# PECOS DISTRICT
# DRILLING OPERATIONS
# CONDITIONS OF APPROVAL

| | |
|---|---|
| **OPERATOR'S NAME:** | **Matador Production Company** |
| **LEASE NO.:** | **NMNM-136226** |
| **WELL NAME & NO.:** | **Biggers Federal Com 24H** |
| **SURFACE HOLE FOOTAGE:** | **0090' FSL & 1226' FEL** |
| **BOTTOM HOLE FOOTAGE** | **0240' FNL & 0994' FEL** |
| **LOCATION:** | **Section 18, T. 25 S., R 35 E., NMPM** |
| **COUNTY:** | **County, New Mexico** |

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)

☐ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 3933612

**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.

**Provide NMOCD Gas Capture Plan (GCP) Form:**
Well(s)/Facility information:
1. Name of facility

2. Wells that will be located (new and future) at this facility
    a. Well name and number
    b. Well API number
    c. Well location, Sect, T, R, Footages, county, state
    d. Expected IP gas rate, Mcfpd of each well
    e. First planned production date for well(s) that are developed from this facility

A. **Hydrogen Sulfide**

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**

2. 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. 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 is located, this does not include the dog house or stairway area.

4. **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**

**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.**
**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

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.**

**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.**

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

**Possibility of water flows in the Castile and Salado formations**
**Possibility of lost circulation in the Rustler, Red Beds, and Delaware formations**

1. The **13-3/8** inch surface casing shall be set at approximately **1000** feet and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    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 is to include the lead cement slurry.**

    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 shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.**

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

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

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

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

   ☐ Cement as proposed by operator. Operator shall provide method of verification.

4. 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.

## 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 53.

2. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi (**Operator will have a 5M, testing to 2,000 psi**).

   a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be psi (**Operator will have a 5M, testing to 3,000 psi**).

5. The appropriate BLM office shall be notified a minimum of 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).

    a. 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).

    b. 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.

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

    d. 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.**

    e. 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.

## C. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## 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.

**JAM 012318**

# PECOS DISTRICT
# SURFACE USE
# CONDITIONS OF APPROVAL

| | |
|---|---|
| OPERATOR'S NAME: | Matador Prod Co |
| LEASE NO.: | NM136226 |
| WELL NAME & NO.: | 24H – Biggers Fed Com |
| SURFACE HOLE FOOTAGE: | 90'/S & 1226'/E |
| BOTTOM HOLE FOOTAGE | 240'/N & 994'/E |
| LOCATION: | Section 18, T. 25 S., R. 35 E., NMPM |
| COUNTY: | Lea County, New Mexico |

## TABLE OF CONTENTS

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





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

## I. GENERAL PROVISIONS

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

## II. PERMIT EXPIRATION

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

## III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

## IV. NOXIOUS WEEDS

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

## V. SPECIAL REQUIREMENT(S)

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

**Below 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.

### 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.)

# VI. CONSTRUCTION

## A. NOTIFICATION

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

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

## B. TOPSOIL

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

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

## C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

## D. FEDERAL MINERAL MATERIALS PIT

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

## E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

## F. EXCLOSURE FENCING (CELLARS & PITS)

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

## G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

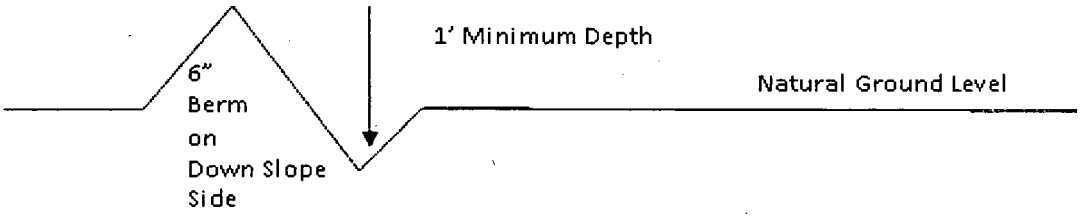
**Turnouts**
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

**Cross Section of a Typical Lead-off Ditch**




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

**Formula for Spacing Interval of Lead-off Ditches**

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

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

**Cattle guards**

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

**Fence Requirement**

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

**Public Access**

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

**Construction Steps**

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

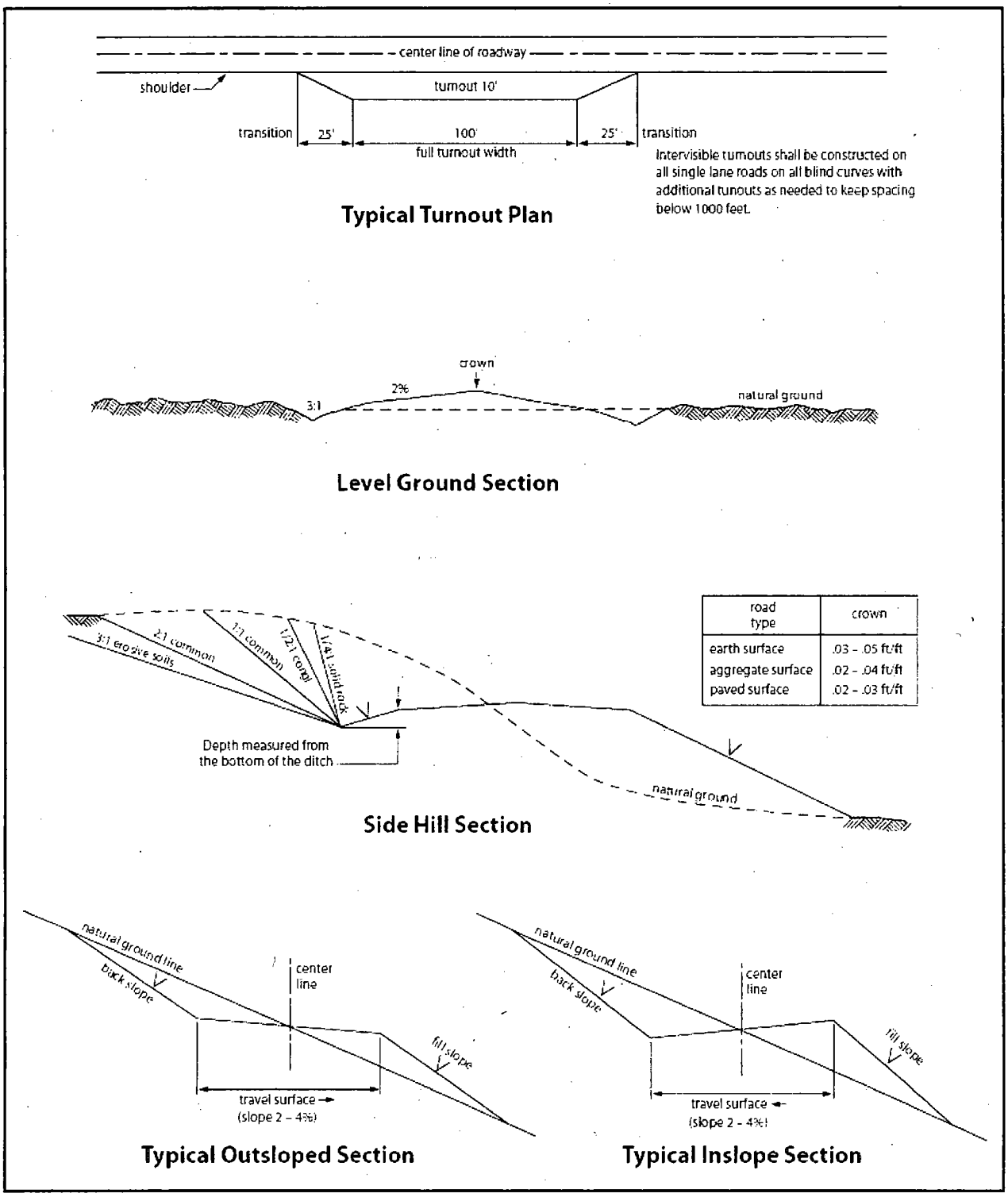



Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

# VII. PRODUCTION (POST DRILLING)

## A. WELL STRUCTURES & FACILITIES

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

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

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

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

**Containment Structures**

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

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

## 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).

Below 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 for LPC Sand/Shinnery Sites

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

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

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

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

*Pounds of pure live seed:

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

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 should be high enough to be visible.
- Windsock on the rig floor and / top of doghouse should 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.
-

## Casing Design Criteria and Load Case Assumptions

### Production Casing

Collapse: $DF_c$=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 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 (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b$=1.125

- Pressure Test: 8000 psi casing test 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.
- 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 (0.47 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).

7 Drilling Stem Testing:

- No DSTs or cores are planned at this time.

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

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

11 Emergency Contacts

- See following page

H2S Contingency Plan Emergency Contacts
Biggers Fed Com wells
Matador Production Company
Sec. 18, T25S, R35E Lea County, NM

| | | | |
|---|---|---|---|
| **Company Office** | | | |
| Matador Production Company | (972)-371-5200 | | |
| **Key Personnel** | | | |
| **Name** | **Title** | **Office** | **Mobile** |
| Billy Goodwin | Vice President Drilling | 972-371-5210 | 817-522-2928 |
| Gary Martin | Drilling Superintendent | | 601-669-1774 |
| Dee Smith | Drilling Superintendent | 972-371-5447 | 972-822-1010 |
| Patrick Walsh | Drilling Engineer | 972-371-5291 | 626-318-5808 |
| Greg Deevers | Construction Superintendent | | 405-431-9527 |
| Jimmy Benefield | Construction Superintendent | | 318-548-6659 |

| | | |
|---|---|---|
| **Lea County** | | |
| Ambulance | 911 | |
| Nor Lea General Hospital (Hobbs) | 575-397-0560 | |
| State Police (Hobbs) | 575-392-5580 | |
| City Police (Hobbs) | 575-397-9625 | |
| Sheriff's Office (Lovington) | 575-396-3611 | |
| Fire Marshall (Lovington) | 575-391-2983 | |
| Volunteer Fire Dept. (Jal) | 575-395-2221 | |
| Emergency Management (Lovington) | 575-391-2983 | |
| New Mexico Oil Conservation Division (Hobbs) | 575-393-6161 | 575-390-3186 |
| BLM (Hobbs) | 575-393-3612 | |
| Hobbs Animal Clinic | 575-392-5563 | |
| Dal Paso Animal Hospital (Hobbs) | 575-397-2286 | |
| Mountain States Equine (Hobbs) | 575-392-7488 | |
| **Carlsbad** | | |
| BLM | 575-234-5972 | |
| **Santa Fe** | | |
| New Mexico Emergency Response Commission (Santa Fe) | 505-476-9600 | |
| New Mexico Emergency Response Commission (Santa Fe) 24 hrs | 505-827-9126 | |
| New Mexico State Emergency Operations Center | 505-476-9635 | |
| **National** | | |
| National Emergency Response Center (Washington, D.C.) | 800-424-8802 | |
| **Medical** | | |
| Flight for Life- 4000 24th St.; Lúbbock, TX | 806-743-9911 | |
| Aerocare- R3, Box 49F; Lubbock, TX | 806-747-8923 | |
| Med Flight Air Amb- 2301 Yale Blvd SE, D3; Albuquerque, NM | 505-842-4433 | |
| SB Air Med Service- 2505 Clark Carr Loop SE; Albuquerque, NM | 505-842-4949 | |

| | | |
|---|---|---|
| **Other** | | |
| Boots & Coots IWC | 800-256-9688 | or 281-931-8884 |
| Cudd Pressure Control | 432-699-0139 | or 432-563-3356 |
| Halliburton | 575-746-2757 | |
| B.J. Services | 575-746-3569 | |
| NM Dept. of Transportation (Roswell) | 575-637-7200 | |

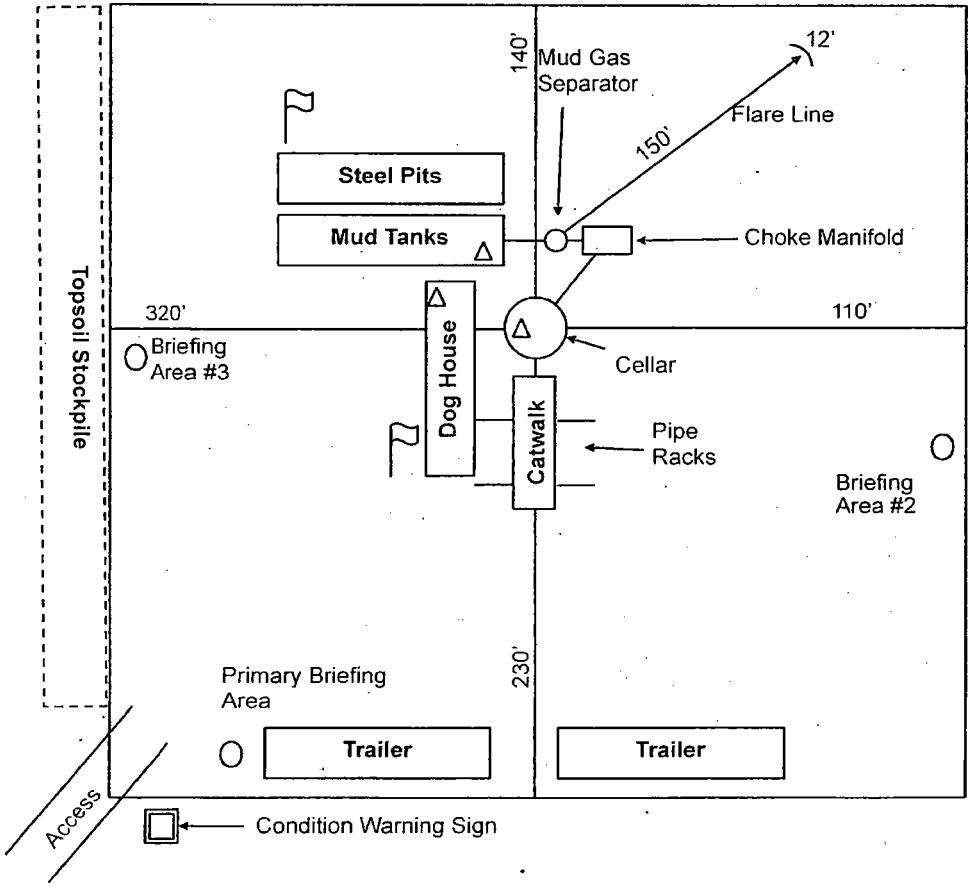
# H2S Rig Diagram

Biggers Fed Com 24H
SHL 90' FSL & 1226' FEL
18-25S-35E Lea County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas




NORTH

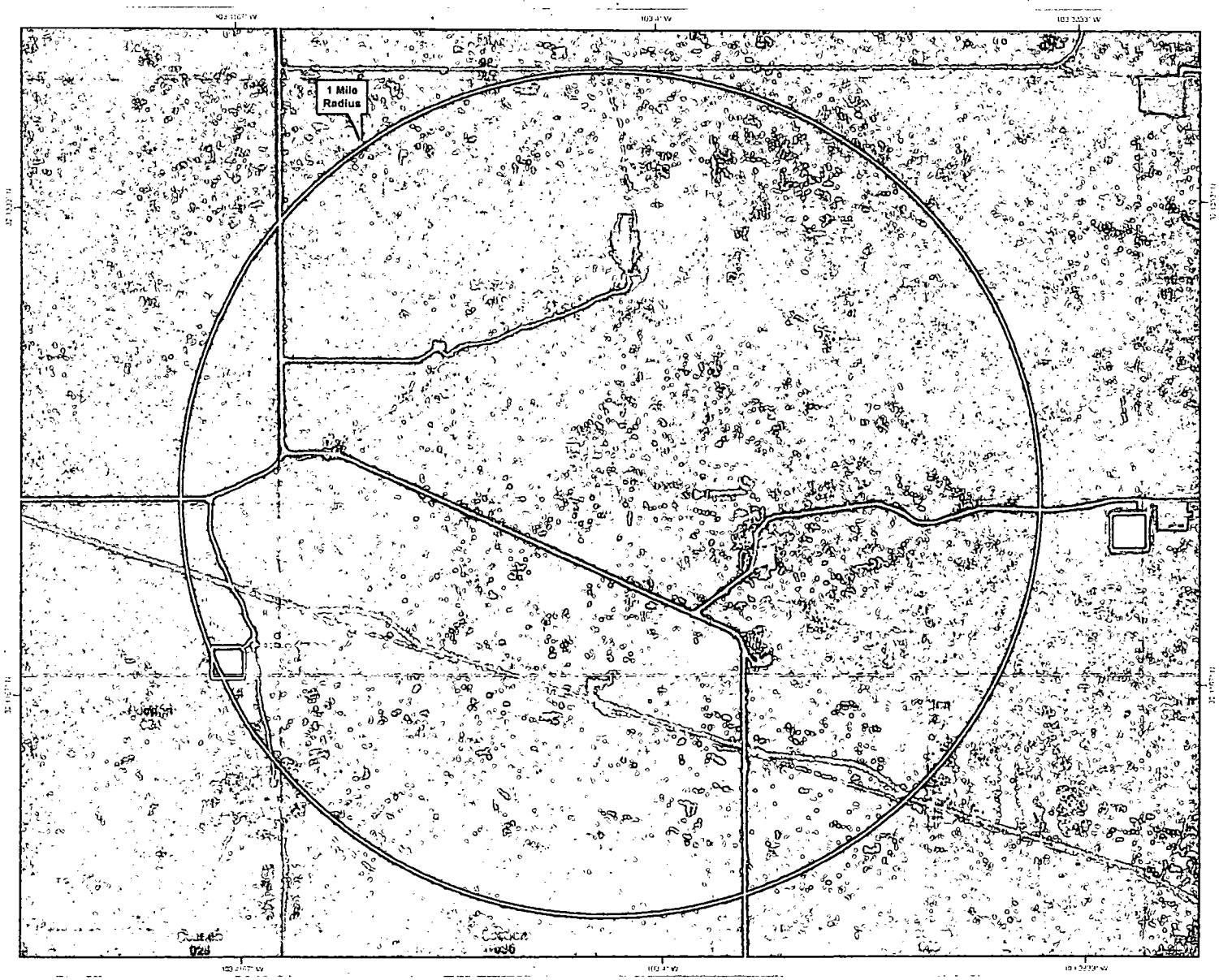
*Prevailing Winds Out of the South*

Matador RESOURCES COMPANY

# Matador Production Company

**Biggers Fed Com #024H**
**$H_2S$ Contingency Plan:**
**1 Mile Radius Map**

Section 18, Township 25S, Range 35E
Lea County, New Mexico




Surface Hole Location

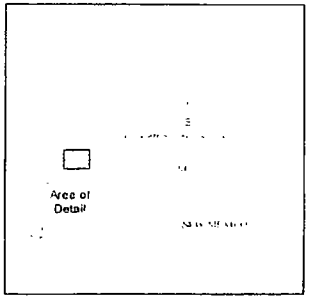
1:13,500
0 0.125 0.25 0.5
Miles

N

NAD 1983 New Mexico State Plane East FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., June 8, 2017 for Matador Production Company



**Matador Resources**
**Lea County, NM**
**Biggers Fed Com**
**024H**
**Prelim Plan A**
**GL:3333'+KB:29'**

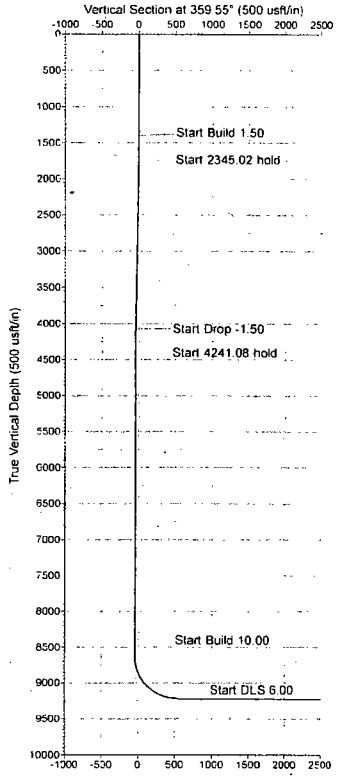
US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3301
Mean Sea Level

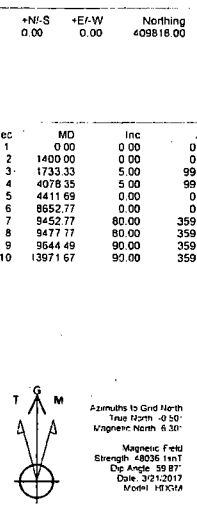
RKB Elevation: RIG @ 3362.00usft (GL:3333'+KB:29')

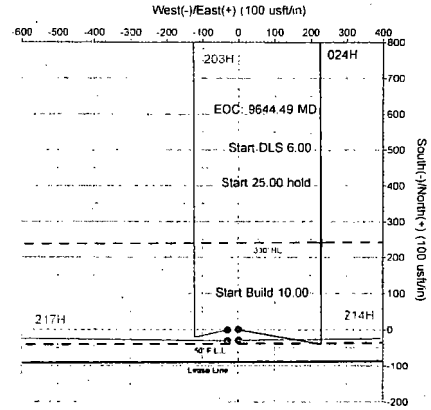
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 409818.00 | 788455.00 | 32° 7' 23.799 N | 103° 24' 5.712 W | |

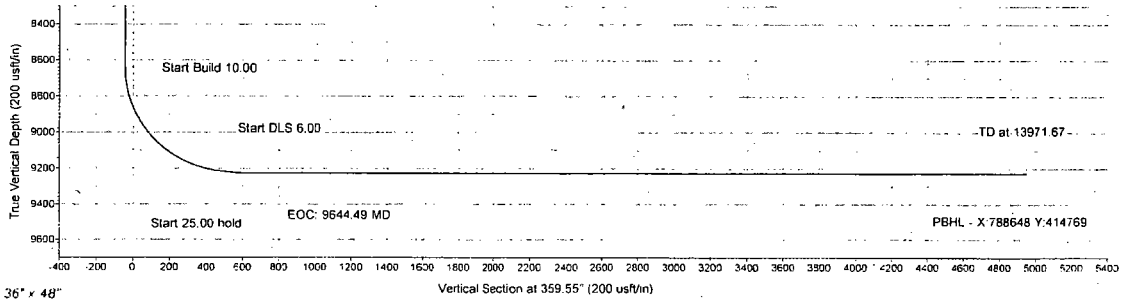
SECTION DETAILS- Lateral

| 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 | 1400.00 | 0.00 | 0.00 | 1400.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 1733.33 | 5.00 | 99.87 | 1732.91 | -2.49 | 14.32 | 1.50 | -2.60 |
| 4 | 4078.35 | 5.00 | 99.87 | 4069.01 | -37.51 | 215.68 | 0.00 | -39.20 |
| 5 | 4411.69 | 0.00 | 0.00 | 4401.92 | -40.00 | 230.00 | 1.50 | -41.81 |
| 6 | 8652.77 | 0.00 | 0.00 | 8643.00 | -40.00 | 230.00 | 0.00 | -41.81 |
| 7 | 9452.77 | 80.00 | 359.75 | 9207.25 | 433.46 | 227.93 | 10.00 | 431.66 |
| 8 | 9477.77 | 80.00 | 359.75 | 9211.59 | 458.08 | 227.83 | 0.00 | 456.28 |
| 9 | 9644.49 | 90.00 | 359.55 | 9226.10 | 623.95 | 226.81 | 6.00 | 622.15 |
| 10 | 13971.67 | 90.00 | 359.55 | 9226.00 | 4951.00 | 193.00 | 0.00 | 4949.33 |

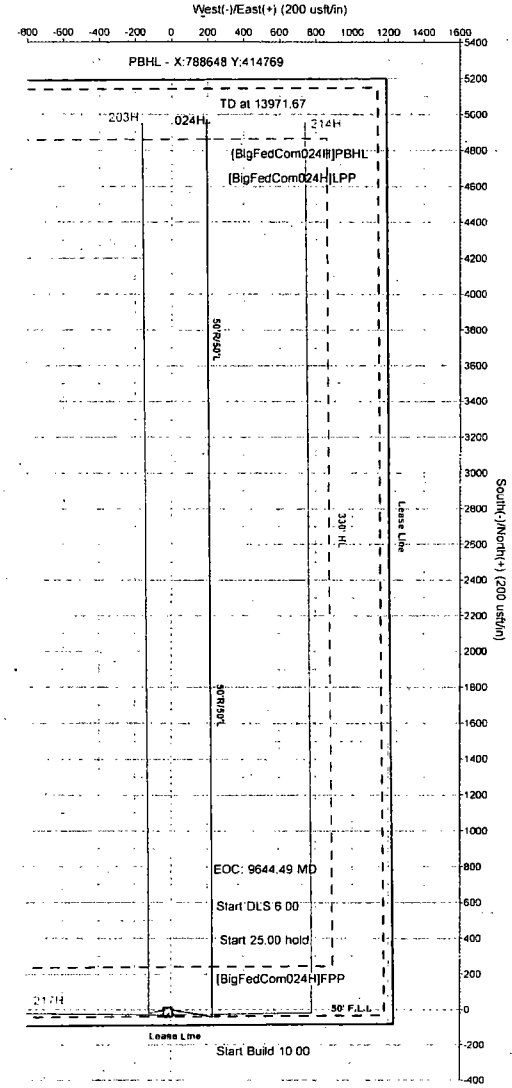


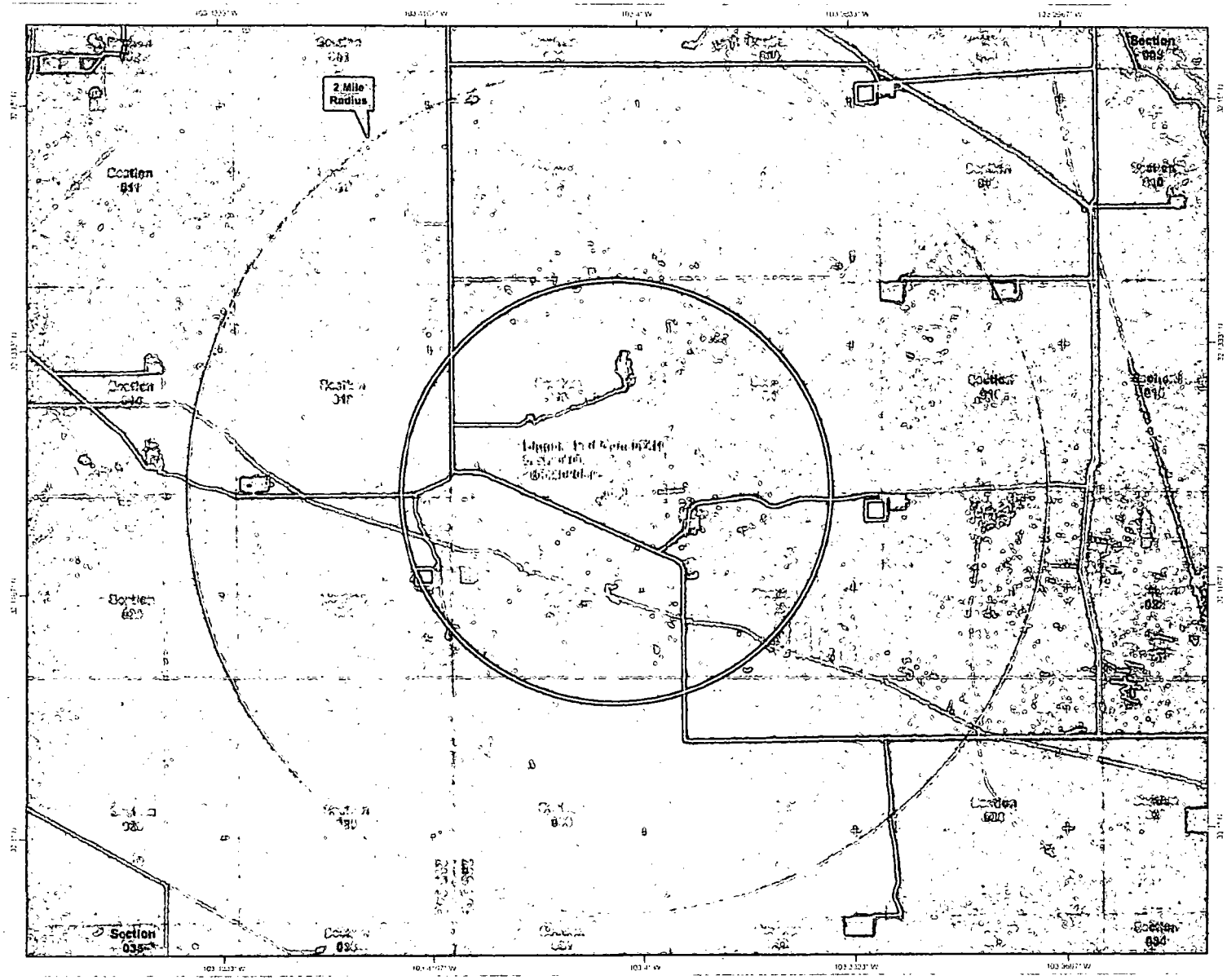

36" x 48"



# Matador Production Company

**Biggers Fed Com #024H**
**$H_2S$ Contingency Plan:**
**2 Mile Radius Map**

Section 18, Township 25S, Range 35E
Lea County, New Mexico

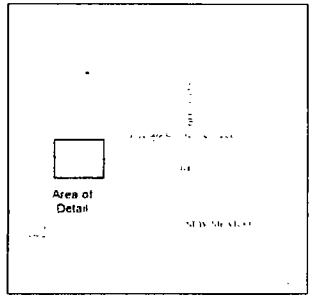



Surface Hole Location

1:27,000
0 0.25 0.5 1
Miles

NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

Prepared by Permits West, Inc., June 8, 2017
for Matador Production Company



# Pro Directional

Survey Report



| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Well:** | 024H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan A | **Database:** | WellPlanner1 |

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

| | | | | | |
|---|---|---|---|---|---|
| **Site** | Biggers Fed Com | | | | |
| **Site Position:** | | **Northing:** | 409,817.00 usft | **Latitude:** | 32° 7' 23.792 N |
| **From:** | Map | **Easting:** | 788,425.00 usft | **Longitude:** | 103° 24' 6.061 W |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.50 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | 024H | | | | | |
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 409,818.00 usft | **Latitude:** | 32° 7' 23.799 N |
| | **+E/-W** | 0.00 usft | **Easting:** | 788,455.00 usft | **Longitude:** | 103° 24' 5.712 W |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | usft | **Ground Level:** | 3,333.00 usft |

| | | | | | |
|---|---|---|---|---|---|
| **Wellbore** | OH | | | | |
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | HDGM | 3/21/2017 | 6.80 | 59.87 | 48,036.10 |

| | | | | | |
|---|---|---|---|---|---|
| **Design** | Prelim Plan A | | | | |
| **Audit Notes:** | | | | | |
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |
| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (°)** | |
| | 0.00 | 0.00 | 0.00 | 359.55 | |

**Survey Tool Program** **Date** 3/21/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 13,971.67 | Prelim Plan A (OH) | MWD - OWSG | MWD - OWSG |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Well:** | 024H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan A | **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) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 1.50 | 99.87 | 1,499.99 | -0.22 | 1.29 | -0.23 | 1.50 | 1.50 | 0.00 |
| 1,600.00 | 3.00 | 99.87 | 1,599.91 | -0.90 | 5.16 | -0.94 | 1.50 | 1.50 | 0.00 |
| 1,700.00 | 4.50 | 99.87 | 1,699.69 | -2.02 | 11.60 | -2.11 | 1.50 | 1.50 | 0.00 |
| 1,733.33 | 5.00 | 99.87 | 1,732.91 | -2.49 | 14.32 | -2.60 | 1.50 | 1.50 | 0.00 |
| 1,800.00 | 5.00 | 99.87 | 1,799.32 | -3.49 | 20.04 | -3.64 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 5.00 | 99.87 | 1,898.94 | -4.98 | 28.63 | -5.20 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 5.00 | 99.87 | 1,998.56 | -6.47 | 37.22 | -6.76 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 5.00 | 99.87 | 2,098.18 | -7.97 | 45.80 | -8.33 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 5.00 | 99.87 | 2,197.80 | -9.46 | 54.39 | -9.89 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 5.00 | 99.87 | 2,297.42 | -10.95 | 62.98 | -11.45 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 5.00 | 99.87 | 2,397.04 | -12.45 | 71.56 | -13.01 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 5.00 | 99.87 | 2,496.66 | -13.94 | 80.15 | -14.57 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 5.00 | 99.87 | 2,596.28 | -15.43 | 88.74 | -16.13 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 5.00 | 99.87 | 2,695.90 | -16.93 | 97.32 | -17.69 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 5.00 | 99.87 | 2,795.52 | -18.42 | 105.91 | -19.25 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 5.00 | 99.87 | 2,895.14 | -19.91 | 114.50 | -20.81 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 5.00 | 99.87 | 2,994.76 | -21.41 | 123.08 | -22.37 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 5.00 | 99.87 | 3,094.38 | -22.90 | 131.67 | -23.93 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 5.00 | 99.87 | 3,194.00 | -24.39 | 140.26 | -25.49 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 5.00 | 99.87 | 3,293.62 | -25.89 | 148.84 | -27.05 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 5.00 | 99.87 | 3,393.23 | -27.38 | 157.43 | -28.62 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 5.00 | 99.87 | 3,492.85 | -28.87 | 166.02 | -30.18 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 5.00 | 99.87 | 3,592.47 | -30.37 | 174.61 | -31.74 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 5.00 | 99.87 | 3,692.09 | -31.86 | 183.19 | -33.30 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 5.00 | 99.87 | 3,791.71 | -33.35 | 191.78 | -34.86 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 5.00 | 99.87 | 3,891.33 | -34.85 | 200.37 | -36.42 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 5.00 | 99.87 | 3,990.95 | -36.34 | 208.95 | -37.98 | 0.00 | 0.00 | 0.00 |
| 4,078.35 | 5.00 | 99.87 | 4,069.01 | -37.51 | 215.68 | -39.20 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 4.68 | 99.87 | 4,090.58 | -37.82 | 217.48 | -39.53 | 1.50 | -1.50 | 0.00 |
| 4,200.00 | 3.18 | 99.87 | 4,190.34 | -39.00 | 224.22 | -40.76 | 1.50 | -1.50 | 0.00 |
| 4,300.00 | 1.68 | 99.87 | 4,290.25 | -39.72 | 228.39 | -41.51 | 1.50 | -1.50 | 0.00 |
| 4,400.00 | 0.18 | 99.87 | 4,390.23 | -40.00 | 229.98 | -41.80 | 1.50 | -1.50 | 0.00 |
| 4,411.69 | 0.00 | 0.00 | 4,401.92 | -40.00 | 230.00 | -41.81 | 1.50 | -1.50 | 0.00 |
| 4,500.00 | 0.00 | 0.00 | 4,490.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 0.00 | 0.00 | 4,590.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 0.00 | 0.00 | 4,690.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,790.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 0.00 | 0.00 | 4,890.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,990.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Well:** | 024H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan A | **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) |
|---|---|---|---|---|---|---|---|---|---|
| 5,100.00 | 0.00 | 0.00 | 5,090.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,190.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,290.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,390.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,490.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,590.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,690.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,790.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,890.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,990.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,090.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,190.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,290.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,390.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,490.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,590.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,690.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,790.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,890.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,990.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 7,090.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,190.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,290.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,390.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,490.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,590.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,690.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,790.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,890.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,990.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 0.00 | 0.00 | 8,090.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 0.00 | 0.00 | 8,190.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 0.00 | 0.00 | 8,290.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 0.00 | 0.00 | 8,390.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,490.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 0.00 | 0.00 | 8,590.23 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,652.77 | 0.00 | 0.00 | 8,643.00 | -40.00 | 230.00 | -41.81 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 4.72 | 359.75 | 8,690.18 | -38.05 | 229.99 | -39.86 | 10.00 | 10.00 | 0.00 |
| 8,750.00 | 9.72 | 359.75 | 8,739.76 | -31.77 | 229.96 | -33.57 | 10.00 | 10.00 | 0.00 |
| 8,800.00 | 14.72 | 359.75 | 8,788.62 | -21.19 | 229.92 | -22.99 | 10.00 | 10.00 | 0.00 |
| 8,850.00 | 19.72 | 359.75 | 8,836.36 | -6.39 | 229.85 | -8.19 | 10.00 | 10.00 | 0.00 |
| 8,900.00 | 24.72 | 359.75 | 8,882.63 | 12.52 | 229.77 | 10.71 | 10.00 | 10.00 | 0.00 |
| 8,950.00 | 29.72 | 359.75 | 8,927.08 | 35.38 | 229.67 | 33.58 | 10.00 | 10.00 | 0.00 |

# Pro Directional

Survey Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Well:** | 024H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan A | **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 | 34.72 | 359.75 | 8,969.36 | 62.03 | 229.55 | 60.23 | 10.00 | 10.00 | 0.00 |
| 9,050.00 | 39.72 | 359.75 | 9,009.16 | 92.27 | 229.42 | 90.47 | 10.00 | 10.00 | 0.00 |
| 9,100.00 | 44.72 | 359.75 | 9,046.18 | 125.86 | 229.28 | 124.06 | 10.00 | 10.00 | 0.00 |
| 9,150.00 | 49.72 | 359.75 | 9,080.13 | 162.55 | 229.12 | 160.74 | 10.00 | 10.00 | 0.00 |
| 9,200.00 | 54.72 | 359.75 | 9,110.75 | 202.06 | 228.94 | 200.25 | 10.00 | 10.00 | 0.00 |
| 9,250.00 | 59.72 | 359.75 | 9,137.81 | 244.08 | 228.76 | 242.28 | 10.00 | 10.00 | 0.00 |
| 9,300.00 | 64.72 | 359.75 | 9,161.10 | 288.31 | 228.57 | 286.50 | 10.00 | 10.00 | 0.00 |
| 9,350.00 | 69.72 | 359.75 | 9,180.45 | 334.39 | 228.37 | 332.59 | 10.00 | 10.00 | 0.00 |
| 9,400.00 | 74.72 | 359.75 | 9,195.71 | 381.99 | 228.16 | 380.18 | 10.00 | 10.00 | 0.00 |
| 9,452.77 | 80.00 | 359.75 | 9,207.25 | 433.46 | 227.93 | 431.66 | 10.00 | 10.00 | 0.00 |
| 9,477.77 | 80.00 | 359.75 | 9,211.59 | 458.08 | 227.83 | 456.28 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 81.33 | 359.72 | 9,215.20 | 480.02 | 227.73 | 478.21 | 6.00 | 6.00 | -0.12 |
| 9,550.00 | 84.33 | 359.66 | 9,221.44 | 529.62 | 227.46 | 527.82 | 6.00 | 6.00 | -0.12 |
| 9,600.00 | 87.33 | 359.60 | 9,225.07 | 579.48 | 227.14 | 577.68 | 6.00 | 6.00 | -0.12 |
| 9,644.49 | 90.00 | 359.55 | 9,226.11 | 623.95 | 226.81 | 622.15 | 6.00 | 6.00 | -0.12 |
| 9,700.00 | 90.00 | 359.55 | 9,226.10 | 679.46 | 226.38 | 677.66 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 359.55 | 9,226.10 | 779.46 | 225.60 | 777.66 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 359.55 | 9,226.10 | 879.45 | 224.82 | 877.66 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 359.55 | 9,226.10 | 979.45 | 224.04 | 977.66 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 359.55 | 9,226.09 | 1,079.45 | 223.25 | 1,077.66 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 359.55 | 9,226.09 | 1,179.45 | 222.47 | 1,177.66 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 359.55 | 9,226.09 | 1,279.44 | 221.69 | 1,277.66 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 359.55 | 9,226.09 | 1,379.44 | 220.91 | 1,377.66 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 359.55 | 9,226.08 | 1,479.44 | 220.13 | 1,477.66 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 359.55 | 9,226.08 | 1,579.43 | 219.35 | 1,577.66 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 359.55 | 9,226.08 | 1,679.43 | 218.57 | 1,677.66 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 359.55 | 9,226.08 | 1,779.43 | 217.78 | 1,777.66 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 359.55 | 9,226.07 | 1,879.42 | 217.00 | 1,877.66 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 359.55 | 9,226.07 | 1,979.42 | 216.22 | 1,977.66 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 359.55 | 9,226.07 | 2,079.42 | 215.44 | 2,077.66 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 359.55 | 9,226.07 | 2,179.42 | 214.66 | 2,177.66 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 359.55 | 9,226.06 | 2,279.41 | 213.88 | 2,277.66 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 359.55 | 9,226.06 | 2,379.41 | 213.10 | 2,377.66 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 359.55 | 9,226.06 | 2,479.41 | 212.31 | 2,477.66 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 359.55 | 9,226.06 | 2,579.40 | 211.53 | 2,577.66 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 359.55 | 9,226.06 | 2,679.40 | 210.75 | 2,677.66 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 359.55 | 9,226.05 | 2,779.40 | 209.97 | 2,777.66 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 359.55 | 9,226.05 | 2,879.39 | 209.19 | 2,877.66 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 359.55 | 9,226.05 | 2,979.39 | 208.41 | 2,977.66 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 359.55 | 9,226.05 | 3,079.39 | 207.63 | 3,077.66 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 359.55 | 9,226.04 | 3,179.38 | 206.84 | 3,177.66 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 359.55 | 9,226.04 | 3,279.38 | 206.06 | 3,277.66 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 359.55 | 9,226.04 | 3,379.38 | 205.28 | 3,377.66 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Well:** | 024H | **North Reference:** | Grid |
| **Wellbore:** | OH | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Prelim Plan A | **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) |
|---|---|---|---|---|---|---|---|---|---|
| 12,500.00 | 90.00 | 359.55 | 9,226.04 | 3,479.38 | 204.50 | 3,477.66 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 359.55 | 9,226.03 | 3,579.37 | 203.72 | 3,577.66 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 359.55 | 9,226.03 | 3,679.37 | 202.94 | 3,677.66 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 359.55 | 9,226.03 | 3,779.37 | 202.16 | 3,777.66 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 359.55 | 9,226.03 | 3,879.36 | 201.37 | 3,877.66 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 359.55 | 9,226.02 | 3,979.36 | 200.59 | 3,977.66 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 359.55 | 9,226.02 | 4,079.36 | 199.81 | 4,077.66 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 359.55 | 9,226.02 | 4,179.35 | 199.03 | 4,177.66 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 359.55 | 9,226.02 | 4,279.35 | 198.25 | 4,277.66 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 359.55 | 9,226.01 | 4,379.35 | 197.47 | 4,377.66 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 359.55 | 9,226.01 | 4,479.34 | 196.69 | 4,477.66 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 359.55 | 9,226.01 | 4,579.34 | 195.90 | 4,577.66 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 359.55 | 9,226.01 | 4,679.34 | 195.12 | 4,677.66 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 359.55 | 9,226.00 | 4,779.34 | 194.34 | 4,777.66 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 359.55 | 9,226.00 | 4,879.33 | 193.56 | 4,877.66 | 0.00 | 0.00 | 0.00 |
| 13,971.67 | 90.00 | 359.55 | 9,226.00 | 4,951.00 | 193.00 | 4,949.33 | 0.00 | 0.00 | 0.00 |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| [BigFedCom024H]LPP<br>- plan misses target center by 4864.83usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)<br>- Point | 0.00 | 0.00 | 0.00 | 4,861.00 | 193.00 | 414,679.00 | 788,648.00 | 32° 8' 11.883 N | 103° 24' 2.978 W |
| [BigFedCom024H]FPP<br>- plan misses target center by 333.14usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)<br>- Point | 0.00 | 0.00 | 0.00 | 241.00 | 230.00 | 410,059.00 | 788,685.00 | 32° 7' 26.164 N | 103° 24' 3.013 W |
| [BigFedCom024H]PBHL<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 9,226.00 | 4,951.00 | 193.00 | 414,769.00 | 788,648.00 | 32° 8' 12.774 N | 103° 24' 2.969 W |

**Plan Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | Local Coordinates +E/-W (usft) | Comment |
|---|---|---|---|---|
| 1400 | 1400 | 0 | 0 | Start Build 1.50 |
| 1733 | 1733 | -2 | 14 | Start 2345.02 hold |
| 4078 | 4069 | -38 | 216 | Start Drop -1.50 |
| 4412 | 4402 | -40 | 230 | Start 4241.08 hold |
| 8653 | 8643 | -40 | 230 | Start Build 10.00 |
| 9453 | 9207 | 433 | 228 | Start 25.00 hold |
| 9478 | 9212 | 458 | 228 | Start DLS 6.00 |
| 9644 | 9226 | 624 | 227 | EOC: 9644.49 MD |
| 13,970 | 9226 | 4949 | 193 | PBHL - X:788648 Y:414769 |
| 13,972 | 9226 | 4951 | 193 | TD at 13971.67 |

# Pro Directional

Anticollision Report



| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

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

**Survey Tool Program** **Date** 3/21/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 13,971.67 | Prelim Plan A (OH) | MWD - OWSG | MWD - OWSG |

**Summary**

| Site Name<br>Offset Well - Wellbore - Design | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|
| Biggers Fed Com | | | | | | |
| 203H - OH - Prelim Plan A | 1,400.00 | 1,401.00 | 30.02 | 20.44 | 3.134 | CC, ES |
| 203H - OH - Prelim Plan A | 1,500.00 | 1,501.01 | 31.30 | 21.01 | 3.043 | SF |
| 214H - OH - Prelim Plan A | 1,055.27 | 1,054.27 | 30.00 | 22.90 | 4.228 | CC |
| 214H - OH - Prelim Plan A | 1,200.00 | 1,198.84 | 30.38 | 22.26 | 3.744 | ES |
| 214H - OH - Prelim Plan A | 4,100.00 | 4,103.90 | 86.51 | 57.66 | 2.998 | SF |
| 217H - OH - Prelim Plan A | 600.00 | 599.00 | 43.14 | 39.30 | 11.247 | CC, ES |
| 217H - OH - Prelim Plan A | 900.00 | 896.10 | 51.81 | 45.86 | 8.719 | SF |

**Offset Design** Biggers Fed Com - 203H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 12809-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1.00 | -1.00 | 0.00 | 0.00 | -91.91 | -1.00 | -30.00 | 30.02 | | | | |
| 100.00 | 100.00 | 101.00 | 99.00 | 0.13 | 0.13 | -91.91 | -1.00 | -30.00 | 30.02 | 29.76 | 0.26 | 116.299 | |
| 200.00 | 200.00 | 201.00 | 199.00 | 0.49 | 0.49 | -91.91 | -1.00 | -30.00 | 30.02 | 29.04 | 0.98 | 30.785 | |
| 300.00 | 300.00 | 301.00 | 299.00 | 0.84 | 0.85 | -91.91 | -1.00 | -30.00 | 30.02 | 28.32 | 1.69 | 17.740 | |
| 400.00 | 400.00 | 401.00 | 399.00 | 1.20 | 1.21 | -91.91 | -1.00 | -30.00 | 30.02 | 27.61 | 2.41 | 12.461 | |
| 500.00 | 500.00 | 501.00 | 499.00 | 1.56 | 1.56 | -91.91 | -1.00 | -30.00 | 30.02 | 26.89 | 3.13 | 9.603 | |
| 600.00 | 600.00 | 601.00 | 599.00 | 1.92 | 1.92 | -91.91 | -1.00 | -30.00 | 30.02 | 26.17 | 3.84 | 7.811 | |
| 700.00 | 700.00 | 701.00 | 699.00 | 2.28 | 2.28 | -91.91 | -1.00 | -30.00 | 30.02 | 25.46 | 4.56 | 6.583 | |
| 800.00 | 800.00 | 801.00 | 799.00 | 2.64 | 2.64 | -91.91 | -1.00 | -30.00 | 30.02 | 24.74 | 5.28 | 5.689 | |
| 900.00 | 900.00 | 901.00 | 899.00 | 3.00 | 3.00 | -91.91 | -1.00 | -30.00 | 30.02 | 24.02 | 5.99 | 5.008 | |
| 1,000.00 | 1,000.00 | 1,001.00 | 999.00 | 3.35 | 3.36 | -91.91 | -1.00 | -30.00 | 30.02 | 23.31 | 6.71 | 4.473 | |
| 1,100.00 | 1,100.00 | 1,101.00 | 1,099.00 | 3.71 | 3.72 | -91.91 | -1.00 | -30.00 | 30.02 | 22.59 | 7.43 | 4.041 | |
| 1,200.00 | 1,200.00 | 1,201.00 | 1,199.00 | 4.07 | 4.07 | -91.91 | -1.00 | -30.00 | 30.02 | 21.87 | 8.14 | 3.686 | |
| 1,300.00 | 1,300.00 | 1,301.00 | 1,299.00 | 4.43 | 4.43 | -91.91 | -1.00 | -30.00 | 30.02 | 21.16 | 8.86 | 3.387 | |
| 1,400.00 | 1,400.00 | 1,401.00 | 1,399.00 | 4.79 | 4.79 | -91.91 | -1.00 | -30.00 | 30.02 | 20.44 | 9.58 | 3.134 | CC, ES |
| 1,500.00 | 1,499.99 | 1,501.01 | 1,498.99 | 5.14 | 5.15 | 168.71 | -1.00 | -30.00 | 31.30 | 21.01 | 10.28 | 3.043 | SF |
| 1,600.00 | 1,599.91 | 1,601.09 | 1,598.91 | 5.48 | 5.51 | 169.95 | -1.00 | -30.00 | 35.16 | 24.17 | 10.98 | 3.201 | |
| 1,700.00 | 1,699.69 | 1,701.31 | 1,698.69 | 5.82 | 5.87 | 171.51 | -1.00 | -30.00 | 41.61 | 29.93 | 11.69 | 3.561 | |
| 1,733.33 | 1,732.91 | 1,731.91 | 1,731.91 | 5.94 | 5.98 | 172.03 | -1.00 | -30.00 | 44.35 | 32.44 | 11.91 | 3.723 | |
| 1,800.00 | 1,799.32 | 1,801.68 | 1,798.32 | 6.17 | 6.23 | 172.95 | -1.00 | -30.00 | 50.11 | 37.72 | 12.39 | 4.044 | |
| 1,900.00 | 1,898.94 | 1,902.06 | 1,897.94 | 6.53 | 6.59 | 173.99 | -1.00 | -30.00 | 58.77 | 45.67 | 13.09 | 4.488 | |

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

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 203H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

Survey Program: 0-MWD - OWSG, 5500-MWD - OWSG, 12808-MWD - OWSG — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,000.00 | 1,998.56 | 2,002.44 | 1,997.56 | 6.88 | 6.95 | 174.77 | -1.00 | -30.00 | 67.44 | 53.64 | 13.80 | 4.887 | |
| 2,100.00 | 2,098.18 | 2,102.82 | 2,097.18 | 7.24 | 7.31 | 175.37 | -1.00 | -30.00 | 76.12 | 61.62 | 14.51 | 5.247 | |
| 2,200.00 | 2,197.80 | 2,203.20 | 2,196.80 | 7.61 | 7.67 | 175.84 | -1.00 | -30.00 | 84.81 | 69.60 | 15.22 | 5.574 | |
| 2,300.00 | 2,297.42 | 2,303.58 | 2,296.42 | 7.97 | 8.03 | 176.23 | -1.00 | -30.00 | 93.51 | 77.58 | 15.93 | 5.871 | |
| 2,400.00 | 2,397.04 | 2,403.96 | 2,396.04 | 8.34 | 8.39 | 176.55 | -1.00 | -30.00 | 102.21 | 85.57 | 16.64 | 6.143 | |
| 2,500.00 | 2,496.66 | 2,504.34 | 2,495.66 | 8.70 | 8.75 | 176.82 | -1.00 | -30.00 | 110.91 | 93.56 | 17.35 | 6.392 | |
| 2,600.00 | 2,596.28 | 2,604.72 | 2,595.28 | 9.07 | 9.11 | 177.05 | -1.00 | -30.00 | 119.61 | 101.55 | 18.06 | 6.622 | |
| 2,700.00 | 2,695.90 | 2,705.10 | 2,694.90 | 9.44 | 9.47 | 177.25 | -1.00 | -30.00 | 128.32 | 109.54 | 18.78 | 6.833 | |
| 2,800.00 | 2,795.52 | 2,805.48 | 2,794.52 | 9.82 | 9.83 | 177.43 | -1.00 | -30.00 | 137.02 | 117.53 | 19.49 | 7.030 | |
| 2,900.00 | 2,895.14 | 2,905.86 | 2,894.14 | 10.19 | 10.19 | 177.58 | -1.00 | -30.00 | 145.73 | 125.52 | 20.21 | 7.212 | |
| 3,000.00 | 2,994.76 | 3,006.24 | 2,993.76 | 10.56 | 10.55 | 177.72 | -1.00 | -30.00 | 154.44 | 133.52 | 20.92 | 7.381 | |
| 3,100.00 | 3,094.38 | 3,106.62 | 3,093.38 | 10.94 | 10.91 | 177.84 | -1.00 | -30.00 | 163.15 | 141.51 | 21.64 | 7.540 | |
| 3,200.00 | 3,194.00 | 3,207.00 | 3,193.00 | 11.31 | 11.26 | 177.95 | -1.00 | -30.00 | 171.86 | 149.50 | 22.36 | 7.688 | |
| 3,300.00 | 3,293.62 | 3,307.38 | 3,292.62 | 11.69 | 11.62 | 178.05 | -1.00 | -30.00 | 180.57 | 157.50 | 23.07 | 7.826 | |
| 3,400.00 | 3,393.23 | 3,407.77 | 3,392.23 | 12.06 | 11.98 | 178.14 | -1.00 | -30.00 | 189.28 | 165.49 | 23.79 | 7.956 | |
| 3,500.00 | 3,492.85 | 3,508.15 | 3,491.85 | 12.44 | 12.34 | 178.22 | -1.00 | -30.00 | 197.99 | 173.48 | 24.51 | 8.079 | |
| 3,600.00 | 3,592.47 | 3,608.53 | 3,591.47 | 12.82 | 12.70 | 178.30 | -1.00 | -30.00 | 206.70 | 181.48 | 25.22 | 8.194 | |
| 3,700.00 | 3,692.09 | 3,708.91 | 3,691.09 | 13.19 | 13.06 | 178.36 | -1.00 | -30.00 | 215.41 | 189.47 | 25.94 | 8.303 | |
| 3,800.00 | 3,791.71 | 3,809.29 | 3,790.71 | 13.57 | 13.42 | 178.43 | -1.00 | -30.00 | 224.13 | 197.46 | 26.66 | 8.406 | |
| 3,900.00 | 3,891.33 | 3,909.67 | 3,890.33 | 13.95 | 13.78 | 178.49 | -1.00 | -30.00 | 232.84 | 205.46 | 27.38 | 8.504 | |
| 4,000.00 | 3,990.95 | 3,989.95 | 3,989.95 | 14.33 | 14.07 | 178.54 | -1.00 | -30.00 | 241.55 | 213.52 | 28.03 | 8.619 | |
| 4,078.35 | 4,069.01 | 4,068.01 | 4,068.01 | 14.63 | 14.35 | 178.58 | -1.00 | -30.00 | 248.38 | 219.79 | 28.59 | 8.688 | |
| 4,100.00 | 4,090.58 | 4,089.58 | 4,089.58 | 14.71 | 14.43 | 178.59 | -1.00 | -30.00 | 250.20 | 221.46 | 28.74 | 8.705 | |
| 4,200.00 | 4,190.34 | 4,189.34 | 4,189.34 | 15.08 | 14.79 | 178.63 | -1.00 | -30.00 | 257.05 | 227.59 | 29.46 | 8.726 | |
| 4,300.00 | 4,290.25 | 4,289.25 | 4,289.25 | 15.44 | 15.14 | 178.66 | -1.00 | -30.00 | 261.28 | 231.10 | 30.17 | 8.659 | |
| 4,400.00 | 4,390.23 | 4,389.23 | 4,389.23 | 15.79 | 15.50 | 178.66 | -1.00 | -30.00 | 262.89 | 232.01 | 30.89 | 8.512 | |
| 4,411.69 | 4,401.92 | 4,400.92 | 4,400.92 | 15.83 | 15.54 | -81.47 | -1.00 | -30.00 | 262.91 | 231.94 | 30.97 | 8.490 | |
| 4,500.00 | 4,490.23 | 4,489.23 | 4,489.23 | 16.13 | 15.86 | -81.47 | -1.00 | -30.00 | 262.91 | 231.32 | 31.59 | 8.322 | |
| 4,600.00 | 4,590.23 | 4,589.23 | 4,589.23 | 16.47 | 16.22 | -81.47 | -1.00 | -30.00 | 262.91 | 230.61 | 32.30 | 8.141 | |
| 4,700.00 | 4,690.23 | 4,689.23 | 4,689.23 | 16.81 | 16.58 | -81.47 | -1.00 | -30.00 | 262.91 | 229.91 | 33.00 | 7.967 | |
| 4,800.00 | 4,790.23 | 4,789.23 | 4,789.23 | 17.16 | 16.94 | -81.47 | -1.00 | -30.00 | 262.91 | 229.20 | 33.71 | 7.800 | |
| 4,900.00 | 4,890.23 | 4,889.23 | 4,889.23 | 17.50 | 17.30 | -81.47 | -1.00 | -30.00 | 262.91 | 228.50 | 34.41 | 7.640 | |
| 5,000.00 | 4,990.23 | 4,989.23 | 4,989.23 | 17.84 | 17.65 | -81.47 | -1.00 | -30.00 | 262.91 | 227.79 | 35.12 | 7.486 | |
| 5,100.00 | 5,090.23 | 5,089.23 | 5,089.23 | 18.19 | 18.01 | -81.47 | -1.00 | -30.00 | 262.91 | 227.08 | 35.83 | 7.338 | |
| 5,200.00 | 5,190.23 | 5,189.23 | 5,189.23 | 18.53 | 18.37 | -81.47 | -1.00 | -30.00 | 262.91 | 226.37 | 36.53 | 7.196 | |
| 5,300.00 | 5,290.23 | 5,289.23 | 5,289.23 | 18.87 | 18.73 | -81.47 | -1.00 | -30.00 | 262.91 | 225.67 | 37.24 | 7.059 | |
| 5,400.00 | 5,390.23 | 5,389.23 | 5,389.23 | 19.22 | 19.09 | -81.47 | -1.00 | -30.00 | 262.91 | 224.96 | 37.95 | 6.928 | |
| 5,500.00 | 5,490.23 | 5,489.23 | 5,489.23 | 19.57 | 19.29 | -81.47 | -1.00 | -30.00 | 262.91 | 224.41 | 38.50 | 6.829 | |
| 5,600.00 | 5,590.23 | 5,589.23 | 5,589.23 | 19.91 | 19.31 | -81.47 | -1.00 | -30.00 | 262.91 | 224.03 | 38.88 | 6.763 | |
| 5,700.00 | 5,690.23 | 5,689.23 | 5,689.23 | 20.26 | 19.32 | -81.47 | -1.00 | -30.00 | 262.91 | 223.67 | 39.24 | 6.700 | |
| 5,800.00 | 5,790.23 | 5,789.23 | 5,789.23 | 20.60 | 19.34 | -81.47 | -1.00 | -30.00 | 262.91 | 223.30 | 39.61 | 6.637 | |
| 5,900.00 | 5,890.23 | 5,889.23 | 5,889.23 | 20.95 | 19.37 | -81.47 | -1.00 | -30.00 | 262.91 | 222.92 | 39.99 | 6.575 | |
| 6,000.00 | 5,990.23 | 5,989.23 | 5,989.23 | 21.30 | 19.40 | -81.47 | -1.00 | -30.00 | 262.91 | 222.54 | 40.37 | 6.512 | |
| 6,100.00 | 6,090.23 | 6,089.23 | 6,089.23 | 21.65 | 19.44 | -81.47 | -1.00 | -30.00 | 262.91 | 222.15 | 40.76 | 6.450 | |
| 6,200.00 | 6,190.23 | 6,189.23 | 6,189.23 | 22.00 | 19.49 | -81.47 | -1.00 | -30.00 | 262.91 | 221.75 | 41.16 | 6.388 | |
| 6,300.00 | 6,290.23 | 6,289.23 | 6,289.23 | 22.35 | 19.54 | -81.47 | -1.00 | -30.00 | 262.91 | 221.35 | 41.56 | 6.325 | |
| 6,400.00 | 6,390.23 | 6,389.23 | 6,389.23 | 22.69 | 19.60 | -81.47 | -1.00 | -30.00 | 262.91 | 220.93 | 41.97 | 6.264 | |
| 6,500.00 | 6,490.23 | 6,489.23 | 6,489.23 | 23.04 | 19.66 | -81.47 | -1.00 | -30.00 | 262.91 | 220.52 | 42.39 | 6.202 | |
| 6,600.00 | 6,590.23 | 6,589.23 | 6,589.23 | 23.39 | 19.73 | -81.47 | -1.00 | -30.00 | 262.91 | 220.09 | 42.82 | 6.141 | |
| 6,700.00 | 6,690.23 | 6,689.23 | 6,689.23 | 23.74 | 19.81 | -81.47 | -1.00 | -30.00 | 262.91 | 219.66 | 43.25 | 6.079 | |
| 6,800.00 | 6,790.23 | 6,789.23 | 6,789.23 | 24.09 | 19.89 | -81.47 | -1.00 | -30.00 | 262.91 | 219.23 | 43.68 | 6.019 | |
| 6,900.00 | 6,890.23 | 6,889.23 | 6,889.23 | 24.44 | 19.98 | -81.47 | -1.00 | -30.00 | 262.91 | 218.78 | 44.12 | 5.958 | |

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

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 203H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

Survey Program: 0-MWD - OWSG, 5500-MWD - OWSG, 12808-MWD - OWSG — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7,000.00 | 6,990.23 | 6,989.23 | 6,989.23 | 24.79 | 20.08 | -81.47 | -1.00 | -30.00 | 262.91 | 218.34 | 44.57 | 5.898 | |
| 7,100.00 | 7,090.23 | 7,089.23 | 7,089.23 | 25.14 | 20.18 | -81.47 | -1.00 | -30.00 | 262.91 | 217.88 | 45.03 | 5.839 | |
| 7,200.00 | 7,190.23 | 7,189.23 | 7,189.23 | 25.50 | 20.29 | -81.47 | -1.00 | -30.00 | 262.91 | 217.42 | 45.49 | 5.780 | |
| 7,300.00 | 7,290.23 | 7,283.82 | 7,283.82 | 25.85 | 20.39 | -81.54 | -1.20 | -30.90 | 263.82 | 217.90 | 45.93 | 5.745 | |
| 7,400.00 | 7,390.23 | 7,377.66 | 7,377.60 | 26.20 | 20.50 | -81.78 | -1.88 | -34.04 | 267.03 | 220.68 | 46.34 | 5.762 | |
| 7,500.00 | 7,490.23 | 7,471.29 | 7,471.06 | 26.55 | 20.61 | -82.19 | -3.05 | -39.41 | 272.54 | 225.79 | 46.75 | 5.830 | |
| 7,600.00 | 7,590.23 | 7,566.75 | 7,566.20 | 26.90 | 20.72 | -82.74 | -4.71 | -47.05 | 280.24 | 233.07 | 47.17 | 5.941 | |
| 7,700.00 | 7,690.23 | 7,666.37 | 7,665.44 | 27.25 | 20.85 | -83.32 | -6.55 | -55.53 | 288.47 | 240.82 | 47.65 | 6.054 | |
| 7,800.00 | 7,790.23 | 7,765.99 | 7,764.68 | 27.61 | 20.99 | -83.86 | -8.40 | -64.02 | 296.73 | 248.60 | 48.13 | 6.165 | |
| 7,900.00 | 7,890.23 | 7,865.61 | 7,863.92 | 27.96 | 21.13 | -84.38 | -10.24 | -72.50 | 305.01 | 256.39 | 48.62 | 6.273 | |
| 8,000.00 | 7,990.23 | 7,965.23 | 7,963.16 | 28.31 | 21.28 | -84.87 | -12.08 | -80.99 | 313.32 | 264.20 | 49.12 | 6.379 | |
| 8,100.00 | 8,090.23 | 8,064.85 | 8,062.40 | 28.66 | 21.43 | -85.33 | -13.93 | -89.47 | 321.65 | 272.03 | 49.62 | 6.482 | |
| 8,200.00 | 8,190.23 | 8,164.47 | 8,161.64 | 29.02 | 21.59 | -85.78 | -15.77 | -97.95 | 330.00 | 279.87 | 50.13 | 6.583 | |
| 8,300.00 | 8,290.23 | 8,264.09 | 8,260.88 | 29.37 | 21.75 | -86.19 | -17.62 | -106.44 | 338.37 | 287.73 | 50.64 | 6.681 | |
| 8,400.00 | 8,390.23 | 8,371.71 | 8,368.18 | 29.72 | 21.94 | -86.57 | -19.38 | -114.53 | 345.79 | 294.54 | 51.25 | 6.747 | |
| 8,500.00 | 8,490.23 | 8,481.21 | 8,477.54 | 30.08 | 22.13 | -86.81 | -20.51 | -119.77 | 350.50 | 298.65 | 51.85 | 6.760 | |
| 8,600.00 | 8,590.23 | 8,590.92 | 8,587.23 | 30.43 | 22.32 | -86.91 | -20.99 | -121.94 | 352.45 | 300.02 | 52.43 | 6.722 | |
| 8,652.77 | 8,643.00 | 8,645.69 | 8,642.00 | 30.62 | 22.41 | -86.91 | -21.00 | -122.00 | 352.51 | 299.79 | 52.72 | 6.686 | |
| 8,700.00 | 8,690.18 | 8,707.14 | 8,689.18 | 30.78 | 22.52 | -86.99 | -21.00 | -122.00 | 352.40 | 299.41 | 53.00 | 6.649 | |
| 8,750.00 | 8,739.76 | 8,742.45 | 8,738.76 | 30.95 | 22.59 | -88.03 | -21.00 | -122.00 | 352.13 | 298.89 | 53.24 | 6.614 | |
| 8,800.00 | 8,788.62 | 8,808.70 | 8,787.62 | 31.12 | 22.71 | -89.73 | -21.00 | -122.00 | 351.92 | 298.39 | 53.53 | 6.574 | |
| 8,806.63 | 8,795.02 | 8,802.29 | 8,794.02 | 31.15 | 22.70 | -90.00 | -21.00 | -122.00 | 351.91 | 298.37 | 53.54 | 6.573 | |
| 8,850.00 | 8,836.36 | 8,839.05 | 8,835.36 | 31.29 | 22.77 | -92.00 | -21.00 | -122.00 | 352.16 | 298.40 | 53.76 | 6.551 | |
| 8,900.00 | 8,882.63 | 8,885.32 | 8,881.63 | 31.44 | 22.85 | -94.72 | -21.00 | -122.00 | 353.36 | 299.36 | 54.01 | 6.543 | |
| 8,950.00 | 8,927.08 | 8,929.76 | 8,926.08 | 31.59 | 22.94 | -97.71 | -21.00 | -122.00 | 356.16 | 301.91 | 54.25 | 6.565 | |
| 9,000.00 | 8,969.36 | 8,972.05 | 8,968.36 | 31.72 | 23.02 | -100.78 | -21.00 | -122.00 | 361.23 | 306.74 | 54.49 | 6.629 | |
| 9,050.00 | 9,009.16 | 9,011.85 | 9,008.16 | 31.85 | 23.10 | -103.72 | -21.00 | -122.00 | 369.23 | 314.51 | 54.72 | 6.747 | |
| 9,100.00 | 9,046.18 | 9,048.87 | 9,045.18 | 31.96 | 23.17 | -106.35 | -21.00 | -122.00 | 380.74 | 325.80 | 54.94 | 6.930 | |
| 9,150.00 | 9,080.13 | 9,082.81 | 9,079.13 | 32.08 | 23.23 | -108.49 | -21.00 | -122.00 | 396.20 | 341.06 | 55.14 | 7.185 | |
| 9,200.00 | 9,110.75 | 9,113.43 | 9,109.75 | 32.22 | 23.29 | -109.98 | -21.00 | -122.00 | 415.83 | 360.51 | 55.32 | 7.517 | |
| 9,250.00 | 9,137.81 | 9,140.49 | 9,136.81 | 32.37 | 23.35 | -110.69 | -21.00 | -122.00 | 439.66 | 384.18 | 55.48 | 7.925 | |
| 9,300.00 | 9,161.10 | 9,163.79 | 9,160.10 | 32.54 | 23.40 | -110.48 | -21.00 | -122.00 | 467.51 | 411.90 | 55.61 | 8.406 | |
| 9,350.00 | 9,180.45 | 9,183.14 | 9,179.45 | 32.72 | 23.43 | -109.21 | -21.00 | -122.00 | 499.06 | 443.34 | 55.72 | 8.957 | |
| 9,400.00 | 9,195.71 | 9,201.60 | 9,194.71 | 32.91 | 23.47 | -106.73 | -21.00 | -122.00 | 533.86 | 478.06 | 55.81 | 9.566 | |
| 9,452.77 | 9,207.25 | 9,209.94 | 9,206.25 | 33.11 | 23.49 | -102.60 | -21.00 | -122.00 | 573.57 | 517.72 | 55.86 | 10.268 | |
| 9,477.77 | 9,211.59 | 9,214.28 | 9,210.59 | 33.22 | 23.50 | -103.26 | -21.00 | -122.00 | 593.21 | 537.33 | 55.88 | 10.616 | |
| 9,500.00 | 9,215.20 | 9,217.89 | 9,214.20 | 33.31 | 23.50 | -102.06 | -21.00 | -122.00 | 611.00 | 555.11 | 55.90 | 10.931 | |
| 9,550.00 | 9,221.44 | 9,224.12 | 9,220.44 | 33.53 | 23.52 | -98.73 | -21.00 | -122.00 | 652.15 | 596.23 | 55.92 | 11.661 | |
| 9,600.00 | 9,225.07 | 9,227.76 | 9,224.07 | 33.76 | 23.52 | -94.50 | -21.00 | -122.00 | 694.60 | 638.66 | 55.94 | 12.417 | |
| 9,644.49 | 9,226.11 | 9,228.79 | 9,225.11 | 33.97 | 23.53 | -90.00 | -21.00 | -122.00 | 733.24 | 677.29 | 55.95 | 13.106 | |
| 9,700.00 | 9,226.10 | 9,228.79 | 9,225.10 | 34.25 | 23.53 | -90.00 | -21.00 | -122.00 | 782.31 | 726.36 | 55.95 | 13.982 | |
| 9,800.00 | 9,226.10 | 9,228.79 | 9,225.10 | 34.82 | 23.53 | -90.00 | -21.00 | -122.00 | 872.67 | 816.72 | 55.96 | 15.595 | |
| 9,900.00 | 9,226.10 | 9,228.79 | 9,225.10 | 35.45 | 23.53 | -90.00 | -21.00 | -122.00 | 964.94 | 908.97 | 55.97 | 17.242 | |
| 10,000.00 | 9,226.10 | 9,228.78 | 9,225.10 | 36.14 | 23.53 | -90.00 | -21.00 | -122.00 | 1,058.61 | 1,002.63 | 55.98 | 18.912 | |
| 10,100.00 | 9,226.09 | 9,228.78 | 9,225.09 | 36.90 | 23.53 | -90.00 | -21.00 | -122.00 | 1,153.34 | 1,097.35 | 55.99 | 20.600 | |
| 10,200.00 | 9,226.09 | 9,228.78 | 9,225.09 | 37.71 | 23.53 | -90.00 | -21.00 | -122.00 | 1,248.89 | 1,192.89 | 56.00 | 22.302 | |
| 10,300.00 | 9,226.09 | 9,228.78 | 9,225.09 | 38.58 | 23.53 | -89.99 | -21.00 | -122.00 | 1,345.09 | 1,289.08 | 56.01 | 24.015 | |
| 10,400.00 | 9,226.09 | 9,228.77 | 9,225.09 | 39.49 | 23.53 | -89.99 | -21.00 | -122.00 | 1,441.81 | 1,385.79 | 56.03 | 25.735 | |
| 10,500.00 | 9,226.08 | 9,228.77 | 9,225.08 | 40.46 | 23.53 | -89.99 | -21.00 | -122.00 | 1,538.95 | 1,482.91 | 56.04 | 27.461 | |
| 10,600.00 | 9,226.08 | 9,228.77 | 9,225.08 | 41.47 | 23.53 | -89.99 | -21.00 | -122.00 | 1,636.43 | 1,580.37 | 56.06 | 29.192 | |
| 10,700.00 | 9,226.08 | 9,228.77 | 9,225.08 | 42.52 | 23.53 | -89.99 | -21.00 | -122.00 | 1,734.20 | 1,678.13 | 56.07 | 30.927 | |
| 10,800.00 | 9,226.08 | 9,228.76 | 9,225.08 | 43.60 | 23.53 | -89.99 | -21.00 | -122.00 | 1,832.21 | 1,776.12 | 56.09 | 32.664 | |

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

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 203H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

Survey Program: 0-MWD - OWSG, 5500-MWD - OWSG, 12808-MWD - OWSG — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,900.00 | 9,226.07 | 9,228.76 | 9,225.07 | 44.73 | 23.53 | -89.99 | -21.00 | -122.00 | 1,930.42 | 1,874.31 | 56.11 | 34.403 | |
| 11,000.00 | 9,226.07 | 9,228.76 | 9,225.07 | 45.88 | 23.53 | -89.99 | -21.00 | -122.00 | 2,028.81 | 1,972.68 | 56.13 | 36.143 | |
| 11,100.00 | 9,226.07 | 9,228.76 | 9,225.07 | 47.06 | 23.53 | -89.99 | -21.00 | -122.00 | 2,127.35 | 2,071.20 | 56.15 | 37.884 | |
| 11,200.00 | 9,226.07 | 9,228.75 | 9,225.07 | 48.28 | 23.53 | -89.99 | -21.00 | -122.00 | 2,226.02 | 2,169.84 | 56.18 | 39.625 | |
| 11,300.00 | 9,226.06 | 9,228.75 | 9,225.06 | 49.52 | 23.53 | -89.99 | -21.00 | -122.00 | 2,324.80 | 2,268.60 | 56.20 | 41.366 | |
| 11,400.00 | 9,226.06 | 9,228.75 | 9,225.06 | 50.78 | 23.53 | -89.99 | -21.00 | -122.00 | 2,423.69 | 2,367.46 | 56.23 | 43.107 | |
| 11,500.00 | 9,226.06 | 9,228.75 | 9,225.06 | 52.06 | 23.53 | -89.99 | -21.00 | -122.00 | 2,522.66 | 2,466.41 | 56.25 | 44.847 | |
| 11,600.00 | 9,226.06 | 9,228.74 | 9,225.06 | 53.37 | 23.53 | -89.99 | -21.00 | -122.00 | 2,621.71 | 2,565.43 | 56.28 | 46.586 | |
| 11,700.00 | 9,226.06 | 9,228.74 | 9,225.06 | 54.69 | 23.53 | -89.99 | -21.00 | -122.00 | 2,720.82 | 2,664.52 | 56.30 | 48.323 | |
| 11,800.00 | 9,226.05 | 9,228.74 | 9,225.05 | 56.03 | 23.53 | -89.99 | -21.00 | -122.00 | 2,820.00 | 2,763.67 | 56.33 | 50.059 | |
| 11,900.00 | 9,226.05 | 9,228.74 | 9,225.05 | 57.39 | 23.53 | -89.99 | -21.00 | -122.00 | 2,919.24 | 2,862.88 | 56.36 | 51.794 | |
| 12,000.00 | 9,226.05 | 9,228.74 | 9,225.05 | 58.77 | 23.53 | -89.99 | -21.00 | -122.00 | 3,018.53 | 2,962.14 | 56.39 | 53.527 | |
| 12,100.00 | 9,226.05 | 9,228.73 | 9,225.05 | 60.15 | 23.53 | -89.99 | -21.00 | -122.00 | 3,117.86 | 3,061.44 | 56.42 | 55.257 | |
| 12,200.00 | 9,226.04 | 9,228.73 | 9,225.04 | 61.56 | 23.53 | -89.99 | -21.00 | -122.00 | 3,217.23 | 3,160.78 | 56.46 | 56.986 | |
| 12,300.00 | 9,226.04 | 9,228.73 | 9,225.04 | 62.97 | 23.53 | -89.99 | -21.00 | -122.00 | 3,316.65 | 3,260.16 | 56.49 | 58.712 | |
| 12,400.00 | 9,226.04 | 15,733.95 | 12,588.04 | 64.40 | 63.05 | -173.98 | 3,376.39 | -149.40 | 3,381.65 | 3,314.32 | 67.33 | 50.224 | |
| 12,500.00 | 9,226.04 | 15,833.95 | 12,588.04 | 65.83 | 64.48 | -173.98 | 3,476.39 | -150.26 | 3,381.66 | 3,313.12 | 68.54 | 49.336 | |
| 12,600.00 | 9,226.03 | 15,933.95 | 12,588.03 | 67.28 | 65.92 | -173.98 | 3,576.39 | -151.13 | 3,381.67 | 3,311.90 | 69.77 | 48.469 | |
| 12,700.00 | 9,226.03 | 16,033.95 | 12,588.03 | 68.74 | 67.38 | -173.98 | 3,676.38 | -151.99 | 3,381.68 | 3,310.67 | 71.01 | 47.622 | |
| 12,800.00 | 9,226.03 | 16,133.95 | 12,588.03 | 70.20 | 68.84 | -173.97 | 3,776.38 | -152.86 | 3,381.69 | 3,309.42 | 72.26 | 46.796 | |
| 12,900.00 | 9,226.03 | 16,233.95 | 12,588.03 | 71.68 | 70.31 | -173.97 | 3,876.37 | -153.72 | 3,381.70 | 3,308.16 | 73.53 | 45.989 | |
| 13,000.00 | 9,226.02 | 16,333.95 | 12,588.02 | 73.16 | 71.79 | -173.97 | 3,976.37 | -154.59 | 3,381.71 | 3,306.89 | 74.81 | 45.203 | |
| 13,100.00 | 9,226.02 | 16,433.95 | 12,588.02 | 74.65 | 73.28 | -173.97 | 4,076.37 | -155.45 | 3,381.71 | 3,305.61 | 76.10 | 44.436 | |
| 13,200.00 | 9,226.02 | 16,533.95 | 12,588.02 | 76.14 | 74.78 | -173.97 | 4,176.36 | -156.32 | 3,381.72 | 3,304.32 | 77.41 | 43.688 | |
| 13,300.00 | 9,226.02 | 16,633.95 | 12,588.02 | 77.65 | 76.28 | -173.97 | 4,276.36 | -157.18 | 3,381.73 | 3,303.01 | 78.72 | 42.959 | |
| 13,400.00 | 9,226.01 | 16,733.95 | 12,588.01 | 79.16 | 77.79 | -173.97 | 4,376.36 | -158.05 | 3,381.74 | 3,301.70 | 80.04 | 42.248 | |
| 13,500.00 | 9,226.01 | 16,833.95 | 12,588.01 | 80.67 | 79.30 | -173.96 | 4,476.35 | -158.91 | 3,381.75 | 3,300.37 | 81.38 | 41.556 | |
| 13,600.00 | 9,226.01 | 16,933.95 | 12,588.01 | 82.19 | 80.82 | -173.96 | 4,576.35 | -159.78 | 3,381.76 | 3,299.04 | 82.72 | 40.882 | |
| 13,700.00 | 9,226.01 | 17,033.95 | 12,588.01 | 83.72 | 82.35 | -173.96 | 4,676.34 | -160.64 | 3,381.77 | 3,297.70 | 84.07 | 40.225 | |
| 13,800.00 | 9,226.00 | 17,133.95 | 12,588.00 | 85.25 | 83.88 | -173.96 | 4,776.34 | -161.51 | 3,381.78 | 3,296.34 | 85.43 | 39.584 | |
| 13,900.00 | 9,226.00 | 17,233.95 | 12,588.00 | 86.78 | 85.41 | -173.96 | 4,876.34 | -162.37 | 3,381.78 | 3,294.98 | 86.80 | 38.961 | |
| 13,971.67 | 9,226.00 | 17,305.62 | 12,588.00 | 87.89 | 86.52 | -173.96 | 4,948.00 | -162.99 | 3,381.79 | 3,294.01 | 87.78 | 38.524 | |

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 214H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

Survey Program: 0-MWD - OWSG, 5500-MWD - OWSG, 12981-MWD - OWSG — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1.00 | -1.00 | 0.00 | 0.00 | 180.00 | -30.00 | 0.00 | 30.00 | | | | |
| 100.00 | 100.00 | 101.00 | 99.00 | 0.13 | 0.13 | 180.00 | -30.00 | 0.00 | 30.00 | 29.74 | 0.26 | 116.234 | |
| 200.00 | 200.00 | 201.00 | 199.00 | 0.49 | 0.49 | 180.00 | -30.00 | 0.00 | 30.00 | 29.02 | 0.98 | 30.768 | |
| 300.00 | 300.00 | 301.00 | 299.00 | 0.84 | 0.85 | 180.00 | -30.00 | 0.00 | 30.00 | 28.31 | 1.69 | 17.731 | |
| 400.00 | 400.00 | 401.00 | 399.00 | 1.20 | 1.21 | 180.00 | -30.00 | 0.00 | 30.00 | 27.59 | 2.41 | 12.454 | |
| 500.00 | 500.00 | 501.00 | 499.00 | 1.56 | 1.56 | 180.00 | -30.00 | 0.00 | 30.00 | 26.87 | 3.13 | 9.597 | |
| 600.00 | 600.00 | 601.00 | 599.00 | 1.92 | 1.92 | 180.00 | -30.00 | 0.00 | 30.00 | 26.16 | 3.84 | 7.807 | |
| 700.00 | 700.00 | 701.00 | 699.00 | 2.28 | 2.28 | 180.00 | -30.00 | 0.00 | 30.00 | 25.44 | 4.56 | 6.579 | |
| 800.00 | 800.00 | 801.00 | 799.00 | 2.64 | 2.64 | 180.00 | -30.00 | 0.00 | 30.00 | 24.72 | 5.28 | 5.685 | |
| 900.00 | 900.00 | 901.00 | 899.00 | 3.00 | 3.00 | 180.00 | -30.00 | 0.00 | 30.00 | 24.01 | 5.99 | 5.005 | |
| 1,000.00 | 1,000.00 | 999.00 | 999.00 | 3.35 | 3.35 | 180.00 | -30.00 | 0.00 | 30.00 | 23.30 | 6.70 | 4.475 | |
| 1,055.27 | 1,055.27 | 1,054.27 | 1,054.27 | 3.55 | 3.54 | 179.26 | -30.00 | 0.39 | 30.00 | 22.90 | 7.10 | 4.228 CC | |
| 1,100.00 | 1,100.00 | 1,098.99 | 1,098.98 | 3.71 | 3.70 | 177.55 | -29.98 | 1.28 | 30.01 | 22.60 | 7.41 | 4.049 | |
| 1,200.00 | 1,200.00 | 1,198.84 | 1,198.75 | 4.07 | 4.04 | 170.19 | -29.93 | 5.17 | 30.38 | 22.26 | 8.11 | 3.744 ES | |
| 1,300.00 | 1,300.00 | 1,298.42 | 1,298.12 | 4.43 | 4.39 | 158.68 | -29.85 | 11.65 | 32.06 | 23.24 | 8.82 | 3.635 | |
| 1,400.00 | 1,400.00 | 1,402.41 | 1,396.87 | 4.79 | 4.76 | 145.19 | -29.73 | 20.67 | 36.28 | 26.74 | 9.53 | 3.805 | |
| 1,500.00 | 1,499.99 | 1,502.84 | 1,495.90 | 5.14 | 5.13 | 34.68 | -29.60 | 31.08 | 41.95 | 31.72 | 10.23 | 4.101 | |
| 1,600.00 | 1,599.91 | 1,603.06 | 1,595.13 | 5.48 | 5.49 | 28.22 | -29.47 | 41.51 | 46.39 | 35.47 | 10.92 | 4.249 | |
| 1,700.00 | 1,699.69 | 1,703.16 | 1,694.49 | 5.82 | 5.87 | 24.14 | -29.33 | 51.95 | 48.91 | 37.29 | 11.61 | 4.212 | |
| 1,733.33 | 1,732.91 | 1,730.17 | 1,727.63 | 5.94 | 5.97 | 23.14 | -29.29 | 55.43 | 49.26 | 37.44 | 11.82 | 4.167 | |
| 1,800.00 | 1,799.32 | 1,803.19 | 1,793.91 | 6.17 | 6.24 | 21.31 | -29.20 | 62.40 | 49.74 | 37.43 | 12.31 | 4.041 | |
| 1,900.00 | 1,898.94 | 1,903.22 | 1,893.33 | 6.53 | 6.62 | 18.63 | -29.06 | 72.85 | 50.56 | 37.55 | 13.01 | 3.885 | |
| 2,000.00 | 1,998.56 | 2,003.25 | 1,992.75 | 6.88 | 6.99 | 16.05 | -28.93 | 83.30 | 51.48 | 37.77 | 13.72 | 3.753 | |
| 2,100.00 | 2,098.18 | 2,103.28 | 2,092.17 | 7.24 | 7.37 | 13.56 | -28.80 | 93.74 | 52.51 | 38.09 | 14.42 | 3.641 | |
| 2,200.00 | 2,197.80 | 2,203.31 | 2,191.59 | 7.61 | 7.76 | 11.17 | -28.66 | 104.19 | 53.63 | 38.50 | 15.13 | 3.545 | |
| 2,300.00 | 2,297.42 | 2,303.34 | 2,291.01 | 7.97 | 8.14 | 8.88 | -28.53 | 114.64 | 54.84 | 39.00 | 15.84 | 3.463 | |
| 2,400.00 | 2,397.04 | 2,403.37 | 2,390.44 | 8.34 | 8.52 | 6.69 | -28.39 | 125.09 | 56.13 | 39.58 | 16.55 | 3.392 | |
| 2,500.00 | 2,496.66 | 2,503.40 | 2,489.86 | 8.70 | 8.91 | 4.61 | -28.26 | 135.54 | 57.50 | 40.24 | 17.26 | 3.332 | |
| 2,600.00 | 2,596.28 | 2,603.43 | 2,589.28 | 9.07 | 9.29 | 2.62 | -28.12 | 145.99 | 58.95 | 40.98 | 17.97 | 3.280 | |
| 2,700.00 | 2,695.90 | 2,703.47 | 2,688.70 | 9.44 | 9.68 | 0.73 | -27.99 | 156.44 | 60.46 | 41.77 | 18.68 | 3.236 | |
| 2,800.00 | 2,795.52 | 2,803.50 | 2,788.12 | 9.82 | 10.07 | -1.06 | -27.85 | 166.89 | 62.03 | 42.63 | 19.40 | 3.197 | |
| 2,900.00 | 2,895.14 | 2,903.53 | 2,887.54 | 10.19 | 10.46 | -2.77 | -27.72 | 177.33 | 63.66 | 43.54 | 20.12 | 3.164 | |
| 3,000.00 | 2,994.76 | 3,003.56 | 2,986.97 | 10.56 | 10.85 | -4.39 | -27.59 | 187.78 | 65.35 | 44.51 | 20.84 | 3.136 | |
| 3,100.00 | 3,094.38 | 3,103.59 | 3,086.39 | 10.94 | 11.23 | -5.92 | -27.45 | 198.23 | 67.08 | 45.52 | 21.56 | 3.112 | |
| 3,200.00 | 3,194.00 | 3,203.62 | 3,185.81 | 11.31 | 11.62 | -7.38 | -27.32 | 208.68 | 68.86 | 46.58 | 22.28 | 3.090 | |
| 3,300.00 | 3,293.62 | 3,303.65 | 3,285.23 | 11.69 | 12.01 | -8.76 | -27.18 | 219.13 | 70.68 | 47.68 | 23.01 | 3.072 | |
| 3,400.00 | 3,393.23 | 3,403.68 | 3,384.65 | 12.06 | 12.40 | -10.07 | -27.05 | 229.58 | 72.54 | 48.81 | 23.73 | 3.057 | |
| 3,500.00 | 3,492.85 | 3,503.71 | 3,484.07 | 12.44 | 12.79 | -11.32 | -26.91 | 240.03 | 74.44 | 49.98 | 24.46 | 3.044 | |
| 3,600.00 | 3,592.47 | 3,603.74 | 3,583.50 | 12.82 | 13.18 | -12.50 | -26.78 | 250.48 | 76.37 | 51.19 | 25.19 | 3.032 | |
| 3,700.00 | 3,692.09 | 3,703.77 | 3,682.92 | 13.19 | 13.58 | -13.63 | -26.65 | 260.92 | 78.34 | 52.42 | 25.92 | 3.022 | |
| 3,800.00 | 3,791.71 | 3,803.80 | 3,782.34 | 13.57 | 13.97 | -14.70 | -26.51 | 271.37 | 80.33 | 53.68 | 26.65 | 3.014 | |
| 3,900.00 | 3,891.33 | 3,903.84 | 3,881.76 | 13.95 | 14.36 | -15.72 | -26.38 | 281.82 | 82.34 | 54.96 | 27.38 | 3.007 | |
| 4,000.00 | 3,990.95 | 4,003.87 | 3,981.18 | 14.33 | 14.75 | -16.69 | -26.24 | 292.27 | 84.39 | 56.27 | 28.12 | 3.001 | |
| 4,078.35 | 4,069.01 | 4,074.46 | 4,059.08 | 14.63 | 15.03 | -17.41 | -26.14 | 300.46 | 86.00 | 57.34 | 28.66 | 3.000 | |
| 4,100.00 | 4,090.58 | 4,103.90 | 4,080.60 | 14.71 | 15.14 | -17.60 | -26.11 | 302.72 | 86.51 | 57.66 | 28.85 | 2.998 SF | |
| 4,200.00 | 4,190.34 | 4,203.98 | 4,179.97 | 15.08 | 15.53 | -18.12 | -25.97 | 313.16 | 90.37 | 60.79 | 29.58 | 3.055 | |
| 4,300.00 | 4,290.25 | 4,304.18 | 4,279.22 | 15.44 | 15.93 | -18.11 | -25.84 | 323.59 | 96.73 | 66.42 | 30.31 | 3.192 | |
| 4,400.00 | 4,390.23 | 4,404.58 | 4,378.28 | 15.79 | 16.32 | -17.68 | -25.71 | 334.00 | 105.57 | 74.54 | 31.02 | 3.403 | |
| 4,411.69 | 4,401.92 | 4,407.04 | 4,389.84 | 15.83 | 16.33 | 82.26 | -25.69 | 335.22 | 106.76 | 75.69 | 31.07 | 3.436 | |
| 4,500.00 | 4,490.23 | 4,505.13 | 4,477.19 | 16.13 | 16.72 | 82.81 | -25.57 | 344.40 | 115.93 | 84.20 | 31.73 | 3.654 | |
| 4,600.00 | 4,590.23 | 4,605.67 | 4,576.10 | 16.47 | 17.11 | 83.35 | -25.44 | 354.79 | 126.32 | 93.89 | 32.44 | 3.895 | |
| 4,700.00 | 4,690.23 | 4,693.78 | 4,675.00 | 16.81 | 17.46 | 83.80 | -25.31 | 365.19 | 136.73 | 103.63 | 33.10 | 4.131 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 214H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 12981-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,800.00 | 4,790.23 | 4,793.23 | 4,773.91 | 17.16 | 17.85 | 84.18 | -25.17 | 375.58 | 147.14 | 113.33 | 33.80 | 4.353 | |
| 4,900.00 | 4,890.23 | 4,892.68 | 4,872.82 | 17.50 | 18.24 | 84.52 | -25.04 | 385.98 | 157.55 | 123.04 | 34.51 | 4.565 | |
| 5,000.00 | 4,990.23 | 5,007.87 | 4,971.73 | 17.84 | 18.69 | 84.82 | -24.91 | 396.37 | 167.97 | 132.70 | 35.27 | 4.762 | |
| 5,100.00 | 5,090.23 | 5,108.41 | 5,070.63 | 18.19 | 19.08 | 85.08 | -24.77 | 406.77 | 178.39 | 142.41 | 35.99 | 4.957 | |
| 5,200.00 | 5,190.23 | 5,191.04 | 5,169.54 | 18.53 | 19.41 | 85.31 | -24.64 | 417.16 | 188.82 | 152.19 | 36.63 | 5.154 | |
| 5,300.00 | 5,290.23 | 5,309.51 | 5,268.45 | 18.87 | 19.88 | 85.52 | -24.50 | 427.56 | 199.25 | 161.84 | 37.41 | 5.326 | |
| 5,400.00 | 5,390.23 | 5,389.94 | 5,367.35 | 19.22 | 20.19 | 85.70 | -24.37 | 437.95 | 209.68 | 171.63 | 38.05 | 5.510 | |
| 5,500.00 | 5,490.23 | 5,489.40 | 5,466.26 | 19.57 | 20.43 | 85.87 | -24.24 | 448.35 | 220.12 | 181.52 | 38.60 | 5.703 | |
| 5,600.00 | 5,590.23 | 5,588.85 | 5,565.17 | 19.91 | 20.50 | 86.02 | -24.10 | 458.74 | 230.55 | 191.58 | 38.97 | 5.916 | |
| 5,700.00 | 5,690.23 | 5,688.30 | 5,664.08 | 20.26 | 20.56 | 86.17 | -23.97 | 469.14 | 240.99 | 201.66 | 39.33 | 6.127 | |
| 5,800.00 | 5,790.23 | 5,787.75 | 5,762.98 | 20.60 | 20.63 | 86.29 | -23.84 | 479.53 | 251.43 | 211.73 | 39.70 | 6.333 | |
| 5,900.00 | 5,890.23 | 5,887.20 | 5,861.89 | 20.95 | 20.71 | 86.41 | -23.70 | 489.92 | 261.87 | 221.79 | 40.08 | 6.534 | |
| 6,000.00 | 5,990.23 | 5,986.66 | 5,960.80 | 21.30 | 20.79 | 86.52 | -23.57 | 500.32 | 272.31 | 231.85 | 40.46 | 6.730 | |
| 6,100.00 | 6,090.23 | 6,086.11 | 6,059.71 | 21.65 | 20.88 | 86.62 | -23.44 | 510.71 | 282.75 | 241.90 | 40.85 | 6.922 | |
| 6,200.00 | 6,190.23 | 6,185.56 | 6,158.61 | 22.00 | 20.98 | 86.72 | -23.30 | 521.11 | 293.19 | 251.95 | 41.24 | 7.109 | |
| 6,300.00 | 6,290.23 | 6,285.01 | 6,257.52 | 22.35 | 21.08 | 86.80 | -23.17 | 531.50 | 303.63 | 261.99 | 41.65 | 7.291 | |
| 6,400.00 | 6,390.23 | 6,384.46 | 6,356.43 | 22.69 | 21.19 | 86.89 | -23.03 | 541.90 | 314.08 | 272.02 | 42.06 | 7.468 | |
| 6,500.00 | 6,490.23 | 6,483.92 | 6,455.34 | 23.04 | 21.31 | 86.96 | -22.90 | 552.29 | 324.52 | 282.05 | 42.47 | 7.640 | |
| 6,600.00 | 6,590.23 | 6,583.37 | 6,554.24 | 23.39 | 21.44 | 87.03 | -22.77 | 562.69 | 334.97 | 292.07 | 42.90 | 7.808 | |
| 6,700.00 | 6,690.23 | 6,682.82 | 6,653.15 | 23.74 | 21.57 | 87.10 | -22.63 | 573.08 | 345.41 | 302.08 | 43.33 | 7.972 | |
| 6,800.00 | 6,790.23 | 6,782.27 | 6,752.06 | 24.09 | 21.70 | 87.17 | -22.50 | 583.48 | 355.86 | 312.09 | 43.77 | 8.131 | |
| 6,900.00 | 6,890.23 | 6,881.73 | 6,850.97 | 24.44 | 21.85 | 87.23 | -22.37 | 593.87 | 366.30 | 322.09 | 44.21 | 8.286 | |
| 7,000.00 | 6,990.23 | 6,981.18 | 6,949.87 | 24.79 | 22.00 | 87.28 | -22.23 | 604.27 | 376.75 | 332.09 | 44.66 | 8.436 | |
| 7,100.00 | 7,090.23 | 7,080.63 | 7,048.78 | 25.14 | 22.15 | 87.34 | -22.10 | 614.66 | 387.20 | 342.08 | 45.11 | 8.583 | |
| 7,200.00 | 7,190.23 | 7,180.08 | 7,147.69 | 25.50 | 22.31 | 87.39 | -21.97 | 625.06 | 397.64 | 352.07 | 45.58 | 8.725 | |
| 7,300.00 | 7,290.23 | 7,279.53 | 7,246.60 | 25.85 | 22.48 | 87.43 | -21.83 | 635.45 | 408.09 | 362.05 | 46.04 | 8.863 | |
| 7,400.00 | 7,390.23 | 7,378.99 | 7,345.50 | 26.20 | 22.65 | 87.48 | -21.70 | 645.85 | 418.54 | 372.02 | 46.52 | 8.997 | |
| 7,500.00 | 7,490.23 | 7,478.44 | 7,444.41 | 26.55 | 22.83 | 87.52 | -21.57 | 656.24 | 428.99 | 381.99 | 47.00 | 9.128 | |
| 7,600.00 | 7,590.23 | 7,577.89 | 7,543.32 | 26.90 | 23.01 | 87.56 | -21.43 | 666.64 | 439.44 | 391.95 | 47.48 | 9.254 | |
| 7,700.00 | 7,690.23 | 7,677.34 | 7,642.22 | 27.25 | 23.20 | 87.60 | -21.30 | 677.03 | 449.88 | 401.91 | 47.97 | 9.377 | |
| 7,800.00 | 7,790.23 | 7,776.80 | 7,741.13 | 27.61 | 23.39 | 87.64 | -21.16 | 687.42 | 460.33 | 411.86 | 48.47 | 9.497 | |
| 7,900.00 | 7,890.23 | 7,876.25 | 7,840.04 | 27.96 | 23.59 | 87.68 | -21.03 | 697.82 | 470.78 | 421.81 | 48.97 | 9.613 | |
| 8,000.00 | 7,990.23 | 7,975.70 | 7,938.95 | 28.31 | 23.79 | 87.71 | -20.90 | 708.21 | 481.23 | 431.75 | 49.48 | 9.726 | |
| 8,100.00 | 8,090.23 | 8,075.15 | 8,037.85 | 28.66 | 24.00 | 87.75 | -20.76 | 718.61 | 491.68 | 441.69 | 49.99 | 9.835 | |
| 8,200.00 | 8,190.23 | 8,174.60 | 8,136.76 | 29.02 | 24.22 | 87.78 | -20.63 | 729.00 | 502.13 | 451.62 | 50.51 | 9.941 | |
| 8,300.00 | 8,290.23 | 8,274.06 | 8,235.67 | 29.37 | 24.43 | 87.81 | -20.50 | 739.40 | 512.58 | 461.54 | 51.03 | 10.044 | |
| 8,400.00 | 8,390.23 | 8,373.51 | 8,334.58 | 29.72 | 24.65 | 87.84 | -20.36 | 749.79 | 523.03 | 471.47 | 51.56 | 10.144 | |
| 8,500.00 | 8,490.23 | 8,477.79 | 8,438.30 | 30.08 | 24.89 | 87.87 | -20.22 | 760.54 | 533.34 | 481.22 | 52.12 | 10.233 | |
| 8,600.00 | 8,590.23 | 8,593.78 | 8,553.92 | 30.43 | 25.14 | 87.89 | -20.10 | 769.86 | 541.38 | 488.66 | 52.72 | 10.269 | |
| 8,652.77 | 8,643.00 | 8,655.19 | 8,615.22 | 30.62 | 25.26 | 87.90 | -20.06 | 773.37 | 544.40 | 491.37 | 53.03 | 10.266 | |
| 8,700.00 | 8,690.18 | 8,710.18 | 8,670.16 | 30.78 | 25.37 | 88.20 | -20.03 | 775.68 | 546.32 | 493.03 | 53.29 | 10.252 | |
| 8,750.00 | 8,739.76 | 8,768.03 | 8,727.99 | 30.95 | 25.47 | 88.84 | -20.01 | 777.26 | 547.53 | 493.97 | 53.56 | 10.223 | |
| 8,800.00 | 8,788.62 | 8,825.06 | 8,785.01 | 31.12 | 25.57 | 90.05 | -20.00 | 777.96 | 548.05 | 494.24 | 53.81 | 10.185 | |
| 8,850.00 | 8,836.36 | 8,875.40 | 8,835.36 | 31.29 | 25.66 | 91.57 | -20.00 | 778.00 | 548.32 | 494.26 | 54.06 | 10.143 | |
| 8,900.00 | 8,882.63 | 8,921.67 | 8,881.63 | 31.44 | 25.73 | 93.31 | -20.00 | 778.00 | 549.19 | 494.88 | 54.31 | 10.112 | |
| 8,950.00 | 8,927.08 | 8,966.12 | 8,926.08 | 31.59 | 25.81 | 95.23 | -20.00 | 778.00 | 551.12 | 496.55 | 54.57 | 10.100 | |
| 9,000.00 | 8,969.36 | 9,008.41 | 8,968.36 | 31.72 | 25.88 | 97.22 | -20.00 | 778.00 | 554.55 | 499.71 | 54.83 | 10.113 | |
| 9,050.00 | 9,009.16 | 9,048.21 | 9,008.16 | 31.85 | 25.95 | 99.14 | -20.00 | 778.00 | 559.95 | 504.83 | 55.12 | 10.159 | |
| 9,100.00 | 9,046.18 | 9,085.22 | 9,045.18 | 31.96 | 26.01 | 100.88 | -20.00 | 778.00 | 567.78 | 512.36 | 55.42 | 10.244 | |
| 9,150.00 | 9,080.13 | 9,119.17 | 9,079.13 | 32.08 | 26.07 | 102.31 | -20.00 | 778.00 | 578.44 | 522.70 | 55.75 | 10.376 | |
| 9,200.00 | 9,110.75 | 9,149.79 | 9,109.75 | 32.22 | 26.12 | 103.31 | -20.00 | 778.00 | 592.26 | 536.18 | 56.08 | 10.560 | |
| 9,250.00 | 9,137.81 | 9,176.85 | 9,136.81 | 32.37 | 26.17 | 103.77 | -20.00 | 778.00 | 609.43 | 553.00 | 56.43 | 10.800 | |

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

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 214H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 12981-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,300.00 | 9,161.10 | 9,200.14 | 9,160.10 | 32.54 | 26.21 | 103.61 | -20.00 | 778.00 | 630.02 | 573.25 | 56.77 | 11.097 | |
| 9,350.00 | 9,180.45 | 9,219.50 | 9,179.45 | 32.72 | 26.24 | 102.71 | -20.00 | 778.00 | 653.98 | 596.87 | 57.11 | 11.451 | |
| 9,400.00 | 9,195.71 | 9,234.76 | 9,194.71 | 32.91 | 26.27 | 101.00 | -20.00 | 778.00 | 681.12 | 623.69 | 57.43 | 11.861 | |
| 9,452.77 | 9,207.25 | 9,246.30 | 9,206.25 | 33.11 | 26.29 | 98.22 | -20.00 | 778.00 | 712.88 | 655.15 | 57.73 | 12.348 | |
| 9,477.77 | 9,211.59 | 9,250.64 | 9,210.59 | 33.22 | 26.30 | 98.66 | -20.00 | 778.00 | 728.87 | 671.01 | 57.86 | 12.596 | |
| 9,500.00 | 9,215.20 | 9,254.24 | 9,214.20 | 33.31 | 26.30 | 97.87 | -20.00 | 778.00 | 743.52 | 685.54 | 57.98 | 12.824 | |
| 9,550.00 | 9,221.44 | 9,260.48 | 9,220.44 | 33.53 | 26.32 | 95.70 | -20.00 | 778.00 | 777.93 | 719.71 | 58.22 | 13.363 | |
| 9,600.00 | 9,225.07 | 9,264.11 | 9,224.07 | 33.76 | 26.32 | 92.94 | -20.00 | 778.00 | 814.14 | 755.71 | 58.43 | 13.934 | |
| 9,644.49 | 9,226.11 | 9,265.15 | 9,225.11 | 33.97 | 26.32 | 90.00 | -20.00 | 778.00 | 847.63 | 789.04 | 58.59 | 14.466 | |
| 9,700.00 | 9,226.10 | 9,265.15 | 9,225.10 | 34.25 | 26.32 | 90.00 | -20.00 | 778.00 | 890.80 | 832.03 | 58.78 | 15.156 | |
| 9,800.00 | 9,226.10 | 9,265.15 | 9,225.10 | 34.82 | 26.32 | 90.00 | -20.00 | 778.00 | 971.74 | 912.68 | 59.06 | 16.453 | |
| 9,900.00 | 9,226.10 | 9,265.14 | 9,225.10 | 35.45 | 26.32 | 90.00 | -20.00 | 778.00 | 1,055.95 | 996.65 | 59.30 | 17.808 | |
| 10,000.00 | 9,226.10 | 9,265.14 | 9,225.10 | 36.14 | 26.32 | 90.00 | -20.00 | 778.00 | 1,142.71 | 1,083.22 | 59.49 | 19.208 | |
| 10,100.00 | 9,226.09 | 9,265.14 | 9,225.09 | 36.90 | 26.32 | 90.00 | -20.00 | 778.00 | 1,231.47 | 1,171.82 | 59.65 | 20.644 | |
| 10,200.00 | 9,226.09 | 9,265.14 | 9,225.09 | 37.71 | 26.32 | 90.00 | -20.00 | 778.00 | 1,321.85 | 1,262.06 | 59.79 | 22.108 | |
| 10,300.00 | 9,226.09 | 9,265.13 | 9,225.09 | 38.58 | 26.32 | 90.00 | -20.00 | 778.00 | 1,413.52 | 1,353.61 | 59.91 | 23.594 | |
| 10,400.00 | 9,226.09 | 9,265.13 | 9,225.09 | 39.49 | 26.32 | 90.00 | -20.00 | 778.00 | 1,506.25 | 1,446.24 | 60.01 | 25.099 | |
| 10,500.00 | 9,226.08 | 9,265.13 | 9,225.08 | 40.46 | 26.32 | 90.00 | -20.00 | 778.00 | 1,599.85 | 1,539.75 | 60.10 | 26.619 | |
| 10,600.00 | 9,226.08 | 9,265.13 | 9,225.08 | 41.47 | 26.32 | 90.00 | -20.00 | 778.00 | 1,694.19 | 1,634.01 | 60.18 | 28.152 | |
| 10,700.00 | 9,226.08 | 9,265.12 | 9,225.08 | 42.52 | 26.32 | 90.00 | -20.00 | 778.00 | 1,789.14 | 1,728.89 | 60.25 | 29.694 | |
| 10,800.00 | 9,226.08 | 9,265.12 | 9,225.08 | 43.60 | 26.32 | 90.00 | -20.00 | 778.00 | 1,884.62 | 1,824.30 | 60.32 | 31.245 | |
| 10,900.00 | 9,226.07 | 9,265.12 | 9,225.07 | 44.73 | 26.32 | 90.00 | -20.00 | 778.00 | 1,980.54 | 1,920.16 | 60.38 | 32.803 | |
| 11,000.00 | 9,226.07 | 9,265.12 | 9,225.07 | 45.88 | 26.32 | 89.99 | -20.00 | 778.00 | 2,076.84 | 2,016.41 | 60.43 | 34.366 | |
| 11,100.00 | 9,226.07 | 9,265.11 | 9,225.07 | 47.06 | 26.32 | 89.99 | -20.00 | 778.00 | 2,173.48 | 2,113.00 | 60.49 | 35.934 | |
| 11,200.00 | 9,226.07 | 9,265.11 | 9,225.07 | 48.28 | 26.32 | 89.99 | -20.00 | 778.00 | 2,270.41 | 2,209.88 | 60.54 | 37.505 | |
| 11,300.00 | 9,226.06 | 9,265.11 | 9,225.06 | 49.52 | 26.32 | 89.99 | -20.00 | 778.00 | 2,367.60 | 2,307.02 | 60.58 | 39.080 | |
| 11,400.00 | 9,226.06 | 9,265.11 | 9,225.06 | 50.78 | 26.32 | 89.99 | -20.00 | 778.00 | 2,465.01 | 2,404.38 | 60.63 | 40.657 | |
| 11,500.00 | 9,226.06 | 9,265.10 | 9,225.06 | 52.06 | 26.32 | 89.99 | -20.00 | 778.00 | 2,562.62 | 2,501.95 | 60.67 | 42.236 | |
| 11,600.00 | 9,226.06 | 9,265.10 | 9,225.06 | 53.37 | 26.32 | 89.99 | -20.00 | 778.00 | 2,660.41 | 2,599.69 | 60.72 | 43.816 | |
| 11,700.00 | 9,226.06 | 9,265.10 | 9,225.06 | 54.69 | 26.32 | 89.99 | -20.00 | 778.00 | 2,758.36 | 2,697.60 | 60.76 | 45.397 | |
| 11,800.00 | 9,226.05 | 9,265.10 | 9,225.05 | 56.03 | 26.32 | 89.99 | -20.00 | 778.00 | 2,856.45 | 2,795.64 | 60.80 | 46.979 | |
| 11,900.00 | 9,226.05 | 9,265.10 | 9,225.05 | 57.39 | 26.32 | 89.99 | -20.00 | 778.00 | 2,954.66 | 2,893.82 | 60.84 | 48.561 | |
| 12,000.00 | 9,226.05 | 9,265.09 | 9,225.05 | 58.77 | 26.32 | 89.99 | -20.00 | 778.00 | 3,053.00 | 2,992.11 | 60.89 | 50.143 | |
| 12,100.00 | 9,226.05 | 9,265.09 | 9,225.05 | 60.15 | 26.32 | 89.99 | -20.00 | 778.00 | 3,151.43 | 3,090.51 | 60.93 | 51.725 | |
| 12,200.00 | 9,226.04 | 9,265.09 | 9,225.04 | 61.56 | 26.32 | 89.99 | -20.00 | 778.00 | 3,249.97 | 3,189.00 | 60.97 | 53.306 | |
| 12,300.00 | 9,226.04 | 9,265.09 | 9,225.04 | 62.97 | 26.32 | 89.99 | -20.00 | 778.00 | 3,348.59 | 3,287.58 | 61.01 | 54.886 | |
| 12,400.00 | 9,226.04 | 9,265.08 | 9,225.04 | 64.40 | 26.32 | 89.99 | -20.00 | 778.00 | 3,447.29 | 3,386.23 | 61.05 | 56.465 | |
| 12,500.00 | 9,226.04 | 16,007.16 | 12,718.04 | 65.83 | 65.97 | 171.13 | 3,484.24 | 749.87 | 3,535.32 | 3,465.86 | 69.46 | 50.895 | |
| 12,600.00 | 9,226.03 | 16,107.16 | 12,718.03 | 67.28 | 67.38 | 171.13 | 3,584.23 | 749.00 | 3,535.31 | 3,464.59 | 70.72 | 49.994 | |
| 12,700.00 | 9,226.03 | 16,207.16 | 12,718.03 | 68.74 | 68.81 | 171.13 | 3,684.23 | 748.12 | 3,535.29 | 3,463.31 | 71.98 | 49.113 | |
| 12,800.00 | 9,226.03 | 16,307.16 | 12,718.03 | 70.20 | 70.24 | 171.13 | 3,784.22 | 747.25 | 3,535.28 | 3,462.02 | 73.26 | 48.254 | |
| 12,900.00 | 9,226.03 | 16,407.16 | 12,718.03 | 71.68 | 71.68 | 171.13 | 3,884.22 | 746.37 | 3,535.27 | 3,460.71 | 74.56 | 47.417 | |
| 13,000.00 | 9,226.02 | 16,507.16 | 12,718.02 | 73.16 | 73.14 | 171.13 | 3,984.22 | 745.50 | 3,535.25 | 3,459.39 | 75.86 | 46.600 | |
| 13,100.00 | 9,226.02 | 16,607.16 | 12,718.02 | 74.65 | 74.60 | 171.13 | 4,084.21 | 744.62 | 3,535.24 | 3,458.05 | 77.18 | 45.803 | |
| 13,200.00 | 9,226.02 | 16,707.16 | 12,718.02 | 76.14 | 76.07 | 171.14 | 4,184.21 | 743.75 | 3,535.22 | 3,456.71 | 78.51 | 45.027 | |
| 13,300.00 | 9,226.02 | 16,807.16 | 12,718.02 | 77.65 | 77.55 | 171.14 | 4,284.20 | 742.87 | 3,535.21 | 3,455.35 | 79.85 | 44.271 | |
| 13,400.00 | 9,226.01 | 16,907.16 | 12,718.01 | 79.16 | 79.04 | 171.14 | 4,384.20 | 742.00 | 3,535.19 | 3,453.99 | 81.21 | 43.534 | |
| 13,500.00 | 9,226.01 | 17,007.16 | 12,718.01 | 80.67 | 80.53 | 171.14 | 4,484.20 | 741.12 | 3,535.18 | 3,452.61 | 82.57 | 42.816 | |
| 13,600.00 | 9,226.01 | 17,107.16 | 12,718.01 | 82.19 | 82.03 | 171.14 | 4,584.19 | 740.25 | 3,535.16 | 3,451.23 | 83.94 | 42.117 | |
| 13,700.00 | 9,226.01 | 17,207.16 | 12,718.01 | 83.72 | 83.54 | 171.14 | 4,684.19 | 739.37 | 3,535.15 | 3,449.83 | 85.32 | 41.436 | |
| 13,800.00 | 9,226.00 | 17,307.16 | 12,718.00 | 85.25 | 85.05 | 171.15 | 4,784.19 | 738.50 | 3,535.13 | 3,448.43 | 86.70 | 40.773 | |
| 13,900.00 | 9,226.00 | 17,407.16 | 12,718.00 | 86.78 | 86.57 | 171.15 | 4,884.18 | 737.62 | 3,535.12 | 3,447.02 | 88.10 | 40.127 | |

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

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 214H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 12981-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13,971.67 | 9,226.00 | 17,478.83 | 12,718.00 | 87.89 | 87.66 | 171.15 | 4,955.85 | 736.99 | 3,535.11 | 3,446.01 | 89.10 | 39.674 | |

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 217H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 13004-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1.00 | -1.00 | 0.00 | 0.00 | -135.94 | -31.00 | -30.00 | 43.14 | | | | |
| 100.00 | 100.00 | 101.00 | 99.00 | 0.13 | 0.13 | -135.94 | -31.00 | -30.00 | 43.14 | 42.88 | 0.26 | 167.142 | |
| 200.00 | 200.00 | 201.00 | 199.00 | 0.49 | 0.49 | -135.94 | -31.00 | -30.00 | 43.14 | 42.16 | 0.98 | 44.243 | |
| 300.00 | 300.00 | 301.00 | 299.00 | 0.84 | 0.85 | -135.94 | -31.00 | -30.00 | 43.14 | 41.45 | 1.69 | 25.496 | |
| 400.00 | 400.00 | 401.00 | 399.00 | 1.20 | 1.21 | -135.94 | -31.00 | -30.00 | 43.14 | 40.73 | 2.41 | 17.908 | |
| 500.00 | 500.00 | 501.00 | 499.00 | 1.56 | 1.56 | -135.94 | -31.00 | -30.00 | 43.14 | 40.01 | 3.13 | 13.801 | |
| 600.00 | 600.00 | 599.00 | 599.00 | 1.92 | 1.92 | -135.94 | -31.00 | -30.00 | 43.14 | 39.30 | 3.84 | 11.247 | CC, ES |
| 700.00 | 700.00 | 698.21 | 698.20 | 2.28 | 2.26 | -134.75 | -30.99 | -31.26 | 44.02 | 39.48 | 4.54 | 9.694 | |
| 800.00 | 800.00 | 797.29 | 797.20 | 2.64 | 2.61 | -131.41 | -30.95 | -35.09 | 46.83 | 41.58 | 5.24 | 8.933 | |
| 900.00 | 900.00 | 896.10 | 895.80 | 3.00 | 2.96 | -126.68 | -30.88 | -41.47 | 51.81 | 45.86 | 5.94 | 8.719 | SF |
| 1,000.00 | 1,000.00 | 994.51 | 993.81 | 3.35 | 3.31 | -121.45 | -30.79 | -50.35 | 59.25 | 52.61 | 6.64 | 8.923 | |
| 1,100.00 | 1,100.00 | 1,107.72 | 1,090.92 | 3.71 | 3.73 | -116.45 | -30.68 | -61.67 | 69.35 | 61.96 | 7.39 | 9.387 | |
| 1,200.00 | 1,200.00 | 1,208.57 | 1,189.22 | 4.07 | 4.12 | -112.27 | -30.55 | -74.61 | 81.21 | 73.11 | 8.10 | 10.022 | |
| 1,300.00 | 1,300.00 | 1,309.43 | 1,287.51 | 4.43 | 4.51 | -109.16 | -30.42 | -87.55 | 93.39 | 84.57 | 8.82 | 10.589 | |
| 1,400.00 | 1,400.00 | 1,389.72 | 1,385.81 | 4.79 | 4.83 | -106.77 | -30.29 | -100.49 | 105.78 | 96.32 | 9.46 | 11.178 | |
| 1,500.00 | 1,499.99 | 1,488.68 | 1,483.93 | 5.14 | 5.22 | 155.42 | -30.16 | -113.41 | 119.49 | 109.33 | 10.17 | 11.754 | |
| 1,600.00 | 1,599.91 | 1,587.24 | 1,581.65 | 5.48 | 5.61 | 157.46 | -30.03 | -126.27 | 135.72 | 124.86 | 10.86 | 12.496 | |
| 1,700.00 | 1,699.69 | 1,685.33 | 1,678.89 | 5.82 | 6.01 | 159.39 | -29.90 | -139.07 | 154.51 | 142.95 | 11.56 | 13.370 | |
| 1,733.33 | 1,732.91 | 1,717.91 | 1,711.19 | 5.94 | 6.14 | 159.99 | -29.86 | -143.33 | 161.34 | 149.55 | 11.79 | 13.686 | |
| 1,800.00 | 1,799.32 | 1,783.00 | 1,775.73 | 6.17 | 6.40 | 161.16 | -29.77 | -151.82 | 175.33 | 163.08 | 12.25 | 14.312 | |
| 1,900.00 | 1,898.94 | 1,880.65 | 1,872.54 | 6.53 | 6.80 | 162.60 | -29.64 | -164.57 | 196.42 | 183.47 | 12.94 | 15.174 | |
| 2,000.00 | 1,998.56 | 1,978.29 | 1,969.35 | 6.88 | 7.19 | 163.76 | -29.52 | -177.31 | 217.60 | 203.96 | 13.64 | 15.952 | |
| 2,100.00 | 2,098.18 | 2,075.94 | 2,066.16 | 7.24 | 7.59 | 164.72 | -29.39 | -190.06 | 238.85 | 224.51 | 14.34 | 16.657 | |
| 2,200.00 | 2,197.80 | 2,173.58 | 2,162.97 | 7.61 | 7.99 | 165.52 | -29.26 | -202.80 | 260.16 | 245.12 | 15.04 | 17.298 | |
| 2,300.00 | 2,297.42 | 2,271.23 | 2,259.78 | 7.97 | 8.39 | 166.19 | -29.13 | -215.54 | 281.51 | 265.77 | 15.74 | 17.882 | |
| 2,400.00 | 2,397.04 | 2,368.87 | 2,356.59 | 8.34 | 8.79 | 166.78 | -29.00 | -228.29 | 302.89 | 286.44 | 16.45 | 18.417 | |
| 2,500.00 | 2,496.66 | 2,466.51 | 2,453.40 | 8.70 | 9.19 | 167.28 | -28.87 | -241.03 | 324.30 | 307.15 | 17.15 | 18.908 | |
| 2,600.00 | 2,596.28 | 2,564.16 | 2,550.21 | 9.07 | 9.59 | 167.72 | -28.74 | -253.78 | 345.73 | 327.87 | 17.86 | 19.360 | |
| 2,700.00 | 2,695.90 | 2,661.80 | 2,647.02 | 9.44 | 9.99 | 168.11 | -28.62 | -266.52 | 367.17 | 348.61 | 18.57 | 19.777 | |
| 2,800.00 | 2,795.52 | 2,759.45 | 2,743.82 | 9.82 | 10.39 | 168.46 | -28.49 | -279.27 | 388.63 | 369.36 | 19.27 | 20.164 | |
| 2,900.00 | 2,895.14 | 2,857.09 | 2,840.63 | 10.19 | 10.79 | 168.77 | -28.36 | -292.01 | 410.10 | 390.12 | 19.98 | 20.523 | |
| 3,000.00 | 2,994.76 | 2,954.74 | 2,937.44 | 10.56 | 11.20 | 169.05 | -28.23 | -304.76 | 431.59 | 410.89 | 20.69 | 20.858 | |
| 3,100.00 | 3,094.38 | 3,052.38 | 3,034.25 | 10.94 | 11.60 | 169.31 | -28.10 | -317.50 | 453.08 | 431.67 | 21.40 | 21.170 | |
| 3,200.00 | 3,194.00 | 3,150.03 | 3,131.06 | 11.31 | 12.00 | 169.54 | -27.97 | -330.25 | 474.58 | 452.46 | 22.11 | 21.461 | |
| 3,300.00 | 3,293.62 | 3,247.67 | 3,227.87 | 11.69 | 12.40 | 169.75 | -27.84 | -342.99 | 496.08 | 473.26 | 22.82 | 21.735 | |
| 3,400.00 | 3,393.23 | 3,345.31 | 3,324.68 | 12.06 | 12.81 | 169.94 | -27.72 | -355.73 | 517.59 | 494.06 | 23.54 | 21.991 | |
| 3,500.00 | 3,492.85 | 3,442.96 | 3,421.49 | 12.44 | 13.21 | 170.12 | -27.59 | -368.48 | 539.11 | 514.86 | 24.25 | 22.233 | |
| 3,600.00 | 3,592.47 | 3,540.60 | 3,518.30 | 12.82 | 13.61 | 170.29 | -27.46 | -381.22 | 560.63 | 535.67 | 24.96 | 22.460 | |
| 3,700.00 | 3,692.09 | 3,638.25 | 3,615.11 | 13.19 | 14.02 | 170.44 | -27.33 | -393.97 | 582.16 | 556.48 | 25.67 | 22.675 | |
| 3,800.00 | 3,791.71 | 3,735.89 | 3,711.92 | 13.57 | 14.42 | 170.58 | -27.20 | -406.71 | 603.69 | 577.30 | 26.39 | 22.877 | |
| 3,900.00 | 3,891.33 | 3,833.54 | 3,808.73 | 13.95 | 14.83 | 170.71 | -27.07 | -419.46 | 625.22 | 598.12 | 27.10 | 23.069 | |
| 4,000.00 | 3,990.95 | 3,931.18 | 3,905.53 | 14.33 | 15.23 | 170.83 | -26.95 | -432.20 | 646.75 | 618.94 | 27.82 | 23.251 | |
| 4,078.35 | 4,069.01 | 4,007.69 | 3,981.39 | 14.63 | 15.55 | 170.93 | -26.84 | -442.19 | 663.63 | 635.25 | 28.38 | 23.387 | |
| 4,100.00 | 4,090.58 | 4,028.84 | 4,002.36 | 14.71 | 15.63 | 170.96 | -26.82 | -444.95 | 668.23 | 639.70 | 28.53 | 23.422 | |
| 4,200.00 | 4,190.34 | 4,126.87 | 4,099.55 | 15.08 | 16.04 | 171.09 | -26.69 | -457.74 | 687.96 | 658.72 | 29.24 | 23.524 | |
| 4,300.00 | 4,290.25 | 4,225.37 | 4,197.21 | 15.44 | 16.45 | 171.18 | -26.56 | -470.60 | 705.15 | 675.19 | 29.96 | 23.536 | |
| 4,400.00 | 4,390.23 | 4,324.30 | 4,295.28 | 15.79 | 16.86 | 171.22 | -26.43 | -483.51 | 719.78 | 689.10 | 30.68 | 23.464 | |
| 4,411.69 | 4,401.92 | 4,335.88 | 4,306.77 | 15.83 | 16.91 | -88.91 | -26.41 | -485.02 | 721.32 | 690.56 | 30.76 | 23.451 | |
| 4,500.00 | 4,490.23 | 4,423.44 | 4,393.58 | 16.13 | 17.27 | -88.92 | -26.30 | -496.45 | 732.85 | 701.46 | 31.39 | 23.350 | |
| 4,600.00 | 4,590.23 | 4,522.58 | 4,491.87 | 16.47 | 17.68 | -88.93 | -26.17 | -509.39 | 745.90 | 713.80 | 32.10 | 23.239 | |
| 4,700.00 | 4,690.23 | 4,621.73 | 4,590.17 | 16.81 | 18.09 | -88.94 | -26.04 | -522.33 | 758.95 | 726.15 | 32.81 | 23.134 | |
| 4,800.00 | 4,790.23 | 4,720.87 | 4,688.47 | 17.16 | 18.50 | -88.94 | -25.91 | -535.27 | 772.00 | 738.49 | 33.52 | 23.032 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 217H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 13004-MWD - OWSG — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,900.00 | 4,890.23 | 4,820.02 | 4,786.76 | 17.50 | 18.91 | -88.95 | -25.78 | -548.21 | 785.06 | 750.83 | 34.23 | 22.934 | |
| 5,000.00 | 4,990.23 | 4,919.16 | 4,885.06 | 17.84 | 19.32 | -88.96 | -25.65 | -561.15 | 798.11 | 763.17 | 34.94 | 22.840 | |
| 5,100.00 | 5,090.23 | 5,018.30 | 4,983.36 | 18.19 | 19.73 | -88.97 | -25.52 | -574.09 | 811.16 | 775.51 | 35.66 | 22.750 | |
| 5,200.00 | 5,190.23 | 5,117.45 | 5,081.65 | 18.53 | 20.15 | -88.98 | -25.38 | -587.03 | 824.21 | 787.84 | 36.37 | 22.662 | |
| 5,300.00 | 5,290.23 | 5,216.59 | 5,179.95 | 18.87 | 20.56 | -88.98 | -25.25 | -599.97 | 837.27 | 800.18 | 37.08 | 22.578 | |
| 5,400.00 | 5,390.23 | 5,315.74 | 5,278.25 | 19.22 | 20.97 | -88.99 | -25.12 | -612.91 | 850.32 | 812.52 | 37.80 | 22.497 | |
| 5,500.00 | 5,490.23 | 5,414.88 | 5,376.54 | 19.57 | 21.36 | -89.00 | -24.99 | -625.85 | 863.37 | 824.89 | 38.48 | 22.434 | |
| 5,600.00 | 5,590.23 | 5,514.03 | 5,474.84 | 19.91 | 21.58 | -89.00 | -24.86 | -638.79 | 876.42 | 837.43 | 38.99 | 22.477 | |
| 5,700.00 | 5,690.23 | 5,613.17 | 5,573.13 | 20.26 | 21.66 | -89.01 | -24.73 | -651.73 | 889.48 | 850.13 | 39.35 | 22.605 | |
| 5,800.00 | 5,790.23 | 5,712.32 | 5,671.43 | 20.60 | 21.75 | -89.01 | -24.60 | -664.67 | 902.53 | 862.82 | 39.71 | 22.727 | |
| 5,900.00 | 5,890.23 | 5,811.46 | 5,769.73 | 20.95 | 21.85 | -89.02 | -24.47 | -677.61 | 915.58 | 875.50 | 40.08 | 22.842 | |
| 6,000.00 | 5,990.23 | 5,910.60 | 5,868.02 | 21.30 | 21.96 | -89.03 | -24.34 | -690.55 | 928.63 | 888.17 | 40.46 | 22.952 | |
| 6,100.00 | 6,090.23 | 6,009.75 | 5,966.32 | 21.65 | 22.07 | -89.03 | -24.21 | -703.49 | 941.68 | 900.84 | 40.84 | 23.055 | |
| 6,200.00 | 6,190.23 | 6,108.89 | 6,064.62 | 22.00 | 22.19 | -89.04 | -24.08 | -716.44 | 954.74 | 913.50 | 41.24 | 23.153 | |
| 6,300.00 | 6,290.23 | 6,208.04 | 6,162.91 | 22.35 | 22.32 | -89.04 | -23.95 | -729.38 | 967.79 | 926.15 | 41.64 | 23.245 | |
| 6,400.00 | 6,390.23 | 6,307.18 | 6,261.21 | 22.69 | 22.46 | -89.05 | -23.82 | -742.32 | 980.84 | 938.80 | 42.04 | 23.331 | |
| 6,500.00 | 6,490.23 | 6,406.33 | 6,359.50 | 23.04 | 22.60 | -89.05 | -23.69 | -755.26 | 993.89 | 951.44 | 42.45 | 23.412 | |
| 6,600.00 | 6,590.23 | 6,505.47 | 6,457.80 | 23.39 | 22.75 | -89.06 | -23.56 | -768.20 | 1,006.95 | 964.07 | 42.87 | 23.487 | |
| 6,700.00 | 6,690.23 | 6,604.62 | 6,556.10 | 23.74 | 22.90 | -89.06 | -23.43 | -781.14 | 1,020.00 | 976.70 | 43.30 | 23.558 | |
| 6,800.00 | 6,790.23 | 6,703.76 | 6,654.39 | 24.09 | 23.06 | -89.07 | -23.30 | -794.08 | 1,033.05 | 989.32 | 43.73 | 23.623 | |
| 6,900.00 | 6,890.23 | 6,802.91 | 6,752.69 | 24.44 | 23.23 | -89.07 | -23.17 | -807.02 | 1,046.10 | 1,001.93 | 44.17 | 23.684 | |
| 7,000.00 | 6,990.23 | 6,902.05 | 6,850.99 | 24.79 | 23.40 | -89.07 | -23.04 | -819.96 | 1,059.16 | 1,014.54 | 44.61 | 23.740 | |
| 7,100.00 | 7,090.23 | 7,001.19 | 6,949.28 | 25.14 | 23.58 | -89.08 | -22.91 | -832.90 | 1,072.21 | 1,027.14 | 45.07 | 23.792 | |
| 7,200.00 | 7,190.23 | 7,100.34 | 7,047.58 | 25.50 | 23.77 | -89.08 | -22.78 | -845.84 | 1,085.26 | 1,039.74 | 45.52 | 23.839 | |
| 7,300.00 | 7,290.23 | 7,200.52 | 7,145.87 | 25.85 | 23.96 | -89.09 | -22.65 | -858.78 | 1,098.31 | 1,052.32 | 45.99 | 23.882 | |
| 7,400.00 | 7,390.23 | 7,301.37 | 7,244.17 | 26.20 | 24.16 | -89.09 | -22.51 | -871.72 | 1,111.37 | 1,064.90 | 46.46 | 23.920 | |
| 7,500.00 | 7,490.23 | 7,397.77 | 7,342.47 | 26.55 | 24.36 | -89.09 | -22.38 | -884.66 | 1,124.42 | 1,077.48 | 46.93 | 23.957 | |
| 7,600.00 | 7,590.23 | 7,503.08 | 7,440.76 | 26.90 | 24.58 | -89.10 | -22.25 | -897.60 | 1,137.47 | 1,090.05 | 47.42 | 23.985 | |
| 7,700.00 | 7,690.23 | 7,603.94 | 7,539.06 | 27.25 | 24.79 | -89.10 | -22.12 | -910.54 | 1,150.52 | 1,102.61 | 47.91 | 24.012 | |
| 7,800.00 | 7,790.23 | 7,704.79 | 7,637.36 | 27.61 | 25.01 | -89.11 | -21.99 | -923.48 | 1,163.57 | 1,115.16 | 48.41 | 24.036 | |
| 7,900.00 | 7,890.23 | 7,794.35 | 7,735.65 | 27.96 | 25.21 | -89.11 | -21.86 | -936.42 | 1,176.63 | 1,127.73 | 48.90 | 24.064 | |
| 8,000.00 | 7,990.23 | 7,906.51 | 7,833.95 | 28.31 | 25.47 | -89.11 | -21.73 | -949.36 | 1,189.68 | 1,140.26 | 49.42 | 24.073 | |
| 8,100.00 | 8,090.23 | 8,007.36 | 7,932.25 | 28.66 | 25.71 | -89.12 | -21.60 | -962.30 | 1,202.73 | 1,152.80 | 49.93 | 24.087 | |
| 8,200.00 | 8,190.23 | 8,108.22 | 8,030.54 | 29.02 | 25.95 | -89.12 | -21.47 | -975.24 | 1,215.78 | 1,165.33 | 50.45 | 24.099 | |
| 8,300.00 | 8,290.23 | 8,190.93 | 8,128.84 | 29.37 | 26.15 | -89.12 | -21.34 | -988.18 | 1,228.84 | 1,177.89 | 50.94 | 24.122 | |
| 8,400.00 | 8,390.23 | 8,333.57 | 8,270.53 | 29.72 | 26.48 | -89.13 | -21.18 | -1,004.47 | 1,240.30 | 1,188.65 | 51.65 | 24.011 | |
| 8,500.00 | 8,490.23 | 8,481.44 | 8,417.97 | 30.08 | 26.78 | -89.13 | -21.06 | -1,015.77 | 1,247.95 | 1,195.60 | 52.34 | 23.842 | |
| 8,600.00 | 8,590.23 | 8,629.98 | 8,566.39 | 30.43 | 27.05 | -89.13 | -21.01 | -1,021.36 | 1,251.72 | 1,198.73 | 52.98 | 23.625 | |
| 8,652.77 | 8,643.00 | 8,708.48 | 8,644.88 | 30.62 | 27.17 | -89.13 | -21.00 | -1,021.99 | 1,252.14 | 1,198.84 | 53.30 | 23.494 | |
| 8,700.00 | 8,690.18 | 8,752.77 | 8,689.18 | 30.78 | 27.24 | -88.97 | -21.00 | -1,022.00 | 1,252.11 | 1,198.57 | 53.54 | 23.386 | |
| 8,750.00 | 8,739.76 | 8,802.36 | 8,738.76 | 30.95 | 27.31 | -89.27 | -21.00 | -1,022.00 | 1,252.01 | 1,198.21 | 53.80 | 23.272 | |
| 8,800.00 | 8,788.62 | 8,851.21 | 8,787.62 | 31.12 | 27.39 | -89.75 | -21.00 | -1,022.00 | 1,251.92 | 1,197.86 | 54.05 | 23.160 | |
| 8,820.80 | 8,808.63 | 8,871.22 | 8,807.63 | 31.19 | 27.42 | -90.00 | -21.00 | -1,022.00 | 1,251.91 | 1,197.75 | 54.16 | 23.115 | |
| 8,850.00 | 8,836.36 | 8,901.05 | 8,835.36 | 31.29 | 27.46 | -90.39 | -21.00 | -1,022.00 | 1,251.94 | 1,197.63 | 54.31 | 23.052 | |
| 8,900.00 | 8,882.63 | 8,945.22 | 8,881.63 | 31.44 | 27.53 | -91.17 | -21.00 | -1,022.00 | 1,252.22 | 1,197.67 | 54.55 | 22.954 | |
| 8,950.00 | 8,927.08 | 8,989.67 | 8,926.08 | 31.59 | 27.60 | -92.02 | -21.00 | -1,022.00 | 1,252.94 | 1,198.14 | 54.80 | 22.865 | |
| 9,000.00 | 8,969.36 | 9,031.96 | 8,968.36 | 31.72 | 27.67 | -92.92 | -21.00 | -1,022.00 | 1,254.31 | 1,199.27 | 55.04 | 22.789 | |
| 9,050.00 | 9,009.16 | 9,071.76 | 9,008.16 | 31.85 | 27.73 | -93.79 | -21.00 | -1,022.00 | 1,256.54 | 1,201.26 | 55.28 | 22.730 | |
| 9,100.00 | 9,046.18 | 9,108.77 | 9,045.18 | 31.96 | 27.79 | -94.59 | -21.00 | -1,022.00 | 1,259.87 | 1,204.34 | 55.52 | 22.691 | |
| 9,150.00 | 9,080.13 | 9,142.72 | 9,079.13 | 32.08 | 27.85 | -95.25 | -21.00 | -1,022.00 | 1,264.51 | 1,208.74 | 55.77 | 22.674 | |
| 9,200.00 | 9,110.75 | 9,173.34 | 9,109.75 | 32.22 | 27.90 | -95.73 | -21.00 | -1,022.00 | 1,270.67 | 1,214.66 | 56.02 | 22.684 | |
| 9,250.00 | 9,137.81 | 9,200.40 | 9,136.81 | 32.37 | 27.94 | -95.97 | -21.00 | -1,022.00 | 1,278.54 | 1,222.28 | 56.27 | 22.723 | |

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

# Pro Directional

## Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 217H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

**Survey Program:** 0-MWD - OWSG, 5500-MWD - OWSG, 13004-MWD - OWSG — Offset Well Error: 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,300.00 | 9,161.10 | 9,223.69 | 9,160.10 | 32.54 | 27.98 | -95.92 | -21.00 | -1,022.00 | 1,288.25 | 1,231.73 | 56.52 | 22.794 | |
| 9,350.00 | 9,180.45 | 9,243.04 | 9,179.45 | 32.72 | 28.01 | -95.53 | -21.00 | -1,022.00 | 1,299.89 | 1,243.12 | 56.77 | 22.898 | |
| 9,400.00 | 9,195.71 | 9,258.30 | 9,194.71 | 32.91 | 28.04 | -94.78 | -21.00 | -1,022.00 | 1,313.51 | 1,256.49 | 57.02 | 23.037 | |
| 9,452.77 | 9,207.25 | 9,269.85 | 9,206.25 | 33.11 | 28.06 | -93.56 | -21.00 | -1,022.00 | 1,329.99 | 1,272.71 | 57.27 | 23.221 | |
| 9,477.77 | 9,211.59 | 9,274.19 | 9,210.59 | 33.22 | 28.06 | -93.76 | -21.00 | -1,022.00 | 1,338.50 | 1,281.11 | 57.40 | 23.321 | |
| 9,500.00 | 9,215.20 | 9,277.79 | 9,214.20 | 33.31 | 28.07 | -93.41 | -21.00 | -1,022.00 | 1,346.41 | 1,288.91 | 57.50 | 23.414 | |
| 9,550.00 | 9,221.44 | 9,284.03 | 9,220.44 | 33.53 | 28.08 | -92.45 | -21.00 | -1,022.00 | 1,365.41 | 1,307.66 | 57.75 | 23.645 | |
| 9,600.00 | 9,225.07 | 9,287.66 | 9,224.07 | 33.76 | 28.09 | -91.26 | -21.00 | -1,022.00 | 1,385.98 | 1,327.99 | 57.98 | 23.903 | |
| 9,644.49 | 9,226.11 | 9,288.70 | 9,225.11 | 33.97 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,405.53 | 1,347.34 | 58.19 | 24.156 | |
| 9,700.00 | 9,226.10 | 9,288.70 | 9,225.10 | 34.25 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,431.47 | 1,373.03 | 58.44 | 24.495 | |
| 9,800.00 | 9,226.10 | 9,288.69 | 9,225.10 | 34.82 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,482.31 | 1,423.41 | 58.89 | 25.169 | |
| 9,900.00 | 9,226.10 | 9,288.69 | 9,225.10 | 35.45 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,537.98 | 1,478.64 | 59.34 | 25.918 | |
| 10,000.00 | 9,226.10 | 9,288.69 | 9,225.10 | 36.14 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,597.97 | 1,538.20 | 59.77 | 26.735 | |
| 10,100.00 | 9,226.09 | 9,288.69 | 9,225.09 | 36.90 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,661.82 | 1,601.64 | 60.18 | 27.614 | |
| 10,200.00 | 9,226.09 | 9,288.68 | 9,225.09 | 37.71 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,729.10 | 1,668.54 | 60.56 | 28.551 | |
| 10,300.00 | 9,226.09 | 9,288.68 | 9,225.09 | 38.58 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,799.42 | 1,738.51 | 60.92 | 29.539 | |
| 10,400.00 | 9,226.09 | 9,288.68 | 9,225.09 | 39.49 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,872.45 | 1,811.20 | 61.25 | 30.573 | |
| 10,500.00 | 9,226.08 | 9,288.68 | 9,225.08 | 40.46 | 28.09 | -90.00 | -21.00 | -1,022.00 | 1,947.87 | 1,886.32 | 61.55 | 31.648 | |
| 10,600.00 | 9,226.08 | 9,288.67 | 9,225.08 | 41.47 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,025.42 | 1,963.60 | 61.83 | 32.760 | |
| 10,700.00 | 9,226.08 | 9,288.67 | 9,225.08 | 42.52 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,104.87 | 2,042.79 | 62.08 | 33.905 | |
| 10,800.00 | 9,226.08 | 9,288.67 | 9,225.08 | 43.60 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,186.00 | 2,123.69 | 62.31 | 35.080 | |
| 10,900.00 | 9,226.07 | 9,288.67 | 9,225.07 | 44.73 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,268.64 | 2,206.11 | 62.53 | 36.281 | |
| 11,000.00 | 9,226.07 | 9,288.66 | 9,225.07 | 45.88 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,352.63 | 2,289.90 | 62.73 | 37.505 | |
| 11,100.00 | 9,226.07 | 9,288.66 | 9,225.07 | 47.06 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,437.83 | 2,374.92 | 62.91 | 38.751 | |
| 11,200.00 | 9,226.07 | 9,288.66 | 9,225.07 | 48.28 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,524.11 | 2,461.03 | 63.08 | 40.015 | |
| 11,300.00 | 9,226.06 | 9,288.66 | 9,225.06 | 49.52 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,611.38 | 2,548.14 | 63.24 | 41.295 | |
| 11,400.00 | 9,226.06 | 9,288.65 | 9,225.06 | 50.78 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,699.52 | 2,636.14 | 63.38 | 42.591 | |
| 11,500.00 | 9,226.06 | 9,288.65 | 9,225.06 | 52.06 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,788.47 | 2,724.95 | 63.52 | 43.900 | |
| 11,600.00 | 9,226.06 | 9,288.65 | 9,225.06 | 53.37 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,878.14 | 2,814.50 | 63.65 | 45.222 | |
| 11,700.00 | 9,226.06 | 9,288.65 | 9,225.06 | 54.69 | 28.09 | -90.00 | -21.00 | -1,022.00 | 2,968.47 | 2,904.71 | 63.76 | 46.553 | |
| 11,800.00 | 9,226.05 | 9,288.64 | 9,225.05 | 56.03 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,059.41 | 2,995.53 | 63.88 | 47.895 | |
| 11,900.00 | 9,226.05 | 9,288.64 | 9,225.05 | 57.39 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,150.89 | 3,086.91 | 63.98 | 49.245 | |
| 12,000.00 | 9,226.05 | 9,288.64 | 9,225.05 | 58.77 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,242.88 | 3,178.79 | 64.09 | 50.603 | |
| 12,100.00 | 9,226.05 | 9,288.64 | 9,225.05 | 60.15 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,335.32 | 3,271.14 | 64.18 | 51.967 | |
| 12,200.00 | 9,226.04 | 9,288.64 | 9,225.04 | 61.56 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,428.20 | 3,363.92 | 64.27 | 53.338 | |
| 12,300.00 | 9,226.04 | 9,288.63 | 9,225.04 | 62.97 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,521.46 | 3,457.10 | 64.36 | 54.714 | |
| 12,400.00 | 9,226.04 | 9,288.63 | 9,225.04 | 64.40 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,615.08 | 3,550.63 | 64.45 | 56.095 | |
| 12,500.00 | 9,226.04 | 9,288.63 | 9,225.04 | 65.83 | 28.09 | -90.00 | -21.00 | -1,022.00 | 3,709.03 | 3,644.51 | 64.53 | 57.480 | |
| 12,600.00 | 9,226.03 | 16,115.93 | 12,718.03 | 67.28 | 68.02 | -160.24 | 3,568.45 | -1,050.93 | 3,711.51 | 3,632.10 | 79.42 | 46.735 | |
| 12,700.00 | 9,226.03 | 16,215.93 | 12,718.03 | 68.74 | 69.42 | -160.24 | 3,668.45 | -1,051.81 | 3,711.54 | 3,630.64 | 80.91 | 45.874 | |
| 12,800.00 | 9,226.03 | 16,315.93 | 12,718.03 | 70.20 | 70.84 | -160.24 | 3,768.44 | -1,052.69 | 3,711.58 | 3,629.16 | 82.41 | 45.035 | |
| 12,900.00 | 9,226.03 | 16,415.93 | 12,718.03 | 71.68 | 72.26 | -160.24 | 3,868.44 | -1,053.56 | 3,711.61 | 3,627.67 | 83.94 | 44.220 | |
| 13,000.00 | 9,226.02 | 16,515.93 | 12,718.02 | 73.16 | 73.70 | -160.24 | 3,968.44 | -1,054.44 | 3,711.64 | 3,626.17 | 85.47 | 43.427 | |
| 13,100.00 | 9,226.02 | 16,615.93 | 12,718.02 | 74.65 | 75.15 | -160.23 | 4,068.43 | -1,055.32 | 3,711.67 | 3,624.66 | 87.01 | 42.656 | |
| 13,200.00 | 9,226.02 | 16,715.92 | 12,718.02 | 76.14 | 76.60 | -160.23 | 4,168.43 | -1,056.20 | 3,711.71 | 3,623.13 | 88.57 | 41.906 | |
| 13,300.00 | 9,226.02 | 16,815.92 | 12,718.02 | 77.65 | 78.07 | -160.23 | 4,268.42 | -1,057.07 | 3,711.74 | 3,621.60 | 90.14 | 41.177 | |
| 13,400.00 | 9,226.01 | 16,915.92 | 12,718.01 | 79.16 | 79.54 | -160.23 | 4,368.42 | -1,057.95 | 3,711.77 | 3,620.05 | 91.72 | 40.468 | |
| 13,500.00 | 9,226.01 | 17,015.92 | 12,718.01 | 80.67 | 81.02 | -160.23 | 4,468.42 | -1,058.83 | 3,711.80 | 3,618.49 | 93.31 | 39.778 | |
| 13,600.00 | 9,226.01 | 17,115.92 | 12,718.01 | 82.19 | 82.51 | -160.23 | 4,568.41 | -1,059.70 | 3,711.84 | 3,616.92 | 94.91 | 39.108 | |
| 13,700.00 | 9,226.01 | 17,215.92 | 12,718.01 | 83.72 | 84.00 | -160.23 | 4,668.41 | -1,060.58 | 3,711.87 | 3,615.35 | 96.52 | 38.457 | |
| 13,800.00 | 9,226.00 | 17,315.92 | 12,718.00 | 85.25 | 85.51 | -160.22 | 4,768.40 | -1,061.46 | 3,711.90 | 3,613.76 | 98.14 | 37.823 | |
| 13,900.00 | 9,226.00 | 17,415.92 | 12,718.00 | 86.78 | 87.01 | -160.22 | 4,868.40 | -1,062.34 | 3,711.93 | 3,612.17 | 99.76 | 37.207 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Biggers Fed Com - 217H - OH - Prelim Plan A — Offset Site Error: 0.00 usft

Survey Program: 0-MWD - OWSG, 5500-MWD - OWSG, 13004-MWD - OWSG — Offset Well Error: 0.00 usft

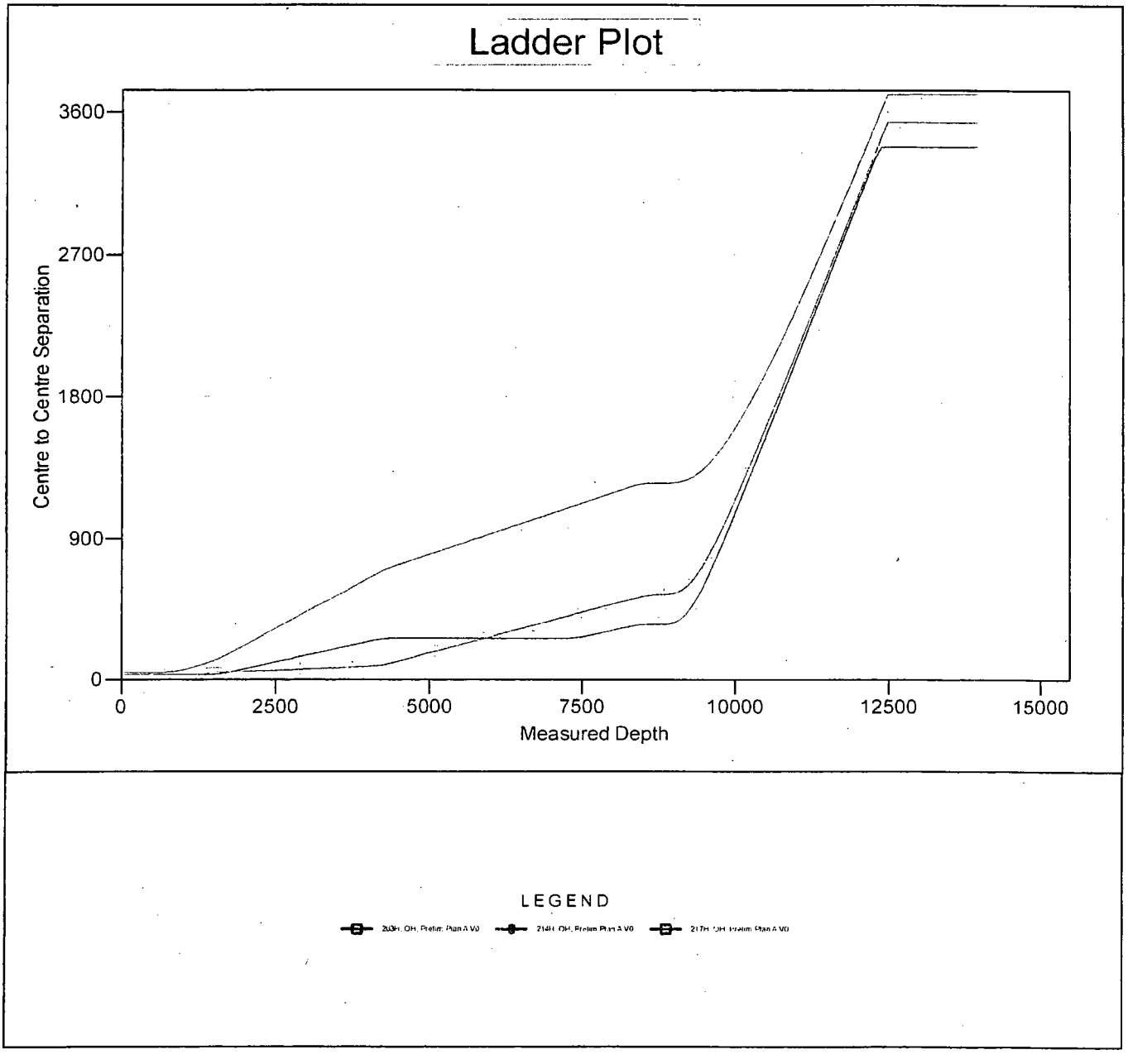
| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13,971.67 | 9,226.00 | 17,487.59 | 12,718.00 | 87.89 | 88.10 | -160.22 | 4,940.07 | -1,062.97 | 3,711.96 | 3,611.02 | 100.93 | 36.776 | |

# Pro Directional

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

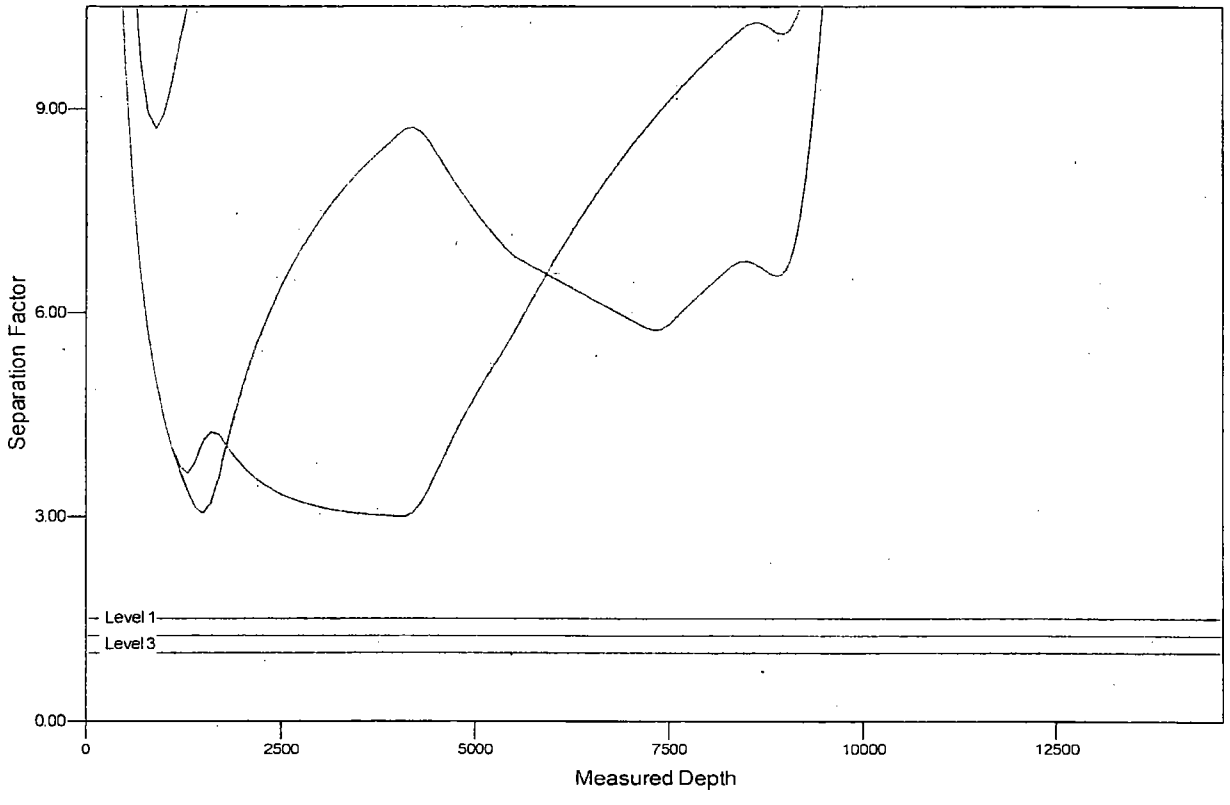
| | |
|---|---|
| Reference Depths are relative to RIG @ 3362.00usft (GL:3333'+KB:29' | Coordinates are relative to: 024H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 |
| Central Meridian is 104° 20' 0.000 W | Grid Convergence at Surface is: 0.50° |

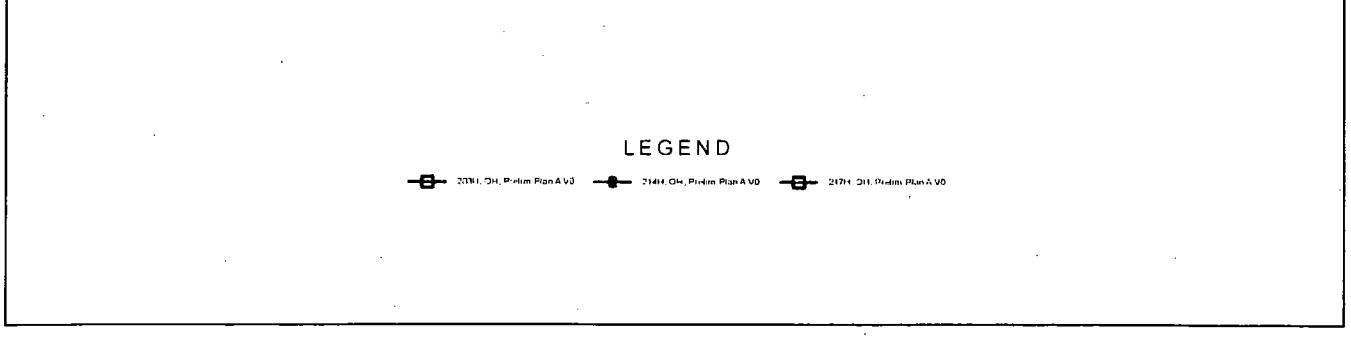


| | | | |
|---|---|---|---|
| **Company:** | Matador Resources | **Local Co-ordinate Reference:** | Well 024H |
| **Project:** | Lea County, NM | **TVD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Reference Site:** | Biggers Fed Com | **MD Reference:** | RIG @ 3362.00usft (GL:3333'+KB:29') |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | 024H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | OH | **Database:** | WellPlanner1 |
| **Reference Design:** | Prelim Plan A | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| Reference Depths are relative to RIG @ 3362.00usft (GL:3333'+KB:29' | Coordinates are relative to: 024H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 |
| Central Meridian is 104° 20' 0.000 W | Grid Convergence at Surface is: 0.50° |

## Separation Factor Plot




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

Matador Production Company
Biggers Fed Com 24H
SHL 90' FSL & 1226' FEL
BHL 240' FNL & 994' FEL
Sec. 18, T. 25 S., R. 35 E., Lea County, NM



Drilling Program

1. ESTIMATED TOPS

| Formation Name | TVD | MD | Bearing |
|---|---|---|---|
| Quaternary | 000' | 000' | water |
| Dewey Lake red beds sandstone | 441' | 441' | water |
| Rustler anydrite | 931' | 931' | barren |
| Top salt | 1448' | 1448' | barren |
| Castile anhydrite | 3738' | 3746' | barren |
| Base salt | 5449' | 5459' | barren |
| Bell Canyon sandstone | 5489' | 5499' | hydrocarbons |
| Cherry Canyon sandstone | 6492' | 6502' | hydrocarbons |
| Brushy Canyon sandstone | 7963' | 7973' | hydrocarbons & goal |
| (KOP | 8690' | 8700' | hydrocarbons) |
| TD | 9226' | 13972' | hydrocarbons |

2. NOTABLE ZONES

Brushy Canyon is the goal. Hole will extend north of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. Closest water well (C 02296) is 3693' north. Depth to water is 230' in this 300' deep well.

3. PRESSURE CONTROL

A 10,000' 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 and choke manifold diagrams.

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

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

A third party company will test the BOPs.

Surface casing will be pressure tested to 250 psi low and 2000 psi high. Intermediate casing pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing and tested to 250 psi low and 2500 psi high on the intermediate casing. In the case of running a speed head with landing mandrel for 9.625" casing, initial surface casing test pressures will be 250 psi low and 3000 psi high. Annular will be tested to 250 psi low and 2500 psi high. Wellhead seals will be tested to 5000 psi once the 9.625" casing has been landed and cemented.

Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 5.5" x 2.875". Wellhead diagram 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.

| Hole O. D. | Set MD | Set TVD | Casing O. D. | Weight (lb/ft) | Grade | Joint | Collapse | Burst | Tension |
|---|---|---|---|---|---|---|---|---|---|
| 17.5" | 0' - 1000' | 0' - 1000' | Surface 13.375" | 54.5 | J-55 | BTC | 1.125 | 1.125 | 1.8 |
| 12.25" | 0' - 5600' | 0' - 5590' | Inter. 9.625" | 40 | J-55 | BTC | 1.125 | 1.125 | 1.8 |
| 8.75" | 0' - 13972' | 0' – 9226' | Product. 5.5" | 20 | P-110 | BTC/TXP | 1.125 | 1.125 | 1.8 |

| Casing Name | Type | Sacks | Yield | Cu. Ft. | Weight | Blend |
|---|---|---|---|---|---|---|
| Surface | Lead | 210 | 1.82 | 382 | 12.8 | Class C + bentonite + 2% CaCl + 3% NaCl + LCM |
| | Tail | 740 | 1.38 | 1021 | 14.8 | Class C + 5% NaCl + LCM |
| TOC = GL | | 100% Excess | | | Centralizers per Onshore Order 2 | |
| Intermediate | Lead | 1170 | 2.13 | 2492 | 12.6 | Class C + Bentonite + 1% $CaCl_2$ + 8% NaCl + LCM |
| | Tail | 620 | 1.38 | 855 | 14.8 | Class C + 5% NaCl + LCM |
| TOC = GL | | 100% Excess | | | 2 on btm jt, 1 on 2nd jt, 1 every 4th jt to GL | |
| Production | Lead | 721 | 2.35 | 1694 | 11.5 | TXI + Fluid Loss + Dispersant + Retarder + LCM |
| | Tail | 1250 | 1.39 | 1737 | 13.2 | TXI + Fluid Loss + Dispersant + Retarder + LCM |
| TOC = 4600' | | 35% Excess | | | 2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (1000' above TOC) | |

5. MUD PROGRAM

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

| Type | Interval (MD) | lb/gal | Viscosity | Fluid Loss |
|---|---|---|---|---|
| fresh water spud | 0' - 1000' | 8.3 | 28 | NC |
| brine water | 1000' - 5600' | 10.0 | 30-32 | NC |
| fresh water & cut brine | 5600' - 13972' | 9.0 | 30-32 | NC |

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud logging program will be used from ≈5600' 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 ≈5000 psi. Expected bottom hole temperature is ≈130° F.

Matador does not anticipate that there will be enough $H_2S$ to meet BLM's Onshore Order 6 requirements for submitting an "$H_2S$ Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Matador has an $H_2S$ safety package on all wells and an "$H_2S$ Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may

be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈2 months to drill and complete the well.

Matador Production Company owns the majority working interest in this well. Per its discussions with its potential partners, Matador will be named operator upon execution of the final Operating Agreements signed by the partners or the issuance of a pooling order by the State.

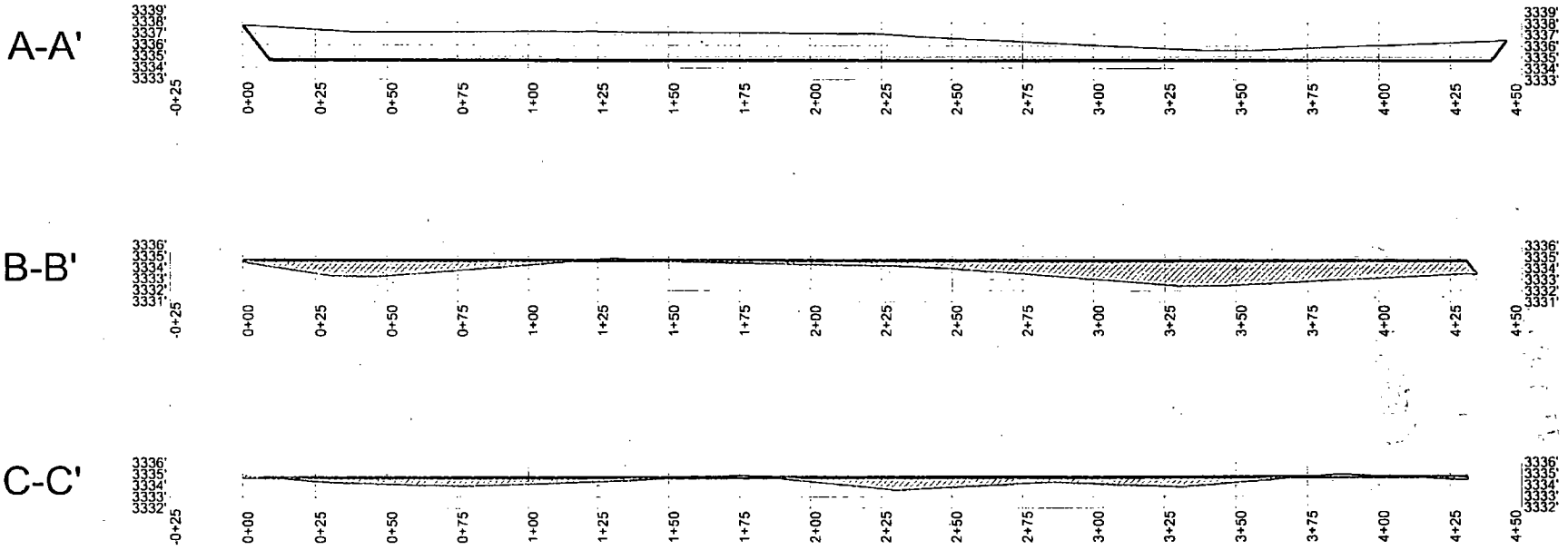
TOP OF PAD ELEVATION: 3334.7'

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

PAD EARTHWORK VOLUMES
CUT : 79,304.6 C.F., 2,937.21 C.Y.
FILL: 79,304.4 C.F., 2,937.20 C.Y.
BALANCE EXPORT: 0.2 C.F., 0.01 C.Y.
AREA: 166088.8 SQ.FT., 3.813 ACRES

# SECTIONS 18 & 19, TOWNSHIP 25-S, RANGE 35-E, N.M.P.M.
# LEA COUNTY, NEW MEXICO

Matador PRODUCTION COMPANY




TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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

Horizontal Scale = 1:60
Vertical Scale = 1:15

| BIGGERS FED COM | REVISION: | |
|---|---|---|
| | MML | 11/03/16 |
| SURFACE PAD SITE PROFILE | | |
| | | |
| DATE: 10/03/16 | | |
| FILE: CD_BIGGERS_FED_COM_203H_SURFACE_PAD_SITE_PRO_REV1 | | |
| DRAWN BY: GJU | | |
| SHEET : 2 OF 2 | | |

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

MAP 9

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
NOVEMBER 03, 2016
Field note description of even date accompanies this plat.

S:\SURVEY\MATADOR_RESOURCES\BIGGERS_FED_COM_203H_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_BIGGERS_FED_COM_203H_SURFACE_PAD_SITE_PRO_REV1.DWG 11/3/2016 4:23:08 PM jstovall

Matador Production Company
Biggers Fed Com 24H
SHL 90' FSL & 1226' FEL
BHL 240' FSL & 994' FEL
Sec. 18, T. 20 S., R. 35 E., Lea County, NM



Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 - 5)

From the junction of NM 18 and NM 128 in Jal...
Go West 13.8 miles on NM 128 to the equivalent of Mile Post 38.7
Then turn left and go South 4.3 miles on a caliche road to a T-junction
Then turn left and go Southeast 2/3 mile on a caliche road
Then turn left and go Northeast 579.65' cross-country to the SW pad corner

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

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 4 & 5)

The 579.65' of new resource road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 1%. Maximum cut or fill = 2'. No culvert, cattle guard, or vehicle turn out is needed. Upgrading will consist of patching potholes with caliche.

3. EXISTING WELLS (See MAP 3)

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

4. PROPOSED PRODUCTION FACILITIES

Tank battery and related production equipment will be on the south and east sides of the pad. Gas line and power line plans have not been formulated.

5. WATER SUPPLY (See MAP 2)

Water will be trucked from Madera's existing water stations on private land in NWNE 21-24s-34e, SESW 30-24s-34e, and NENE 8-25s-35e.

6. CONSTRUCTION MATERIALS & METHODS (See MAP 2)

NM One Call (811) will be notified before construction starts. Top ≈6" of soil and brush will be stockpiled west of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land (Destiny pit in NENE 4-25s-35e and Madera pit in SENW 6-25s-35e).

7. WASTE DISPOSAL

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

8. ANCILLARY FACILITIES

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

9. WELL SITE LAYOUT (See MAPS 6 & 7)

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

10. RECLAMATION (See MAPS 8 & 9)

Interim reclamation will be completed within 6 months of completing the last well on the pad. Interim reclamation will consist of shrinking the pad ≈33% (1.22 acre) by removing caliche and reclaiming swaths on the west and north sides of the pad. This will leave 2.43 acres for the production equipment (e. g., tank battery, heater-treaters, flare), pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the last well is plugged. Once the last well is plugged, then the rest of the pad will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled. Land use:

579.65' x 30' new road = 0.40 acre
+ 370' x 430' pad = 3.65 acres
4.05 acres short term
- 1.22 acre interim pad reclamation
2.83 acres long term

11. SURFACE OWNER

All construction will be on BLM.

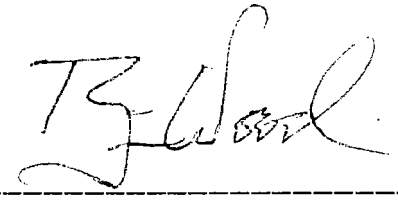
12. OTHER INFORMATION

On site inspection was held with Vance Wolf on October 27, 2016 and with Vance Wolf, Kelly Reid, and Stan Allison (all BLM) on November 30, 2016.

Lone Mountain filed archaeology report NMCRIS-138616 on July 28, 2017.

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 4th day of August, 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