32	1.69	17.740		
400.00	400.00	401.00	401.00	1.20	1.21	88.09	1.00	30.00	30.02	27.61	2.41	12.461		
500.00	500.00	501.00	501.00	1.56	1.56	88.09	1.00	30.00	30.02	26.89	3.13	9.603		
600.00	600.00	601.00	601.00	1.92	1.92	88.09	1.00	30.00	30.02	26.17	3.84	7.811		
700.00	700.00	701.00	701.00	2.28	2.28	88.09	1.00	30.00	30.02	25.46	4.56	6.583		
800.00	800.00	801.00	801.00	2.64	2.64	88.09	1.00	30.00	30.02	24.74	5.28	5.689		
900.00	900.00	901.00	901.00	3.00	3.00	88.09	1.00	30.00	30.02	24.02	5.99	5.008		
1,000.00	1,000.00	1,001.00	1,001.00	3.35	3.36	88.09	1.00	30.00	30.02	23.31	6.71	4.473		
1,100.00	1,100.00	1,101.00	1,101.00	3.71	3.72	88.09	1.00	30.00	30.02	22.59	7.43	4.041	CC, ES	
1,200.00	1,200.00	1,200.46	1,200.46	4.07	4.06	88.13	1.01	30.88	30.90	22.77	8.13	3.800		
1,300.00	1,300.00	1,299.87	1,299.83	4.25	4.24	88.22	1.04	33.49	33.52	25.04	8.49	3.950		
1,400.00	1,399.99	1,399.20	1,399.06	4.28	4.27	-14.24	1.10	37.81	37.03	28.49	8.54	4.336		
1,500.00	1,499.96	1,498.46	1,498.14	4.34	4.33	-14.94	1.17	43.85	40.58	31.93	8.65	4.691		
1,600.00	1,599.86	1,602.36	1,597.02	4.43	4.43	-16.03	1.27	51.60	44.19	35.37	8.82	5.009		
1,700.00	1,699.68	1,702.41	1,696.59	4.54	4.55	-17.51	1.37	60.31	47.05	37.99	9.05	5.196		
1,800.00	1,799.37	1,802.43	1,796.18	4.69	4.70	-19.49	1.48	69.02	48.29	38.95	9.34	5.171		
1,900.00	1,898.99	1,902.45	1,895.79	4.86	4.88	-21.74	1.59	77.73	48.77	39.10	9.67	5.043		
2,000.00	1,998.60	2,002.47	1,995.39	5.05	5.08	-23.95	1.70	86.45	49.32	39.28	10.05	4.910		

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

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** WellPlanner1  
**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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipse's (usft)	Minimum Separation (usft)	Separation Factor		
2,100.00	2,098.22	2,102.49	2,094.99	5.26	5.30	-26.10	1.80	95.16	49.95	39.49	10.46	4.775		
2,200.00	2,197.84	2,202.51	2,194.59	5.49	5.53	-28.20	1.91	103.87	50.65	39.73	10.91	4.642		
2,300.00	2,297.46	2,302.53	2,294.19	5.74	5.78	-30.24	2.02	112.59	51.41	40.01	11.39	4.512		
2,400.00	2,397.08	2,397.45	2,393.79	6.00	6.03	-32.21	2.12	121.30	52.23	40.34	11.89	4.393		
2,500.00	2,496.70	2,502.56	2,493.39	6.27	6.32	-34.13	2.23	130.01	53.12	40.68	12.44	4.271		
2,600.00	2,596.32	2,602.58	2,592.99	6.55	6.61	-35.98	2.34	138.73	54.06	41.07	12.99	4.161		
2,700.00	2,695.94	2,702.60	2,692.59	6.84	6.90	-37.76	2.45	147.44	55.06	41.49	13.57	4.058		
2,800.00	2,795.56	2,802.62	2,792.19	7.14	7.20	-39.48	2.55	156.15	56.10	41.95	14.16	3.963		
2,900.00	2,895.18	2,902.64	2,891.79	7.45	7.51	-41.13	2.66	164.86	57.20	42.44	14.77	3.874		
3,000.00	2,994.80	2,997.34	2,991.39	7.76	7.81	-42.72	2.77	173.58	58.34	42.97	15.37	3.796		
3,100.00	3,094.42	3,102.68	3,090.99	8.08	8.15	-44.25	2.88	182.29	59.53	43.51	16.02	3.716		
3,200.00	3,194.04	3,202.70	3,190.59	8.40	8.47	-45.71	2.98	191.00	60.76	44.09	16.66	3.646		
3,300.00	3,293.66	3,302.72	3,290.19	8.73	8.80	-47.12	3.09	199.72	62.02	44.70	17.32	3.582		
3,400.00	3,393.28	3,402.74	3,389.79	9.06	9.13	-48.47	3.20	208.43	63.32	45.34	17.98	3.522		
3,500.00	3,492.90	3,502.76	3,489.39	9.40	9.47	-49.77	3.30	217.14	64.65	46.01	18.65	3.467		
3,600.00	3,592.52	3,602.78	3,588.99	9.74	9.81	-51.01	3.41	225.86	66.02	46.70	19.32	3.417		
3,700.00	3,692.14	3,702.80	3,688.59	10.08	10.15	-52.21	3.52	234.57	67.42	47.41	20.01	3.370		
3,800.00	3,791.76	3,802.82	3,788.19	10.42	10.49	-53.35	3.63	243.28	68.84	48.15	20.69	3.327		
3,900.00	3,891.37	3,902.84	3,887.79	10.77	10.84	-54.45	3.73	252.00	70.29	48.90	21.39	3.287		
4,000.00	3,990.99	3,997.14	3,987.39	11.12	11.17	-55.50	3.84	260.71	71.77	49.70	22.07	3.252		
4,100.00	4,090.61	4,102.87	4,086.99	11.47	11.54	-56.51	3.95	269.42	73.25	50.48	22.79	3.215		
4,200.00	4,190.23	4,202.89	4,186.59	11.82	11.89	-57.48	4.06	278.14	74.78	51.29	23.49	3.183		
4,300.00	4,289.85	4,302.91	4,286.19	12.17	12.25	-58.41	4.16	286.85	76.32	52.12	24.20	3.154		
4,400.00	4,389.47	4,402.93	4,385.79	12.53	12.60	-59.30	4.27	295.56	77.88	52.97	24.91	3.126		
4,500.00	4,489.09	4,502.95	4,485.39	12.88	12.96	-60.16	4.38	304.28	79.46	53.83	25.63	3.101		
4,600.00	4,588.71	4,602.97	4,584.99	13.24	13.31	-60.98	4.49	312.99	81.06	54.71	26.35	3.077		
4,700.00	4,688.33	4,702.99	4,684.59	13.60	13.67	-61.77	4.59	321.70	82.67	55.60	27.06	3.054		
4,800.00	4,787.95	4,803.01	4,784.19	13.96	14.03	-62.53	4.70	330.42	84.29	56.51	27.79	3.034		
4,900.00	4,887.57	4,903.03	4,883.79	14.32	14.39	-63.27	4.81	339.13	85.94	57.43	28.51	3.015		
5,000.00	4,987.19	4,996.95	4,983.39	14.51	14.57	-63.97	4.91	347.84	87.59	58.71	28.88	3.033		
5,100.00	5,086.81	5,103.07	5,082.99	14.55	14.62	-64.65	5.02	356.56	89.26	60.30	28.96	3.083		
5,200.00	5,186.43	5,203.09	5,182.59	14.50	14.66	-65.30	5.13	365.27	90.94	61.89	29.04	3.131		
5,300.00	5,286.05	5,303.11	5,282.19	14.65	14.72	-65.93	5.24	373.99	92.63	63.48	29.15	3.178		
5,400.00	5,385.67	5,403.13	5,381.79	14.72	14.78	-66.54	5.34	382.70	94.33	65.05	29.27	3.222		
5,500.00	5,485.29	5,503.15	5,481.39	14.79	14.86	-67.13	5.45	391.41	96.04	66.62	29.42	3.264		
5,600.00	5,584.91	5,603.17	5,580.99	14.87	14.94	-67.69	5.56	400.12	97.76	68.18	29.58	3.305		
5,700.00	5,684.53	5,703.18	5,680.59	14.96	15.04	-68.24	5.67	408.84	99.49	69.72	29.77	3.342		
5,800.00	5,784.14	5,797.18	5,780.59	15.07	15.13	-68.83	5.77	417.45	101.16	71.19	29.96	3.376		
5,900.00	5,883.76	5,898.14	5,881.29	15.18	15.24	-70.08	5.86	424.88	102.05	71.86	30.19	3.380		
6,000.00	5,983.38	5,999.02	5,982.02	15.29	15.34	-72.15	5.93	430.13	102.08	71.64	30.44	3.353		
6,100.00	6,083.00	6,099.76	6,082.69	15.42	15.45	-75.10	5.97	433.81	101.41	70.69	30.72	3.301		
6,200.00	6,182.62	6,200.30	6,183.21	15.56	15.56	-78.98	6.00	435.71	100.27	69.26	31.01	3.234		
6,300.00	6,282.24	6,300.33	6,283.24	15.70	15.66	-83.78	6.00	436.00	99.07	67.76	31.31	3.165		
6,400.00	6,381.86	6,400.05	6,382.86	15.85	15.77	-88.81	6.00	436.00	98.50	66.91	31.60	3.118		
6,423.58	6,405.35	6,423.44	6,406.35	15.89	15.80	-90.00	6.00	436.00	98.48	66.82	31.66	3.110		
6,430.81	6,412.55	6,430.64	6,413.55	15.90	15.81	-90.37	6.00	436.00	98.48	66.80	31.69	3.108		
6,500.00	6,481.52	6,500.39	6,482.52	16.01	15.89	-93.62	6.00	436.00	98.68	66.80	31.88	3.096		
6,600.00	6,581.29	6,600.61	6,582.29	16.16	16.01	-97.44	6.00	436.00	99.32	67.17	32.15	3.090		
6,700.00	6,681.17	6,700.74	6,682.17	16.32	16.15	-100.23	6.00	436.00	100.08	67.66	32.42	3.087		
6,800.00	6,781.12	6,800.79	6,782.12	16.47	16.28	-102.00	6.00	436.00	100.68	67.99	32.70	3.079		
6,900.00	6,881.11	6,900.80	6,882.11	16.63	16.43	-102.79	6.00	436.00	100.99	68.00	32.99	3.062		
6,930.81	6,911.92	6,930.01	6,912.92	16.67	16.47	-0.57	6.00	436.00	101.00	67.93	33.08	3.054		

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

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design														Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B														Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM															
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
7,000.00	6,981.11	7,000.80	6,982.11	16.77	16.58	-0.57	6.00	436.00	101.00	67.72	33.28	3.035			
7,100.00	7,081.11	7,100.80	7,082.11	16.93	16.74	-0.57	6.00	436.00	101.00	67.41	33.59	3.007			
7,200.00	7,181.11	7,200.80	7,182.11	17.08	16.90	-0.57	6.00	436.00	101.00	67.09	33.91	2.978			
7,300.00	7,281.11	7,300.80	7,282.11	17.25	17.07	-0.57	6.00	436.00	101.00	66.76	34.25	2.949			
7,400.00	7,381.11	7,400.80	7,382.11	17.42	17.24	-0.57	6.00	436.00	101.00	66.41	34.59	2.920			
7,500.00	7,481.11	7,500.80	7,482.11	17.59	17.43	-0.57	6.00	436.00	101.00	66.05	34.95	2.890			
7,600.00	7,581.11	7,600.80	7,582.11	17.77	17.61	-0.57	6.00	436.00	101.00	65.69	35.32	2.860			
7,700.00	7,681.11	7,700.80	7,682.11	17.96	17.80	-0.57	6.00	436.00	101.00	65.31	35.70	2.830			
7,800.00	7,781.11	7,800.80	7,782.11	18.15	18.00	-0.57	6.00	436.00	101.00	64.92	36.08	2.799			
7,900.00	7,881.11	7,900.80	7,882.11	18.34	18.20	-0.57	6.00	436.00	101.00	64.52	36.48	2.769			
8,000.00	7,981.11	8,000.80	7,982.11	18.54	18.41	-0.57	6.00	436.00	101.00	64.11	36.89	2.738			
8,100.00	8,081.11	8,100.80	8,082.11	18.75	18.62	-0.57	6.00	436.00	101.00	63.70	37.31	2.707			
8,200.00	8,181.11	8,200.80	8,182.11	18.96	18.83	-0.57	6.00	436.00	101.00	63.27	37.73	2.677			
8,300.00	8,281.11	8,300.80	8,282.11	19.17	19.05	-0.57	6.00	436.00	101.00	62.84	38.17	2.646			
8,400.00	8,381.11	8,400.80	8,382.11	19.39	19.28	-0.57	6.00	436.00	101.00	62.39	38.61	2.616			
8,500.00	8,481.11	8,500.80	8,482.11	19.62	19.51	-0.57	6.00	436.00	101.00	61.94	39.06	2.586			
8,600.00	8,581.11	8,600.80	8,582.11	19.84	19.74	-0.57	6.00	436.00	101.00	61.48	39.52	2.556			
8,700.00	8,681.11	8,700.80	8,682.11	20.07	19.97	-0.57	6.00	436.00	101.00	61.01	39.99	2.526			
8,800.00	8,781.11	8,800.80	8,782.11	20.31	20.21	-0.57	6.00	436.00	101.00	60.54	40.46	2.496			
8,900.00	8,881.11	8,900.80	8,882.11	20.55	20.46	-0.57	6.00	436.00	101.00	60.06	40.95	2.467			
9,000.00	8,981.11	9,000.80	8,982.11	20.79	20.70	-0.57	6.00	436.00	101.00	59.57	41.43	2.438			
9,100.00	9,081.11	9,100.80	9,082.11	21.03	20.95	-0.57	6.00	436.00	101.00	59.08	41.93	2.409			
9,200.00	9,181.11	9,200.80	9,182.11	21.28	21.20	-0.57	6.00	436.00	101.00	58.57	42.43	2.380			
9,300.00	9,281.11	9,300.80	9,282.11	21.53	21.46	-0.57	6.00	436.00	101.00	58.07	42.94	2.352			
9,400.00	9,381.11	9,400.80	9,382.11	21.79	21.72	-0.57	6.00	436.00	101.00	57.55	43.45	2.325			
9,500.00	9,481.11	9,500.80	9,482.11	22.04	21.98	-0.57	6.00	436.00	101.00	57.04	43.97	2.297			
9,600.00	9,581.11	9,600.80	9,582.11	22.30	22.24	-0.57	6.00	436.00	101.00	56.51	44.49	2.270			
9,700.00	9,681.11	9,700.80	9,682.11	22.57	22.51	-0.57	6.00	436.00	101.00	55.98	45.02	2.243			
9,800.00	9,781.11	9,800.80	9,782.11	22.83	22.78	-0.57	6.00	436.00	101.00	55.45	45.56	2.217			
9,900.00	9,881.11	9,900.80	9,882.11	23.10	23.05	-0.57	6.00	436.00	101.00	54.91	46.10	2.191			
10,000.00	9,981.11	10,000.80	9,982.11	23.37	23.32	-0.57	6.00	436.00	101.00	54.36	46.64	2.166			
10,100.00	10,081.11	10,100.80	10,082.11	23.64	23.60	-0.57	6.00	436.00	101.00	53.81	47.19	2.140			
10,200.00	10,181.11	10,200.80	10,182.11	23.92	23.88	-0.57	6.00	436.00	101.00	53.26	47.74	2.116			
10,300.00	10,281.11	10,300.80	10,282.11	24.19	24.16	-0.57	6.00	436.00	101.00	52.70	48.30	2.091			
10,314.13	10,295.24	10,313.33	10,296.24	24.23	24.19	-0.57	6.00	436.00	101.00	52.63	48.38	2.088			
10,400.00	10,381.11	10,398.14	10,381.05	24.47	24.43	-0.57	6.03	436.00	101.04	52.19	48.86	2.068 SF			
10,500.00	10,481.11	10,482.40	10,464.94	24.75	24.67	-0.56	13.10	435.93	109.46	60.27	49.18	2.225			
10,600.00	10,581.11	10,582.92	10,543.31	25.04	24.89	-0.56	31.27	435.77	132.10	82.88	49.21	2.684			
10,700.00	10,681.11	10,637.08	10,612.60	25.32	25.09	-0.55	57.56	435.52	167.66	118.63	49.04	3.419			
10,800.00	10,781.11	10,703.45	10,671.26	25.61	25.26	-0.55	88.51	435.24	214.40	165.65	48.75	4.398			
10,900.00	10,881.11	10,761.70	10,719.51	25.90	25.40	-0.55	121.11	434.94	270.46	222.00	48.45	5.582			
11,000.00	10,981.11	10,812.24	10,758.50	26.19	25.53	-0.54	153.23	434.64	334.10	285.92	48.19	6.933			
11,100.00	11,081.11	10,850.00	10,785.71	26.48	25.62	-0.54	179.41	434.40	403.93	356.07	47.86	8.439			
11,200.00	11,181.11	10,900.00	10,818.97	26.77	25.74	-0.54	216.72	434.06	478.59	430.61	47.98	9.975			
11,300.00	11,281.11	10,926.01	10,834.94	27.07	25.80	-0.54	237.23	433.87	557.09	509.28	47.81	11.653			
11,400.00	11,381.11	10,950.00	10,848.85	27.36	25.86	-0.54	256.79	433.69	638.85	591.09	47.76	13.375			
11,500.00	11,481.11	10,978.81	10,864.44	27.66	25.94	-0.54	281.01	433.47	723.12	675.24	47.88	15.102			
11,529.79	11,510.90	10,985.53	10,867.90	27.75	25.95	-0.54	286.76	433.41	748.68	700.75	47.91	15.625			
11,550.00	11,531.11	11,000.00	10,875.12	27.81	25.99	-0.01	299.31	433.30	766.05	718.01	48.04	15.947			
11,600.00	11,580.93	11,000.00	10,875.12	27.96	25.99	-0.01	299.31	433.30	807.28	759.32	47.96	16.833			
11,650.00	11,630.23	11,014.46	10,882.02	28.10	26.03	-0.01	312.01	433.18	846.71	798.70	48.01	17.636			
11,700.00	11,678.62	11,027.69	10,888.05	28.24	26.07	-0.01	323.79	433.07	884.08	836.04	48.04	18.403			

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

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 123H - OH - Prelim Plan B													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
11,750.00	11,725.73	11,050.00	10,897.59	28.37	26.14	0.00	343.95	432.88	919.36	871.23	48.13	19.102		
11,800.00	11,771.20	11,050.00	10,897.59	28.50	26.14	0.00	343.95	432.88	952.18	904.14	48.04	19.821		
11,850.00	11,814.70	11,070.52	10,905.67	28.62	26.20	0.00	362.81	432.71	982.62	934.53	48.09	20.431		
11,900.00	11,855.88	11,085.63	10,911.19	28.73	26.25	0.00	376.88	432.58	1,010.63	962.52	48.10	21.009		
11,950.00	11,894.44	11,100.00	10,916.08	28.83	26.30	0.00	390.39	432.46	1,036.07	987.97	48.10	21.538		
12,000.00	11,930.08	11,116.80	10,921.38	28.92	26.35	0.00	405.33	432.31	1,058.89	1,010.78	48.11	22.008		
12,050.00	11,962.53	11,132.77	10,925.98	29.01	26.41	0.00	421.62	432.17	1,079.02	1,030.90	48.12	22.424		
12,100.00	11,991.54	11,150.00	10,930.46	29.10	26.47	0.00	438.26	432.02	1,096.41	1,048.28	48.13	22.781		
12,150.00	12,016.89	11,165.27	10,934.01	29.19	26.52	0.00	453.11	431.88	1,111.00	1,062.87	48.13	23.082		
12,200.00	12,038.39	11,181.75	10,937.40	29.29	26.59	0.00	469.23	431.73	1,122.77	1,074.62	48.14	23.321		
12,250.00	12,055.88	11,200.00	10,940.61	29.41	26.65	0.00	487.20	431.56	1,131.68	1,083.52	48.17	23.494		
12,300.00	12,069.22	11,214.97	10,942.81	29.55	26.71	0.00	502.01	431.43	1,137.71	1,089.52	48.19	23.609		
12,329.79	12,075.15	11,224.91	10,944.06	34.83	26.75	0.00	511.87	431.34	1,139.93	1,092.28	47.65	23.922		
12,354.79	12,079.49	11,233.25	10,944.98	34.85	26.78	0.00	520.16	431.26	1,141.54	1,093.98	47.56	24.001		
12,400.00	12,086.29	11,250.00	10,946.45	34.88	26.85	0.00	536.84	431.11	1,144.31	1,096.88	47.43	24.125		
12,450.00	12,091.33	11,264.98	10,947.35	34.91	26.91	0.00	551.79	430.97	1,146.26	1,098.97	47.30	24.236		
12,500.00	12,093.76	11,292.13	10,948.00	34.95	27.02	0.00	578.93	430.72	1,147.20	1,099.94	47.25	24.277		
12,521.46	12,094.00	11,292.13	10,948.00	34.97	27.02	0.00	578.93	430.72	1,147.05	1,099.86	47.19	24.308		
12,551.49	12,094.00	11,312.11	10,948.00	34.99	27.11	0.00	598.91	430.53	1,147.00	1,099.80	47.20	24.301		
12,600.00	12,094.00	11,360.62	10,948.00	35.03	27.33	0.00	647.42	430.09	1,147.00	1,099.71	47.30	24.250		
12,700.00	12,094.00	11,460.62	10,948.00	35.12	27.83	0.00	747.41	429.17	1,147.00	1,099.47	47.54	24.128		
12,800.00	12,094.00	11,560.62	10,948.00	35.22	28.39	0.00	847.41	428.24	1,147.00	1,099.17	47.83	23.981		
12,900.00	12,094.00	11,660.62	10,948.00	35.33	29.01	0.00	947.41	427.32	1,147.00	1,098.83	48.17	23.812		
13,000.00	12,094.00	11,760.62	10,948.00	35.46	29.69	0.00	1,047.40	426.40	1,147.00	1,098.45	48.56	23.622		
13,100.00	12,094.00	11,860.62	10,948.00	35.63	30.43	0.00	1,147.40	425.48	1,147.00	1,098.01	48.99	23.412		
13,200.00	12,094.00	11,960.62	10,948.00	35.84	31.21	0.00	1,247.39	424.56	1,147.00	1,097.53	49.47	23.184		
13,300.00	12,094.00	12,060.62	10,948.00	36.13	32.04	0.00	1,347.39	423.64	1,147.00	1,097.00	50.00	22.940		
13,400.00	12,094.00	12,160.62	10,948.00	36.51	32.91	0.00	1,447.38	422.71	1,147.00	1,096.44	50.57	22.682		
13,500.00	12,094.00	12,260.62	10,948.00	37.01	33.82	0.00	1,547.38	421.79	1,147.00	1,095.82	51.18	22.412		
13,600.00	12,094.00	12,360.62	10,948.00	37.63	34.77	0.00	1,647.38	420.87	1,147.00	1,095.17	51.83	22.130		
13,700.00	12,094.00	12,460.62	10,948.00	38.35	35.75	0.00	1,747.37	419.95	1,147.00	1,094.48	52.52	21.840		
13,800.00	12,094.00	12,560.62	10,948.00	39.15	36.76	0.00	1,847.37	419.03	1,147.00	1,093.76	53.25	21.542		
13,900.00	12,094.00	12,660.62	10,948.00	40.02	37.79	0.00	1,947.36	418.11	1,147.00	1,093.00	54.01	21.238		
14,000.00	12,094.00	12,760.62	10,948.00	40.94	38.86	0.00	2,047.36	417.18	1,147.00	1,092.20	54.80	20.929		
14,100.00	12,094.00	12,860.62	10,948.00	41.90	39.95	0.00	2,147.35	416.26	1,147.00	1,091.37	55.63	20.617		
14,200.00	12,094.00	12,960.62	10,948.00	42.90	41.06	0.00	2,247.35	415.34	1,147.00	1,090.51	56.49	20.303		
14,300.00	12,094.00	13,060.62	10,948.00	43.92	42.19	0.00	2,347.35	414.42	1,147.00	1,089.62	57.38	19.988		
14,400.00	12,094.00	13,160.62	10,948.00	44.98	43.33	0.00	2,447.34	413.50	1,147.00	1,088.70	58.30	19.673		
14,500.00	12,094.00	13,260.62	10,948.00	46.06	44.50	0.00	2,547.34	412.58	1,147.00	1,087.75	59.25	19.359		
14,600.00	12,094.00	13,360.62	10,948.00	47.16	45.68	0.00	2,647.33	411.65	1,147.00	1,086.78	60.22	19.046		
14,700.00	12,094.00	13,460.62	10,948.00	48.28	46.88	0.00	2,747.33	410.73	1,147.00	1,085.78	61.22	18.736		
14,800.00	12,094.00	13,560.62	10,948.00	49.42	48.09	0.00	2,847.32	409.81	1,147.00	1,084.76	62.24	18.429		
14,900.00	12,094.00	13,660.62	10,948.00	50.57	49.31	0.00	2,947.32	408.89	1,147.00	1,083.72	63.28	18.125		
15,000.00	12,094.00	13,760.62	10,948.00	51.74	50.54	0.00	3,047.32	407.97	1,147.00	1,082.66	64.35	17.826		
15,100.00	12,094.00	13,860.62	10,948.00	52.93	51.79	0.00	3,147.31	407.04	1,147.00	1,081.57	65.43	17.530		
15,200.00	12,094.00	13,960.62	10,948.00	54.13	53.04	0.00	3,247.31	406.12	1,147.00	1,080.47	66.53	17.239		
15,300.00	12,094.00	14,060.62	10,948.00	55.34	54.31	0.00	3,347.30	405.20	1,147.00	1,079.35	67.66	16.953		
15,400.00	12,094.00	14,160.62	10,948.00	56.56	55.58	0.00	3,447.30	404.28	1,147.00	1,078.21	68.80	16.673		
15,500.00	12,094.00	14,260.62	10,948.00	57.79	56.86	0.00	3,547.29	403.36	1,147.00	1,077.05	69.95	16.397		
15,600.00	12,094.00	14,360.62	10,948.00	59.03	58.15	0.00	3,647.29	402.44	1,147.00	1,075.88	71.12	16.127		
15,700.00	12,094.00	14,460.62	10,948.00	60.28	59.44	0.00	3,747.29	401.51	1,147.00	1,074.69	72.31	15.862		
15,800.00	12,094.00	14,560.62	10,948.00	61.54	60.75	0.00	3,847.28	400.59	1,147.00	1,073.49	73.51	15.603		

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

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** WellPlanner1  
**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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,900.00	12,094.00	14,660.62	10,948.00	62.81	62.05	0.00	3,947.28	399.67	1,147.00	1,072.28	74.73	15.349		
16,000.00	12,094.00	14,760.62	10,948.00	64.09	63.37	0.00	4,047.27	398.75	1,147.00	1,071.05	75.95	15.101		
16,100.00	12,094.00	14,860.62	10,948.00	65.37	64.69	0.00	4,147.27	397.83	1,147.00	1,069.81	77.19	14.859		
16,200.00	12,094.00	14,960.62	10,948.00	66.66	66.01	0.00	4,247.27	396.91	1,147.00	1,068.56	78.45	14.622		
16,300.00	12,094.00	15,060.62	10,948.00	67.95	67.34	0.00	4,347.26	395.98	1,147.00	1,067.29	79.71	14.390		
16,400.00	12,094.00	15,160.62	10,948.00	69.26	68.68	0.00	4,447.26	395.06	1,147.00	1,066.02	80.98	14.164		
16,500.00	12,094.00	15,260.62	10,948.00	70.56	70.02	0.00	4,547.25	394.14	1,147.00	1,064.73	82.27	13.942		
16,600.00	12,094.00	15,360.62	10,948.00	71.88	71.36	0.00	4,647.25	393.22	1,147.00	1,063.44	83.56	13.727		
16,700.00	12,094.00	15,460.62	10,948.00	73.19	72.71	0.00	4,747.24	392.30	1,147.00	1,062.14	84.86	13.516		
16,800.00	12,094.00	15,560.62	10,948.00	74.51	74.06	0.00	4,847.24	391.38	1,147.00	1,060.82	86.18	13.310		
16,840.76	12,094.00	15,601.38	10,948.00	75.05	74.61	0.00	4,888.00	391.00	1,147.00	1,060.29	86.71	13.228		

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 133H - OH - Prelim Plan B													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
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	101.00	0.13	0.13	-90.00	0.00	-30.00	30.00	29.74	0.26	116.234		
200.00	200.00	201.00	201.00	0.49	0.49	-90.00	0.00	-30.00	30.00	29.02	0.98	30.768		
300.00	300.00	301.00	301.00	0.84	0.85	-90.00	0.00	-30.00	30.00	28.31	1.69	17.731		
400.00	400.00	401.00	401.00	1.20	1.21	-90.00	0.00	-30.00	30.00	27.59	2.41	12.454		
500.00	500.00	501.00	501.00	1.56	1.56	-90.00	0.00	-30.00	30.00	26.87	3.13	9.597		
600.00	600.00	601.00	601.00	1.92	1.92	-90.00	0.00	-30.00	30.00	26.16	3.84	7.807		
700.00	700.00	701.00	701.00	2.28	2.28	-90.00	0.00	-30.00	30.00	25.44	4.56	6.579		
800.00	800.00	801.00	801.00	2.64	2.64	-90.00	0.00	-30.00	30.00	24.72	5.28	5.685		
900.00	900.00	901.00	901.00	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	1,001.00	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	1,101.00	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	1,201.00	4.07	4.07	-90.00	0.00	-30.00	30.00	21.86	8.14	3.684		
1,300.00	1,300.00	1,301.00	1,301.00	4.25	4.25	-90.00	0.00	-30.00	30.00	21.49	8.51	3.526	CC, ES, SF	
1,400.00	1,399.99	1,400.99	1,400.99	4.28	4.28	168.08	0.00	-30.00	30.85	22.29	8.57	3.601		
1,500.00	1,499.96	1,500.96	1,500.96	4.34	4.34	169.00	0.00	-30.00	33.42	24.73	8.68	3.848		
1,600.00	1,599.86	1,600.28	1,600.28	4.43	4.43	169.59	-0.41	-30.78	38.47	29.62	8.86	4.344		
1,700.00	1,699.68	1,699.30	1,699.26	4.54	4.54	169.35	-1.61	-33.07	46.75	37.67	9.08	5.150		
1,800.00	1,799.37	1,797.85	1,797.71	4.69	4.67	169.66	-3.60	-36.85	58.23	48.88	9.35	6.229		
1,900.00	1,898.99	1,895.90	1,895.58	4.86	4.82	167.72	-6.38	-42.10	72.06	62.40	9.66	7.460		
2,000.00	1,998.60	2,006.60	1,992.79	5.05	5.03	166.58	-9.88	-48.79	87.41	77.37	10.03	8.712		
2,100.00	2,098.22	2,107.94	2,091.08	5.26	5.24	165.53	-13.88	-56.40	103.64	93.21	10.44	9.931		
2,200.00	2,197.84	2,209.28	2,189.36	5.49	5.46	164.77	-17.88	-64.01	119.90	109.03	10.87	11.026		
2,300.00	2,297.46	2,289.38	2,287.64	5.74	5.66	164.19	-21.88	-71.62	136.18	124.88	11.29	12.059		
2,400.00	2,397.08	2,388.04	2,385.93	6.00	5.91	163.74	-25.89	-79.23	152.46	140.68	11.78	12.944		
2,500.00	2,496.70	2,486.70	2,484.21	6.27	6.17	163.37	-29.89	-86.84	168.76	156.47	12.29	13.734		
2,600.00	2,596.32	2,585.35	2,582.49	6.55	6.44	163.07	-33.89	-94.45	185.05	172.24	12.82	14.437		
2,700.00	2,695.94	2,684.01	2,680.78	6.84	6.72	162.81	-37.89	-102.06	201.36	187.99	13.37	15.064		
2,800.00	2,795.56	2,782.67	2,779.06	7.14	7.01	162.60	-41.89	-109.68	217.66	203.73	13.93	15.625		
2,900.00	2,895.18	2,881.33	2,877.34	7.45	7.31	162.41	-45.89	-117.29	233.97	219.46	14.51	16.126		
3,000.00	2,994.80	2,979.99	2,975.63	7.76	7.62	162.25	-49.89	-124.90	250.28	235.18	15.10	16.575		
3,100.00	3,094.42	3,078.65	3,073.91	8.08	7.93	162.11	-53.90	-132.51	266.60	250.89	15.70	16.978		
3,200.00	3,194.04	3,177.31	3,172.19	8.40	8.25	161.98	-57.90	-140.12	282.91	266.60	16.31	17.341		
3,300.00	3,293.66	3,275.96	3,270.47	8.73	8.57	161.87	-61.90	-147.73	299.23	282.29	16.94	17.668		
3,400.00	3,393.28	3,374.62	3,368.76	9.06	8.89	161.77	-65.90	-155.34	315.54	297.98	17.56	17.965		
3,500.00	3,492.90	3,473.28	3,467.04	9.40	9.22	161.68	-69.90	-162.95	331.86	313.66	18.20	18.234		
3,600.00	3,592.52	3,571.94	3,565.32	9.74	9.56	161.60	-73.90	-170.56	348.18	329.33	18.84	18.478		
3,700.00	3,692.14	3,670.60	3,663.61	10.08	9.89	161.52	-77.91	-178.17	364.50	345.00	19.49	18.701		
3,800.00	3,791.76	3,769.26	3,761.89	10.42	10.23	161.45	-81.91	-185.78	380.81	360.67	20.14	18.905		
3,900.00	3,891.37	3,867.92	3,860.17	10.77	10.57	161.39	-85.91	-193.39	397.13	376.33	20.80	19.091		
4,000.00	3,990.99	3,966.57	3,958.45	11.12	10.91	161.33	-89.91	-201.01	413.45	391.99	21.46	19.263		
4,100.00	4,090.61	4,069.04	4,060.55	11.47	11.27	161.29	-93.95	-208.68	429.55	407.40	22.15	19.389		
4,200.00	4,190.23	4,175.53	4,166.79	11.82	11.64	161.33	-97.34	-215.13	444.14	421.27	22.87	19.422		
4,300.00	4,289.85	4,282.52	4,273.65	12.17	12.00	161.46	-99.81	-219.84	457.01	433.44	23.58	19.382		
4,400.00	4,389.47	4,389.95	4,381.02	12.53	12.36	161.68	-101.37	-222.80	468.17	443.88	24.29	19.275		
4,500.00	4,489.09	4,497.73	4,488.80	12.88	12.72	161.97	-101.99	-223.98	477.59	452.59	25.00	19.107		
4,600.00	4,588.71	4,601.35	4,589.71	13.24	13.04	162.30	-102.00	-224.00	485.91	460.25	25.66	18.934		
4,700.00	4,688.33	4,701.74	4,689.33	13.60	13.35	162.60	-102.00	-224.00	494.22	467.90	26.32	18.775		
4,800.00	4,787.95	4,802.12	4,788.95	13.96	13.66	162.90	-102.00	-224.00	502.55	475.56	26.99	18.623		
4,900.00	4,887.57	4,902.50	4,888.57	14.32	13.97	163.19	-102.00	-224.00	510.89	483.24	27.65	18.479		
5,000.00	4,987.19	5,002.68	4,988.19	14.51	14.13	163.47	-102.00	-224.00	519.24	491.25	27.99	18.554		
5,100.00	5,086.81	5,103.26	5,087.81	14.55	14.14	163.73	-102.00	-224.00	527.60	499.60	28.01	18.839		

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

## Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 133H - OH - Prelim Plan B													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,186.43	5,203.64	5,187.43	14.60	14.16	164.00	-102.00	-224.00	535.98	507.93	28.05	19.111		
5,300.00	5,286.05	5,304.02	5,287.05	14.65	14.18	164.25	-102.00	-224.00	544.36	516.26	28.10	19.619		
5,400.00	5,385.67	5,404.40	5,386.67	14.72	14.22	164.49	-102.00	-224.00	552.76	524.58	28.18	19.614		
5,500.00	5,485.29	5,504.78	5,486.29	14.79	14.27	164.73	-102.00	-224.00	561.16	532.89	28.28	19.846		
5,600.00	5,584.91	5,605.16	5,585.91	14.87	14.32	164.96	-102.00	-224.00	569.58	541.19	28.39	20.063		
5,700.00	5,684.53	5,705.54	5,685.53	14.96	14.38	165.19	-102.00	-224.00	578.00	549.48	28.52	20.266		
5,800.00	5,784.14	5,805.92	5,785.14	15.07	14.46	165.40	-102.00	-224.00	586.43	557.77	28.67	20.455		
5,900.00	5,883.76	5,906.30	5,884.76	15.18	14.54	165.62	-102.00	-224.00	594.88	566.04	28.84	20.630		
6,000.00	5,983.38	6,006.68	5,984.38	15.29	14.63	165.82	-102.00	-224.00	603.32	574.30	29.02	20.791		
6,100.00	6,083.00	6,107.06	6,084.00	15.42	14.72	166.02	-102.00	-224.00	611.78	582.56	29.22	20.938		
6,200.00	6,182.62	6,207.44	6,183.62	15.56	14.83	166.22	-102.00	-224.00	620.24	590.81	29.43	21.072		
6,300.00	6,282.24	6,307.82	6,283.24	15.70	14.94	166.40	-102.00	-224.00	628.71	599.04	29.67	21.192		
6,400.00	6,381.86	6,408.20	6,382.86	15.85	15.06	166.59	-102.00	-224.00	637.19	607.27	29.91	21.300		
6,430.81	6,412.55	6,422.48	6,413.55	15.90	15.08	166.64	-102.00	-224.00	639.80	609.83	29.97	21.346		
6,500.00	6,481.52	6,508.55	6,482.52	16.01	15.19	166.77	-102.00	-224.00	645.27	615.09	30.18	21.382		
6,600.00	6,581.29	6,608.77	6,582.29	16.16	15.33	166.92	-102.00	-224.00	651.73	621.28	30.45	21.401		
6,700.00	6,681.17	6,708.89	6,682.17	16.32	15.47	167.03	-102.00	-224.00	656.51	625.76	30.74	21.355		
6,800.00	6,781.12	6,808.94	6,782.12	16.47	15.62	167.10	-102.00	-224.00	659.58	628.54	31.04	21.246		
6,900.00	6,881.11	6,908.96	6,882.11	16.63	15.78	167.13	-102.00	-224.00	660.96	629.60	31.36	21.077		
6,930.81	6,911.92	6,921.85	6,912.92	16.67	15.80	-90.61	-102.00	-224.00	661.04	629.61	31.43	21.034		
7,000.00	6,981.11	7,008.96	6,982.11	16.77	15.94	-90.61	-102.00	-224.00	661.04	629.36	31.68	20.868		
7,100.00	7,081.11	7,108.96	7,082.11	16.93	16.11	-90.61	-102.00	-224.00	661.04	629.03	32.01	20.654		
7,200.00	7,181.11	7,208.96	7,182.11	17.08	16.28	-90.61	-102.00	-224.00	661.04	628.69	32.35	20.436		
7,300.00	7,281.11	7,308.96	7,282.11	17.25	16.46	-90.61	-102.00	-224.00	661.04	628.34	32.70	20.215		
7,400.00	7,381.11	7,408.96	7,382.11	17.42	16.65	-90.61	-102.00	-224.00	661.04	627.97	33.07	19.992		
7,500.00	7,481.11	7,508.96	7,482.11	17.59	16.84	-90.61	-102.00	-224.00	661.04	627.59	33.44	19.766		
7,600.00	7,581.11	7,608.96	7,582.11	17.77	17.04	-90.61	-102.00	-224.00	661.04	627.21	33.83	19.540		
7,700.00	7,681.11	7,708.96	7,682.11	17.96	17.24	-90.61	-102.00	-224.00	661.04	626.81	34.23	19.312		
7,800.00	7,781.11	7,808.96	7,782.11	18.15	17.45	-90.61	-102.00	-224.00	661.04	626.40	34.64	19.085		
7,900.00	7,881.11	7,908.96	7,882.11	18.34	17.67	-90.61	-102.00	-224.00	661.04	625.98	35.06	18.857		
8,000.00	7,981.11	8,008.96	7,982.11	18.54	17.88	-90.61	-102.00	-224.00	661.04	625.55	35.48	18.629		
8,100.00	8,081.11	8,108.96	8,082.11	18.75	18.10	-90.61	-102.00	-224.00	661.04	625.12	35.92	18.403		
8,200.00	8,181.11	8,208.96	8,182.11	18.96	18.33	-90.61	-102.00	-224.00	661.04	624.67	36.37	18.177		
8,300.00	8,281.11	8,308.96	8,282.11	19.17	18.56	-90.61	-102.00	-224.00	661.04	624.22	36.82	17.952		
8,400.00	8,381.11	8,408.96	8,382.11	19.39	18.80	-90.61	-102.00	-224.00	661.04	623.75	37.28	17.729		
8,500.00	8,481.11	8,508.96	8,482.11	19.62	19.03	-90.61	-102.00	-224.00	661.04	623.28	37.76	17.508		
8,600.00	8,581.11	8,608.96	8,582.11	19.84	19.28	-90.61	-102.00	-224.00	661.04	622.80	38.23	17.289		
8,700.00	8,681.11	8,708.96	8,682.11	20.07	19.52	-90.61	-102.00	-224.00	661.04	622.32	38.72	17.072		
8,800.00	8,781.11	8,808.96	8,782.11	20.31	19.77	-90.61	-102.00	-224.00	661.04	621.82	39.21	16.858		
8,900.00	8,881.11	8,908.96	8,882.11	20.55	20.02	-90.61	-102.00	-224.00	661.04	621.32	39.71	16.646		
9,000.00	8,981.11	9,008.96	8,982.11	20.79	20.28	-90.61	-102.00	-224.00	661.04	620.82	40.22	16.436		
9,100.00	9,081.11	9,108.96	9,082.11	21.03	20.54	-90.61	-102.00	-224.00	661.04	620.31	40.73	16.229		
9,200.00	9,181.11	9,208.96	9,182.11	21.28	20.80	-90.61	-102.00	-224.00	661.04	619.79	41.25	16.025		
9,300.00	9,281.11	9,308.96	9,282.11	21.53	21.06	-90.61	-102.00	-224.00	661.04	619.26	41.77	15.824		
9,400.00	9,381.11	9,408.96	9,382.11	21.79	21.33	-90.61	-102.00	-224.00	661.04	618.73	42.30	15.626		
9,500.00	9,481.11	9,508.96	9,482.11	22.04	21.60	-90.61	-102.00	-224.00	661.04	618.20	42.84	15.430		
9,600.00	9,581.11	9,608.96	9,582.11	22.30	21.87	-90.61	-102.00	-224.00	661.04	617.66	43.38	15.238		
9,700.00	9,681.11	9,708.96	9,682.11	22.57	22.15	-90.61	-102.00	-224.00	661.04	617.11	43.93	15.048		
9,800.00	9,781.11	9,808.96	9,782.11	22.83	22.43	-90.61	-102.00	-224.00	661.04	616.56	44.48	14.862		
9,900.00	9,881.11	9,908.96	9,882.11	23.10	22.71	-90.61	-102.00	-224.00	661.04	616.00	45.03	14.679		
10,000.00	9,981.11	10,008.96	9,982.11	23.37	22.99	-90.61	-102.00	-224.00	661.04	615.44	45.59	14.498		
10,100.00	10,081.11	10,108.96	10,082.11	23.64	23.27	-90.61	-102.00	-224.00	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  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 133H - OH - Prelim Plan B													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,200.00	10,181.11	10,208.96	10,182.11	23.92	23.56	-90.61	-102.00	-224.00	661.04	614.31	46.73	14.147		
10,300.00	10,281.11	10,308.96	10,282.11	24.19	23.84	-90.61	-102.00	-224.00	661.04	613.74	47.30	13.976		
10,400.00	10,381.11	10,408.96	10,382.11	24.47	24.13	-90.61	-102.00	-224.00	661.04	613.16	47.88	13.807		
10,500.00	10,481.11	10,508.96	10,482.11	24.75	24.43	-90.61	-102.00	-224.00	661.04	612.58	48.46	13.642		
10,600.00	10,581.11	10,608.96	10,582.11	25.04	24.72	-90.61	-102.00	-224.00	661.04	612.00	49.04	13.480		
10,700.00	10,681.11	10,708.96	10,682.11	25.32	25.01	-90.61	-102.00	-224.00	661.04	611.41	49.63	13.320		
10,800.00	10,781.11	10,808.96	10,782.11	25.61	25.31	-90.61	-102.00	-224.00	661.04	610.82	50.22	13.163		
10,900.00	10,881.11	10,908.96	10,882.11	25.90	25.61	-90.61	-102.00	-224.00	661.04	610.23	50.81	13.010		
11,000.00	10,981.11	11,008.96	10,982.11	26.19	25.91	-90.61	-102.00	-224.00	661.04	609.63	51.41	12.859		
11,100.00	11,081.11	11,108.96	11,082.11	26.48	26.21	-90.61	-102.00	-224.00	661.04	609.03	52.01	12.710		
11,200.00	11,181.11	11,208.96	11,182.11	26.77	26.51	-90.61	-102.00	-224.00	661.04	608.43	52.61	12.564		
11,300.00	11,281.11	11,291.04	11,282.11	27.07	26.76	-90.61	-102.00	-224.00	661.04	607.87	53.16	12.434		
11,400.00	11,381.11	11,391.06	11,382.13	27.36	27.07	-90.60	-101.89	-224.00	661.04	607.27	53.77	12.294		
11,420.97	11,402.08	11,412.04	11,403.08	27.43	27.13	-90.53	-101.10	-224.01	661.04	607.14	53.90	12.265		
11,500.00	11,481.11	11,489.85	11,480.24	27.66	27.36	-89.70	-91.50	-224.10	661.11	606.74	54.36	12.161		
11,529.79	11,510.90	11,518.30	11,508.03	27.75	27.44	-89.17	-85.38	-224.15	661.23	606.70	54.53	12.125		
11,550.00	11,531.11	11,537.32	11,526.41	27.81	27.50	-88.23	-80.53	-224.20	661.37	606.72	54.65	12.102		
11,600.00	11,580.93	11,583.75	11,570.54	27.96	27.62	-87.24	-66.15	-224.33	661.85	606.92	54.92	12.051		
11,650.00	11,630.23	11,629.38	11,612.64	28.10	27.74	-86.28	-48.57	-224.49	662.50	607.32	55.18	12.006		
11,700.00	11,678.62	11,674.28	11,652.57	28.24	27.86	-85.35	-28.07	-224.68	663.32	607.89	55.43	11.968		
11,750.00	11,725.73	11,718.50	11,690.21	28.37	27.96	-84.46	-4.87	-224.90	664.28	608.60	55.67	11.932		
11,800.00	11,771.20	11,762.12	11,725.48	28.50	28.08	-83.60	20.78	-225.13	665.34	609.43	55.90	11.902		
11,850.00	11,814.70	11,805.19	11,758.29	28.62	28.16	-82.80	48.67	-225.39	666.47	610.35	56.13	11.875		
11,900.00	11,855.88	11,847.77	11,788.57	28.73	28.25	-82.04	78.58	-225.67	667.65	611.31	56.34	11.850		
11,950.00	11,894.44	11,889.91	11,816.27	28.83	28.34	-81.34	110.32	-225.96	668.84	612.29	56.55	11.827		
12,000.00	11,930.08	11,931.65	11,841.34	28.92	28.44	-80.70	143.69	-226.27	670.01	613.26	56.76	11.805		
12,050.00	11,962.53	11,973.05	11,863.74	29.01	28.55	-80.12	178.49	-226.59	671.14	614.18	56.97	11.782		
12,100.00	11,991.54	12,014.15	11,883.43	29.10	28.66	-79.61	214.56	-226.92	672.20	615.02	57.18	11.757		
12,150.00	12,016.89	12,055.00	11,900.39	29.19	28.77	-79.16	251.70	-227.27	673.15	615.76	57.39	11.729		
12,200.00	12,038.39	12,095.63	11,914.60	29.29	28.88	-78.78	289.76	-227.62	673.99	616.38	57.61	11.699		
12,250.00	12,055.88	12,138.08	11,926.02	29.41	29.00	-78.47	328.55	-227.98	674.69	616.85	57.84	11.664		
12,300.00	12,069.22	12,176.40	11,934.66	29.55	29.12	-78.24	367.93	-228.34	675.24	617.15	58.09	11.625		
12,329.79	12,075.15	12,200.00	11,938.43	34.83	29.19	-78.13	391.22	-228.55	675.49	617.29	58.20	11.607		
12,354.79	12,079.49	12,220.45	11,940.91	34.85	29.26	-78.04	411.51	-228.74	675.76	617.47	58.29	11.593		
12,400.00	12,086.29	12,256.56	11,943.52	34.88	29.37	-77.76	447.53	-229.07	676.51	618.05	58.46	11.572		
12,450.00	12,091.33	12,300.43	11,944.00	34.91	29.51	-77.39	491.39	-229.48	677.46	618.78	58.69	11.544		
12,500.00	12,093.76	12,350.37	11,944.00	34.95	29.70	-77.16	541.32	-229.94	678.00	619.01	58.99	11.493		
12,521.46	12,094.00	12,371.82	11,944.00	34.97	29.78	-77.13	562.78	-230.14	678.06	618.92	59.13	11.467		
12,600.00	12,094.00	12,450.36	11,944.00	35.03	30.10	-77.13	641.31	-230.85	678.06	618.35	59.71	11.356		
12,700.00	12,094.00	12,550.36	11,944.00	35.12	30.57	-77.13	741.31	-231.79	678.06	617.50	60.55	11.198		
12,800.00	12,094.00	12,650.36	11,944.00	35.22	31.09	-77.13	841.31	-232.71	678.06	616.54	61.52	11.022		
12,900.00	12,094.00	12,750.36	11,944.00	35.33	31.67	-77.13	941.30	-233.63	678.06	615.46	62.59	10.832		
13,000.00	12,094.00	12,850.36	11,944.00	35.46	32.31	-77.13	1,041.30	-234.56	678.06	614.28	63.78	10.631		
13,100.00	12,094.00	12,950.36	11,944.00	35.63	33.00	-77.13	1,141.29	-235.48	678.06	612.99	65.07	10.421		
13,200.00	12,094.00	13,050.36	11,944.00	35.84	33.73	-77.13	1,241.29	-236.40	678.06	611.61	66.45	10.204		
13,300.00	12,094.00	13,150.36	11,944.00	36.13	34.51	-77.13	1,341.29	-237.33	678.06	610.13	67.92	9.983		
13,400.00	12,094.00	13,250.36	11,944.00	36.51	35.33	-77.13	1,441.28	-238.25	678.06	608.58	69.48	9.759		
13,500.00	12,094.00	13,350.36	11,944.00	37.01	36.19	-77.13	1,541.28	-239.17	678.06	606.94	71.12	9.534		
13,600.00	12,094.00	13,450.36	11,944.00	37.63	37.09	-77.13	1,641.27	-240.10	678.06	605.23	72.83	9.310		
13,700.00	12,094.00	13,550.36	11,944.00	38.35	38.02	-77.13	1,741.27	-241.02	678.06	603.45	74.61	9.088		
13,800.00	12,094.00	13,650.36	11,944.00	39.15	38.98	-77.13	1,841.26	-241.94	678.06	601.61	76.45	8.869		
13,900.00	12,094.00	13,750.36	11,944.00	40.02	39.97	-77.13	1,941.26	-242.87	678.06	599.71	78.35	8.654		

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

# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Nina Cortell Fed Com - No. 133H - OH - Prelim Plan B													Offset Well Error:	0.00 usft
Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 5000-MWD+HDGM														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,000.00	12,094.00	13,850.36	11,944.00	40.94	40.98	-77.13	2,041.26	-243.79	678.06	597.75	80.31	8.443		
14,100.00	12,094.00	13,950.36	11,944.00	41.90	42.02	-77.13	2,141.25	-244.71	678.06	595.74	82.32	8.237		
14,200.00	12,094.00	14,050.36	11,944.00	42.90	43.09	-77.13	2,241.25	-245.64	678.06	593.69	84.37	8.037		
14,300.00	12,094.00	14,150.36	11,944.00	43.92	44.18	-77.13	2,341.24	-246.56	678.06	591.59	86.47	7.841		
14,400.00	12,094.00	14,250.36	11,944.00	44.98	45.28	-77.13	2,441.24	-247.48	678.06	589.45	88.61	7.652		
14,500.00	12,094.00	14,350.36	11,944.00	46.06	46.41	-77.13	2,541.23	-248.41	678.06	587.27	90.79	7.468		
14,600.00	12,094.00	14,450.36	11,944.00	47.16	47.55	-77.13	2,641.23	-249.33	678.06	585.06	93.00	7.291		
14,700.00	12,094.00	14,550.36	11,944.00	48.28	48.71	-77.13	2,741.23	-250.25	678.06	582.81	95.25	7.119		
14,800.00	12,094.00	14,650.36	11,944.00	49.42	49.88	-77.13	2,841.22	-251.18	678.06	580.53	97.53	6.952		
14,900.00	12,094.00	14,750.36	11,944.00	50.57	51.07	-77.13	2,941.22	-252.10	678.06	578.23	99.84	6.792		
15,000.00	12,094.00	14,850.36	11,944.00	51.74	52.27	-77.13	3,041.21	-253.02	678.07	575.90	102.17	6.637		
15,100.00	12,094.00	14,950.36	11,944.00	52.93	53.48	-77.13	3,141.21	-253.95	678.07	573.54	104.53	6.487		
15,200.00	12,094.00	15,050.36	11,944.00	54.13	54.70	-77.13	3,241.20	-254.87	678.07	571.16	106.91	6.343		
15,300.00	12,094.00	15,150.36	11,944.00	55.34	55.93	-77.13	3,341.20	-255.79	678.07	568.76	109.31	6.203		
15,400.00	12,094.00	15,250.36	11,944.00	56.56	57.18	-77.13	3,441.20	-256.72	678.07	566.34	111.73	6.069		
15,500.00	12,094.00	15,350.36	11,944.00	57.79	58.43	-77.13	3,541.19	-257.64	678.07	563.89	114.17	5.939		
15,600.00	12,094.00	15,450.36	11,944.00	59.03	59.69	-77.13	3,641.19	-258.56	678.07	561.44	116.63	5.814		
15,700.00	12,094.00	15,550.36	11,944.00	60.28	60.96	-77.13	3,741.18	-259.49	678.07	558.96	119.11	5.693		
15,800.00	12,094.00	15,650.36	11,944.00	61.54	62.23	-77.13	3,841.18	-260.41	678.07	556.47	121.60	5.576		
15,900.00	12,094.00	15,750.36	11,944.00	62.81	63.52	-77.13	3,941.17	-261.33	678.07	553.96	124.11	5.464		
16,000.00	12,094.00	15,850.36	11,944.00	64.09	64.81	-77.13	4,041.17	-262.25	678.07	551.44	126.63	5.355		
16,100.00	12,094.00	15,950.36	11,944.00	65.37	66.11	-77.13	4,141.17	-263.18	678.07	548.91	129.16	5.250		
16,200.00	12,094.00	16,050.36	11,944.00	66.66	67.41	-77.13	4,241.16	-264.10	678.07	546.36	131.71	5.148		
16,300.00	12,094.00	16,150.36	11,944.00	67.95	68.72	-77.13	4,341.16	-265.02	678.07	543.81	134.26	5.050		
16,400.00	12,094.00	16,250.36	11,944.00	69.26	70.03	-77.13	4,441.15	-265.95	678.07	541.24	136.83	4.956		
16,500.00	12,094.00	16,350.36	11,944.00	70.56	71.35	-77.13	4,541.15	-266.87	678.07	538.66	139.41	4.864		
16,600.00	12,094.00	16,450.36	11,944.00	71.88	72.67	-77.13	4,641.14	-267.79	678.07	536.07	142.00	4.775		
16,700.00	12,094.00	16,550.36	11,944.00	73.19	74.00	-77.13	4,741.14	-268.72	678.07	533.48	144.60	4.689		
16,800.00	12,094.00	16,650.36	11,944.00	74.51	75.33	-77.13	4,841.14	-269.64	678.07	530.87	147.20	4.606		
16,840.76	12,094.00	16,691.13	11,944.00	75.05	75.87	-77.13	4,881.90	-270.02	678.07	529.81	148.26	4.573		

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

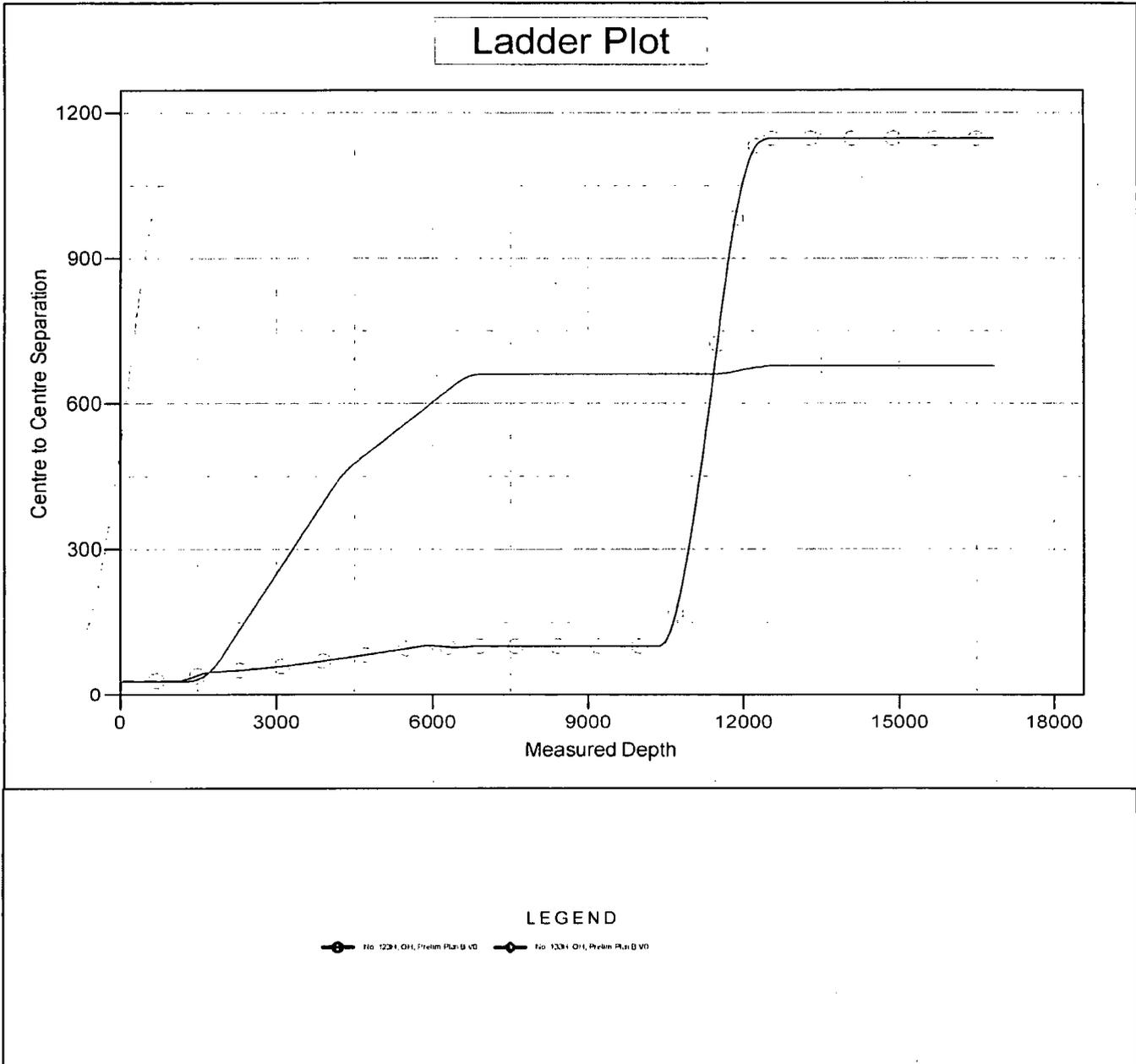
# Pro Directional Anticollision Report

**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to Well @ 3834.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 104.333334°W

Coordinates are relative to: No. 203H  
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30  
 Grid Convergence at Surface is: 0.36°



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

# Pro Directional Anticollision Report

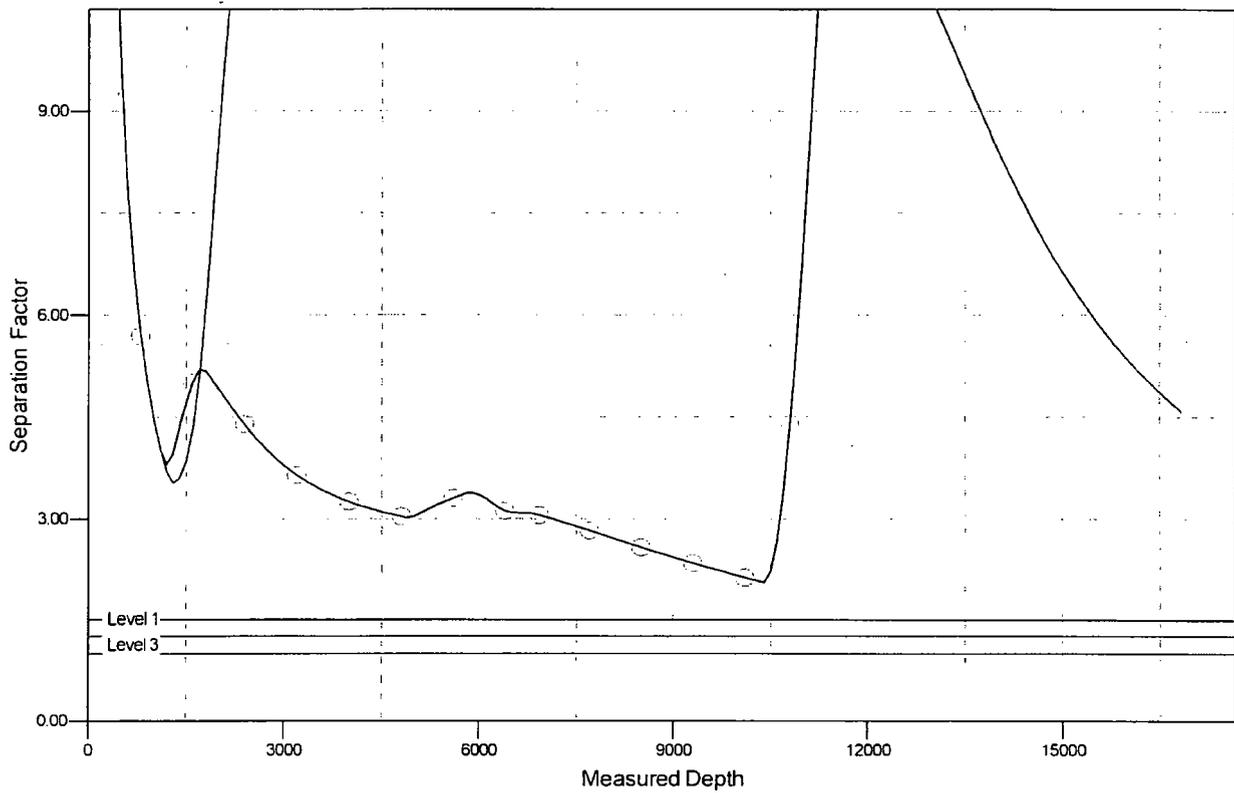
**Company:** Matador Resources  
**Project:** Lea County, NM  
**Reference Site:** Nina Cortell Fed Com  
**Site Error:** 0.00 usft  
**Reference Well:** No. 203H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** OH  
**Reference Design:** Prelim Plan B

**Local Co-ordinate Reference:** Well No. 203H  
**TVD Reference:** Well @ 3834.00usft  
**MD Reference:** Well @ 3834.00usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** WellPlanner1  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to Well @ 3834.00usft  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 104.333334°W

Coordinates are relative to: No. 203H  
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30  
 Grid Convergence at Surface is: 0.36°

## Separation Factor Plot



### LEGEND

No. 123H, OH, Prelim Plan B VD    
  No. 123H, OH, Prelim Plan B VD

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

Matador Production Company  
 Nina Cortell Fed Com 203H  
 SHL 150' FSL & 2088' FEL  
 BHL 240' FNL & 1652' FEL  
 Sec. 3, T. 22 S., R. 32 E., Lea County, NM

DRILL PLAN PAGE 1

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
Salado salt	1353'	1353'	N/A
Castile anhydrite	3487'	3494'	N/A
Base salt	4861'	4873'	N/A
Bell Canyon sandstone	4925'	4937'	hydrocarbons
Cherry Canyon sandstone	5915'	5931'	hydrocarbons
Brushy Canyon sandstone	6878'	6897'	hydrocarbons
Bone Spring limestone	8874'	8893'	hydrocarbons
1 <sup>st</sup> Bone Spring carbonate	9573'	9592'	hydrocarbons
1 <sup>st</sup> Bone Spring sandstone	9836'	9855'	hydrocarbons
2 <sup>nd</sup> Bone Spring carbonate	10221'	10240'	hydrocarbons
2nd Bone Spring sandstone	10494'	10513'	hydrocarbons
3 <sup>rd</sup> Bone Spring carbonate	11034'	11053'	hydrocarbon
(KOP	11531'	11550'	hydrocarbons)
3 <sup>rd</sup> Bone Spring sandstone	11572'	11591'	hydrocarbon
Wolfcamp A carbonate	11981'	12064'	Hydrocarbons & goal
TD	12094'	16841'	hydrocarbons

2. NOTABLE ZONES

Wolfcamp is the goal. Hole will extend north of the last perforation point to allow for pump installation. All perforations will be  $\geq 330'$  from the dedication perimeter. Closest water well (C 03717) is 6494' west. Water bearing strata were found at 620' - 630' in the 650' deep well.

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DRILL PLAN PAGE 2

### 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.

After setting the surface casing, and before drilling the surface casing shoe, a minimum 2M BOPE system will be installed. It will be tested to 250 psi low and 2000 psi high. Annular will be tested to 250 psi low and 1000 psi high.

After setting intermediate 1 casing, a minimum 3M BOPE system will be installed and tested to 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high.

After setting intermediate 2 casing, a minimum 5M BOPE system will be installed and tested to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high.

Matador requests a variance to have the option of running a speed head for setting the intermediate 1 and 2 strings. In the case of running a speed head with landing mandrel for 9.625" and 7" casing, a minimum 3M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high before drilling below the surface shoe. After 7" casing is set in the speed head,

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DRILL PLAN PAGE 3

the BOP will then be lifted to install another casing head section for setting the production casing. Matador will nipple up the casing head and BOP and a minimum 5M BOPE system will be installed. Pressure tests will be made to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 2500 psi high. A diagram of the speed head is attached.

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'	13.375" surface	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	0' - 5000'	0' - 4987'	9.625" inter. 1	40	J-55	BTC	1.125	1.125	1.8
8.75"	0' - 12330'	0' - 12075'	7.0" inter. 2	29	P-110	BTC	1.125	1.125	1.8
6.125"	0' - 16841'	0' - 12094'	4.5" product.	13.5	P-110	BTC/TXP	1.125	1.125	1.8

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DRILL PLAN PAGE 4

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	240	1.82	436	12.8	Class C + Bentonite + 2% CaCl <sub>2</sub> + 3% NaCl + LCM
	Tail	839	1.38	1157	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	909	2.13	1936	12.6	Class C + Bentonite + 1% CaCl <sub>2</sub> + 8% NaCl + LCM
	Tail	482	1.38	665	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	563	2.36	1328	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	327	1.38	451	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)	
Production	Tail	597	1.17	698	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 11830'		25% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

### 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' - 12330'	9.0	30-31	NC
OBM	12330' - 16841'	12.5	50-60	<10

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DRILL PLAN PAGE 5

#### 6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud logging program will be used from  $\approx 5000'$  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

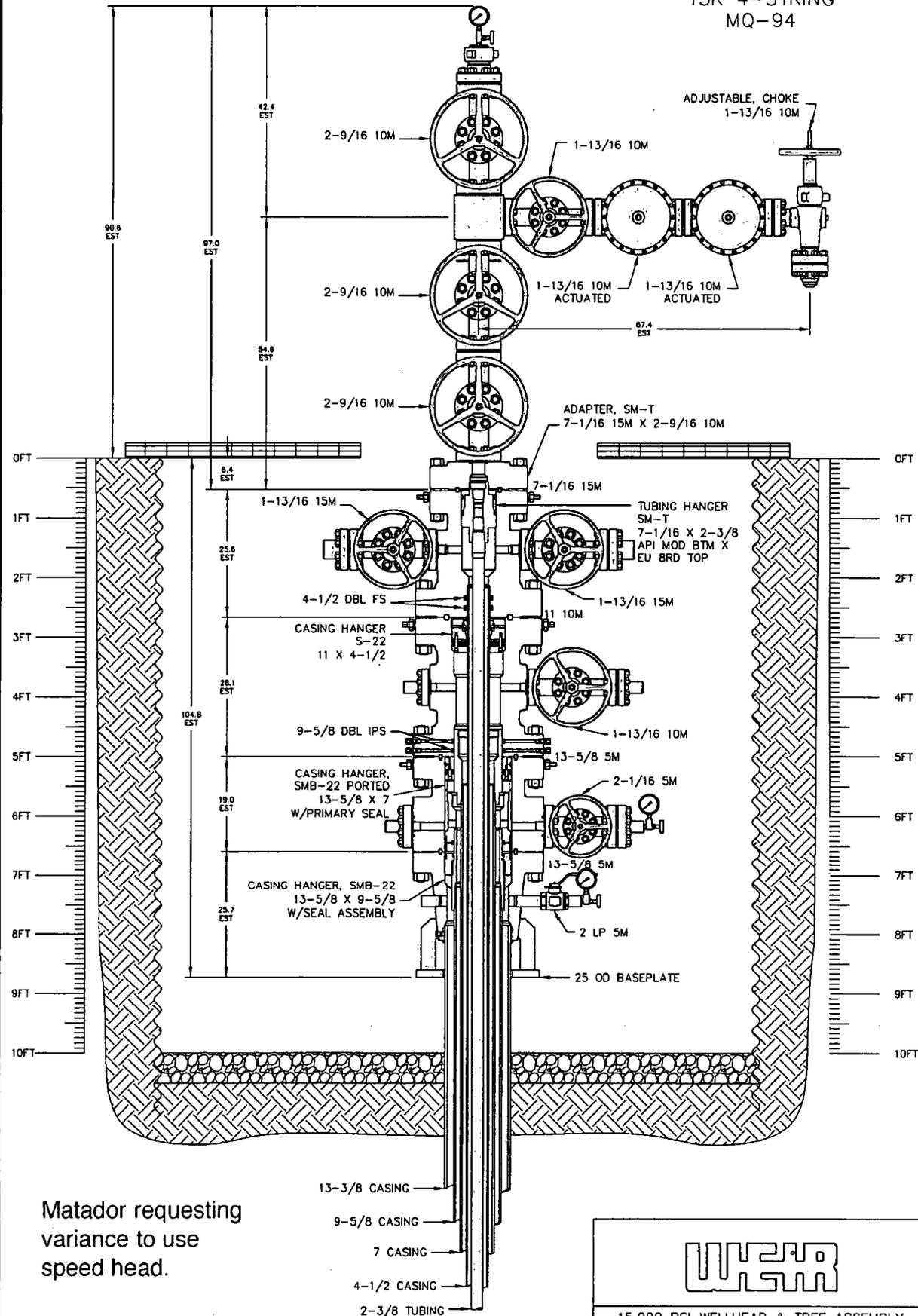
No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is  $\approx 8000$  psi. Expected bottom hole temperature is  $\approx 170^\circ$  F.

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<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H<sub>2</sub>S safety package on all wells, an "H<sub>2</sub>S 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  $\approx 3$  months to drill and complete the well.

MATADOR  
15K 4-STRING  
MQ-94



Matador requesting  
variance to use  
speed head.

NOTE:  
DIMENSIONS SHOWN ON THIS DRAWING ARE  
ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY  
DEPENDING ON RAW MATERIAL LENGTHS.  
NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED.  
DIMENSIONS SHOWN SHOULD BE CONSIDERED  
FOR REFERENCE PURPOSES ONLY.

RESTRICTED CONFIDENTIAL DOCUMENT

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CONSENT OF SEABOARD INTERNATIONAL INC.

WER

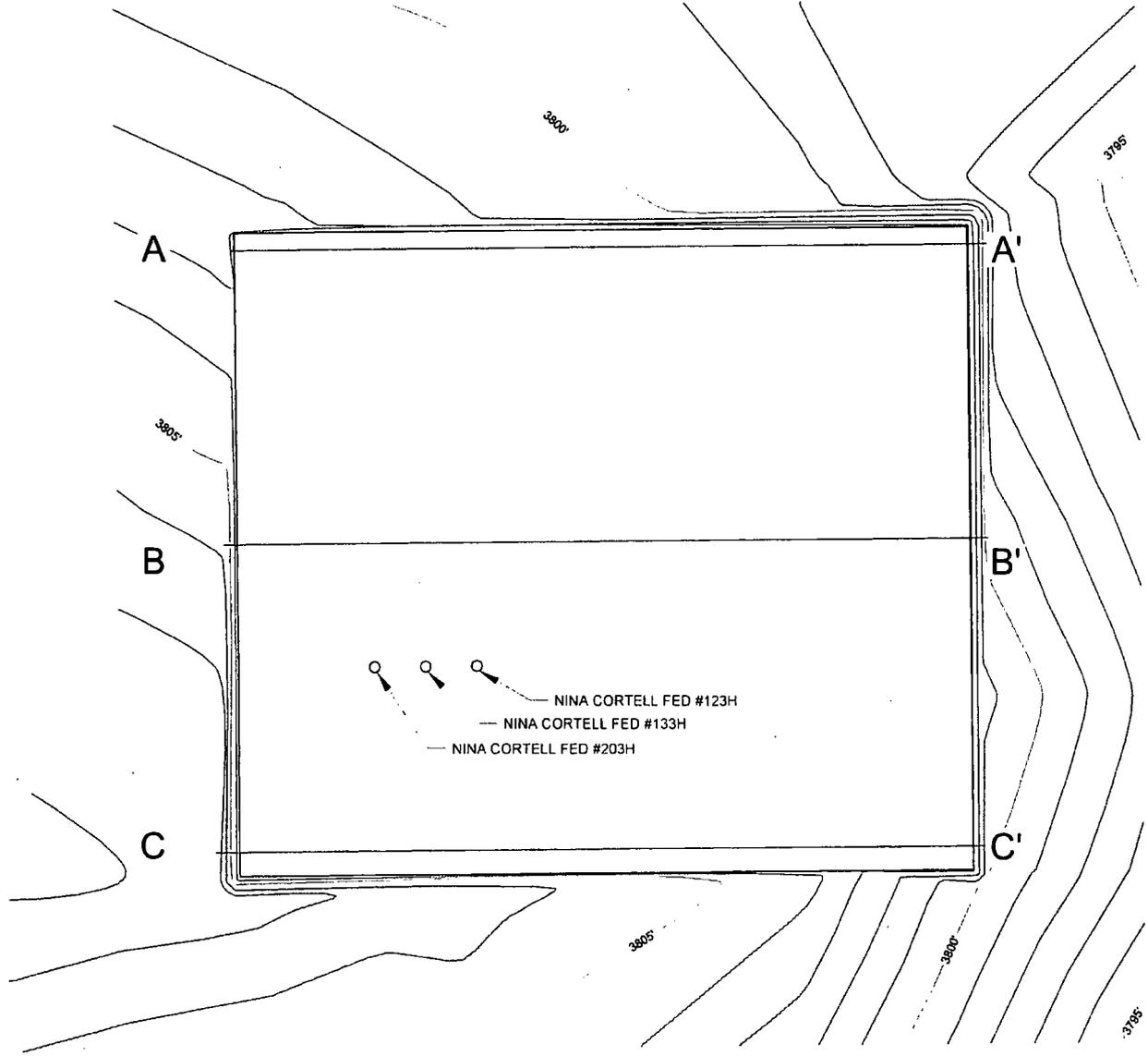
15,000 PSI WELLHEAD & TREE ASSEMBLY  
13-3/8 X 9-5/8 X 7 X 4-1/2 X 2-3/8

DRAWN BY:	RPL	SCALE:	1:10	DATE:	18JAN16	REV:	
CHECKED BY:		DRAWING NO.		P-20986			
APPROVED BY:							

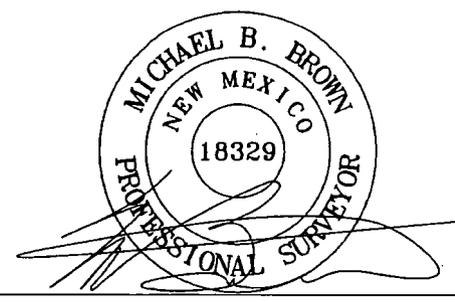
SCALE: 1" = 100'  
 0' 50' 100'

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

MAP 11



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 TELEPHONE: (817) 744-7512 • FAX (817) 744-7548  
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 WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329  
 MAY 01, 2017

Field note description of even date accompanies this plat.

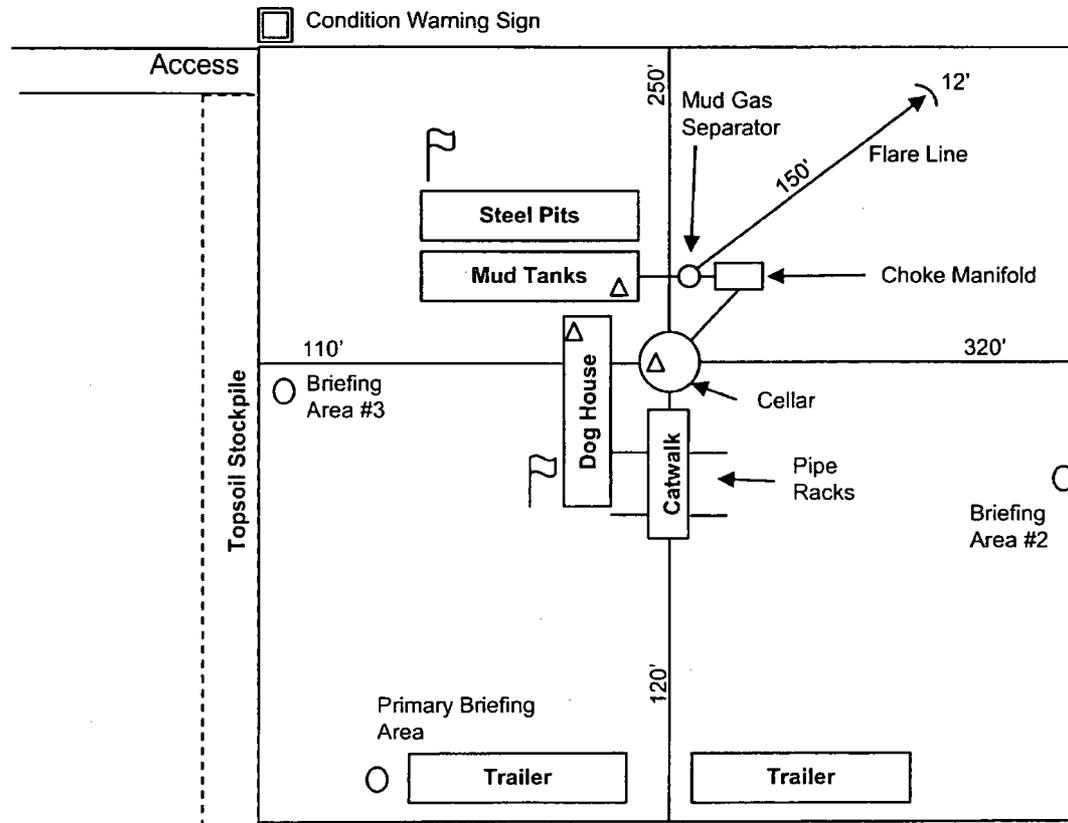
<b>NINA CORTELL FED 203H          SURFACE PAD SITE PROFILE</b>	REVISION:	
	GLH	05/01/17
DATE:	04/18/17	
FILE:	CD_NINA_CORTELL_FED_203H_SURFACE_PAD_SITE_REV1	
DRAWN BY:	GJU	
SHEET:	1 OF 2	

- 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.

# Rig Diagram

Nina Cortell Fed Com 203H  
 SHL 150' FSL & 2088' FEL  
 3-22S-32E Lea County, NM

-  Wind Direction Indicator
-  H2S Monitors
-  Briefing Areas



North  
  
 Prevailing Winds Out Of South



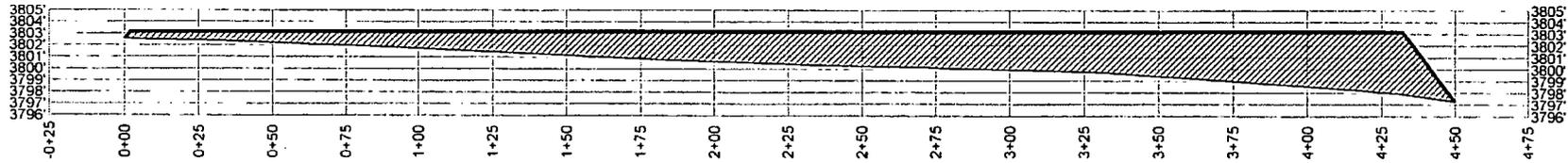
TOP OF PAD ELEVATION: 3803.2634  
 CUT SLOPE: 33.33% 3.000:1 18.43°  
 FILL SLOPE: 33.33% 3.000:1 18.43°  
 BALANCE TOLERANCE (C.Y.): 0.00  
 CUT SWELL FACTOR: 1.00  
 FILL SHRINK FACTOR: 1.00

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

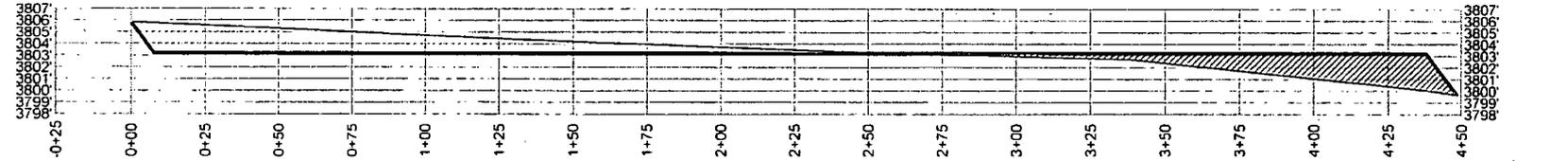


PAD EARTHWORK VOLUMES  
 CUT : 157,534.0 C.F., 5,834.59 C.Y.  
 FILL: 157,534.0 C.F., 5,834.59 C.Y.  
 AREA: 173572.3 SQ.FT., 3.985 ACRES

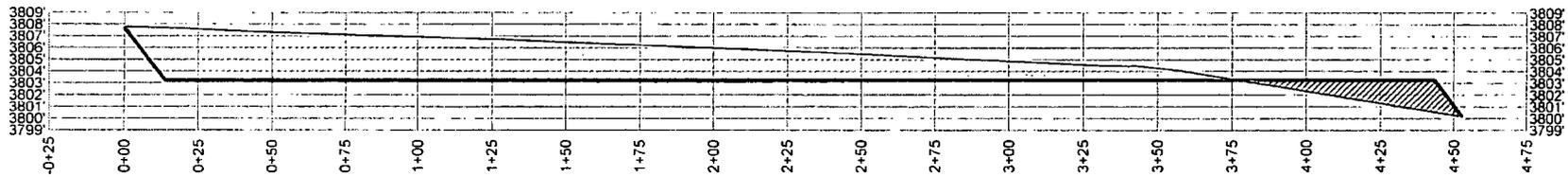
A-A'



B-B'



C-C'



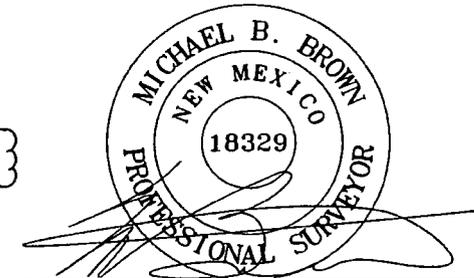
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140  
 TELEPHONE: (817) 744-7512 • FAX (817) 744-7548  
 TEXAS FIRM REGISTRATION NO. 10042504  
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Horizontal Scale = 1:60  
 Vertical Scale = 1:5

NINA CORTELL FED 203H SURFACE PAD SITE PROFILE	REVISION:	
	GLH	05/01/17
DATE: 04/18/17		
FILE: CO\NINA CORTELL FED 203H SURFACE PAD SITE_REV1		
DRAWN BY: GJU		
SHEET: 2 OF 2		

NOTES:  
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 3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

MAP 12



Michael Blake Brown, P.S. No. 18329

MAY 01, 2017

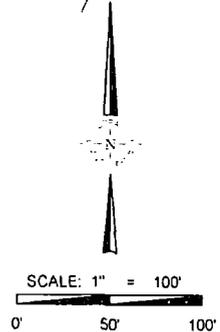
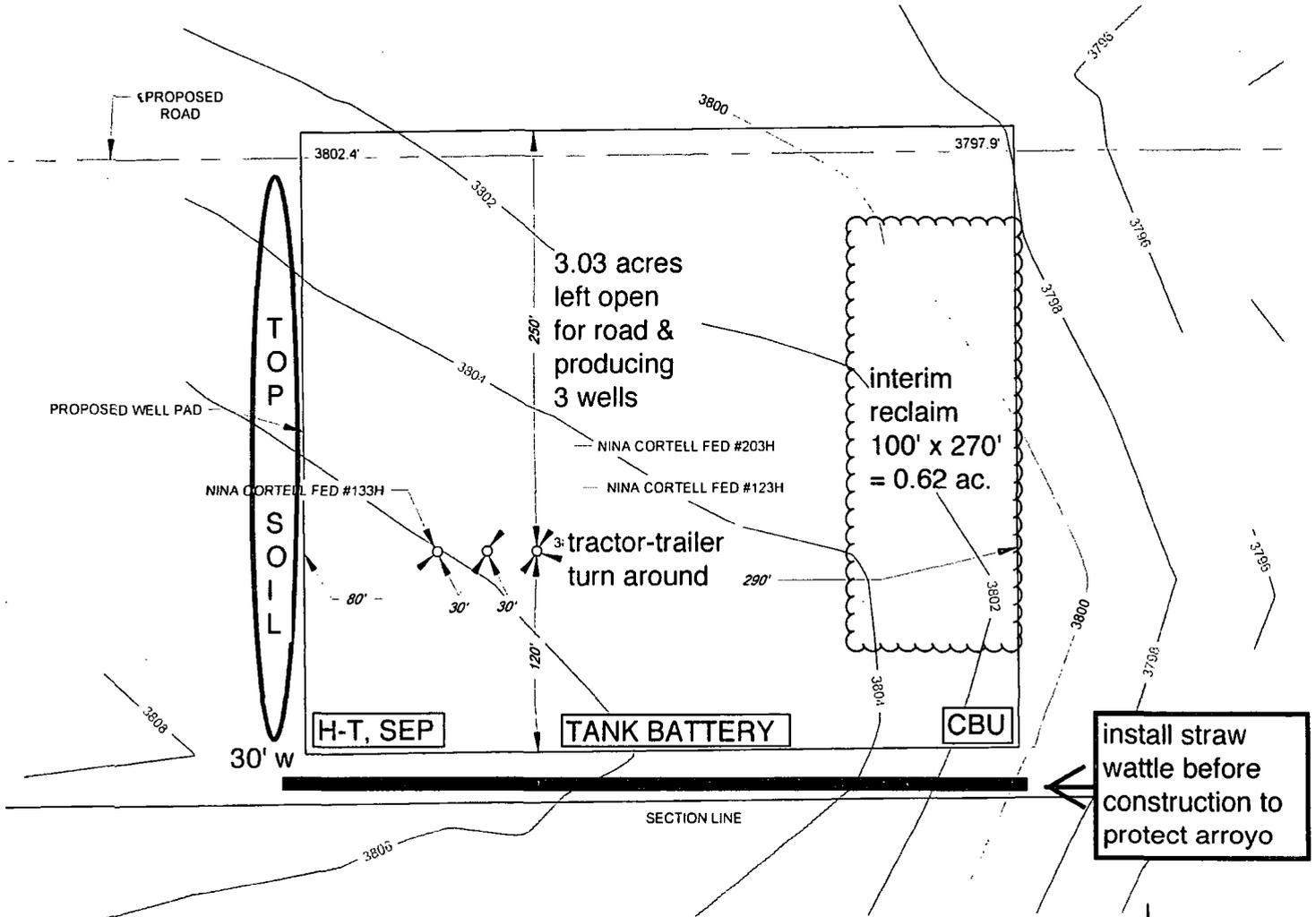
Field note description of even date accompanies this plat.



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.

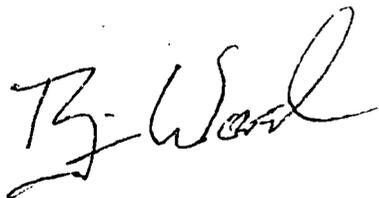
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Nina Cortell Fed Com 133H  
SHL 150' FSL & 2088' FEL  
Sec. 3, T. 22 S., R. 32 E., Lea County, NM

SURFACE PLAN PAGE 5

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 22nd 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

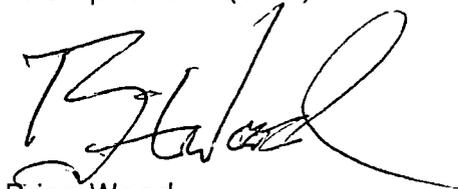
Field representative will be:  
Sam Pryor, Senior Staff Landman  
Matador Production Company  
5400 LBJ Freeway, Suite 1500  
Dallas TX 75240  
Phone: (972) 371-5241  
FAX: (214) 866-4841

November 21, 2017

To Who It May Concern:

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.

A handwritten signature in black ink, appearing to read "B. Wood", written in a cursive style.

Brian Wood

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).

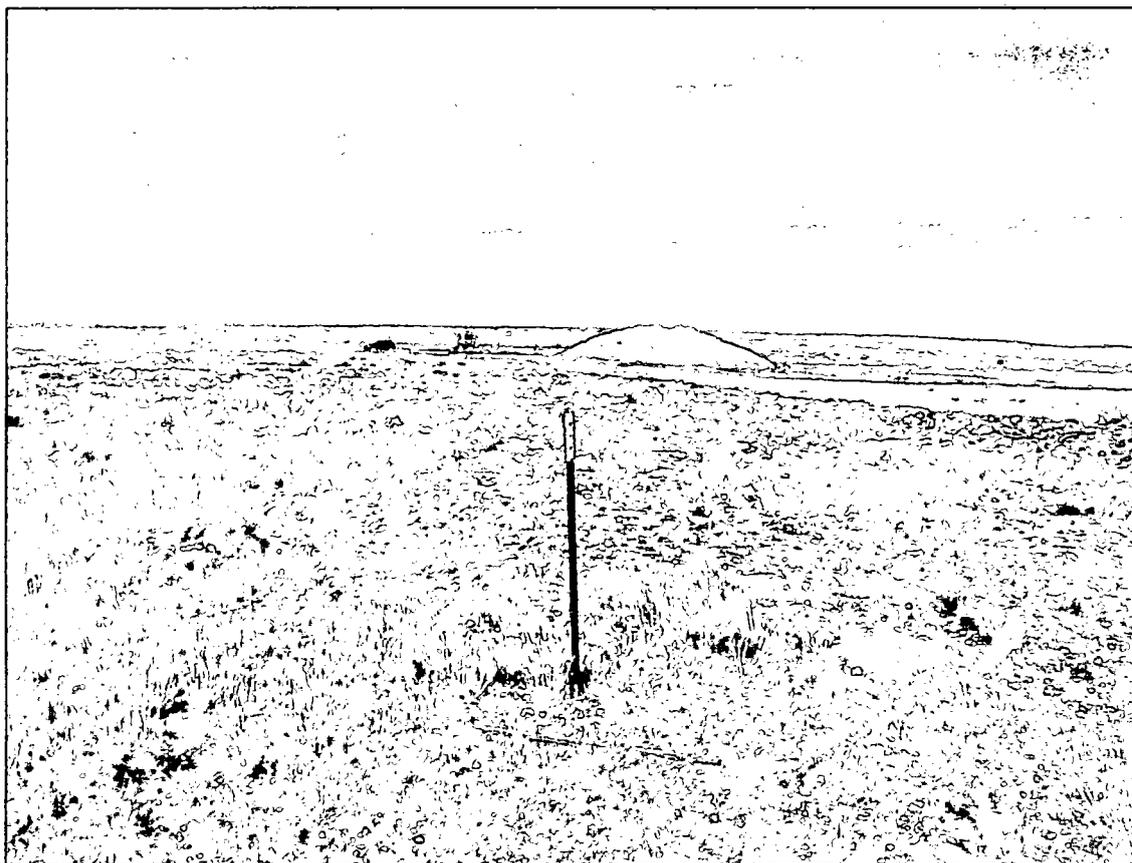
The west half of the topsoil pile will be used in reclaiming the remainder of the pad. A bulldozer was on location (see attached photos). A pile of caliche was awaiting loading and transport off-location for reuse. Once the caliche is removed, then the remainder of the topsoil will be spread.



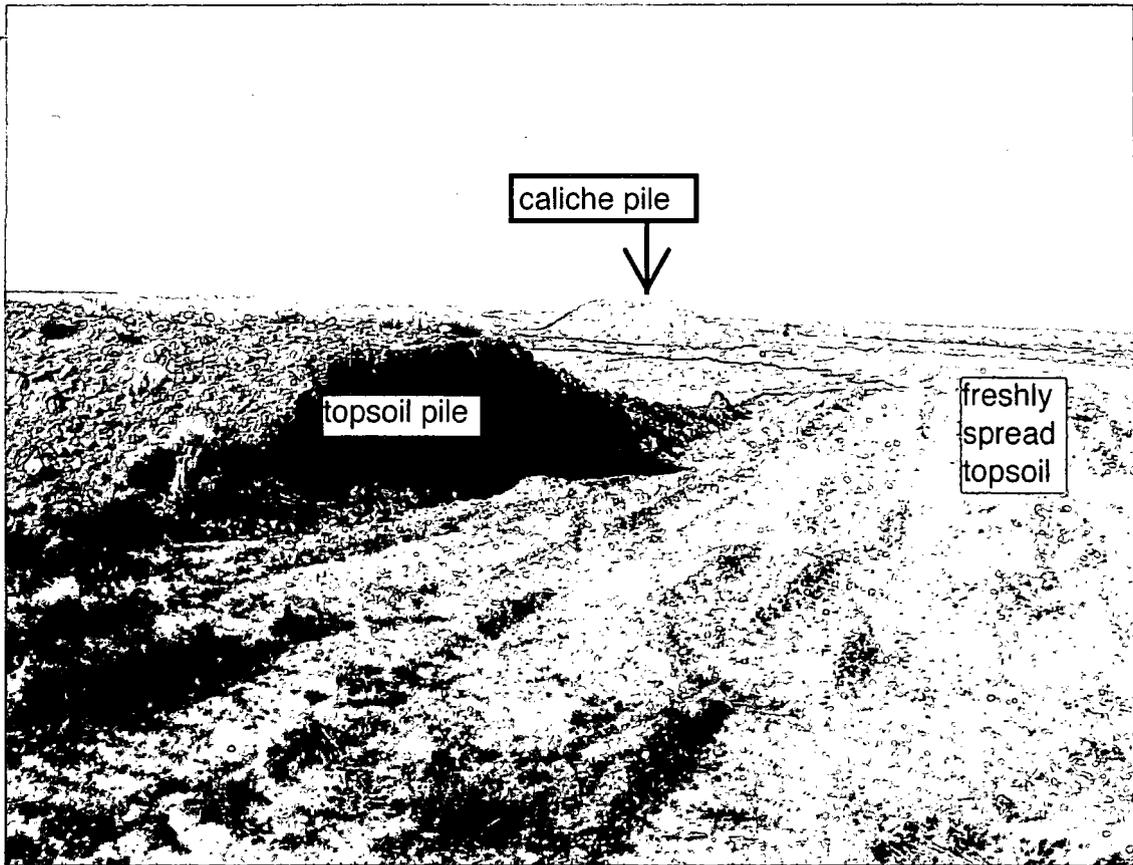
Brian Wood



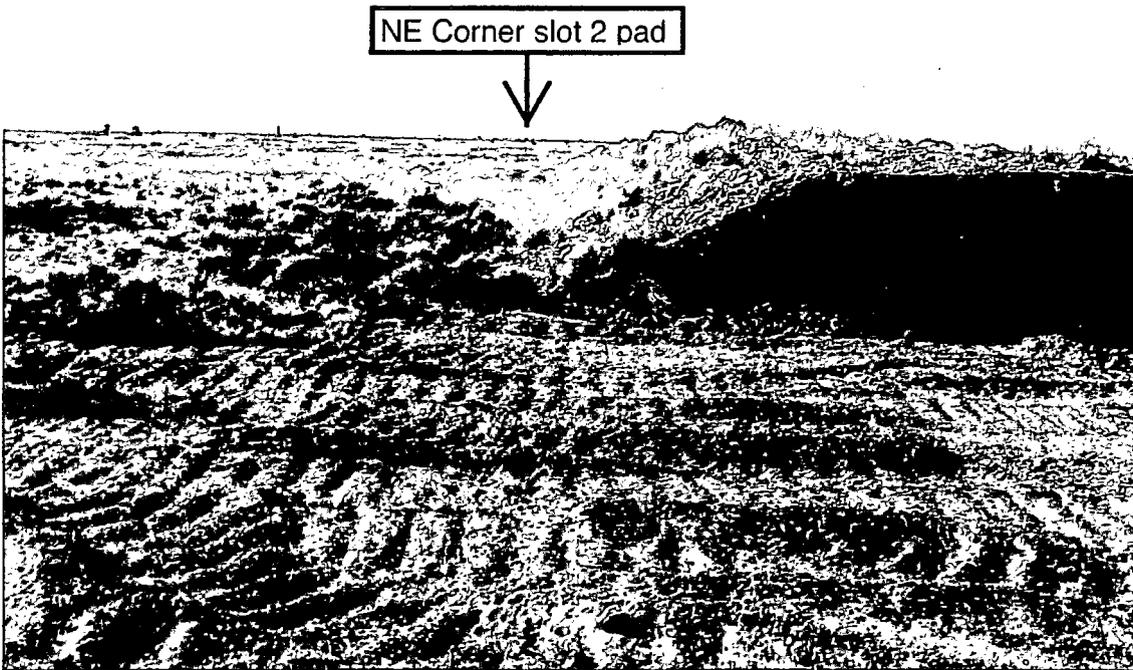
Looking East at Matador Nina Cortell slot 2 pad NE corner. Devon soil pile on left.



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:

Describe 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: