

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

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|-----------------------|-------------------------------------|
| OPERATOR'S NAME:      | Matador Production Company          |
| LEASE NO.:            | NMNM-086150                         |
| WELL NAME & NO.:      | Brad Dyer Federal 221H              |
| SURFACE HOLE FOOTAGE: | 0330' FSL & 0869' FWL               |
| BOTTOM HOLE FOOTAGE   | 0240' FNL & 0330' FWL               |
| LOCATION:             | Section 35, T. 22 S., R 32 E., NMPM |
| COUNTY:               | County, New Mexico                  |

10M will need to be used for drilling below 9-5/8" shoe as the 7-5/8" X 7" will be in the Wolfcamp and average mud weight is 12 lb per e-mail exchange with Matador on 06/11/2018.

### A. DRILLING OPERATIONS REQUIREMENTS

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

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

☐ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,  
(575) 3933612

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the Delaware formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
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.

## **B. 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 Salado and Castile.

Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

Abnormal pressures may be encountered when penetrating the 3<sup>rd</sup> Bone Spring Sandstone and all subsequent formations.

1. The 13-3/8 inch surface casing shall be set at approximately 1215 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) 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.

**Formation below the 13-3/8" shoe to be tested according to Onshore Order**

**2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

**9-5/8" 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 1<sup>st</sup> intermediate casing is:

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

**Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office**

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

☐ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

**Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

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

4. The minimum required fill of cement behind the 5-1/2 X 4-1/2 inch production casing is:

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

5. 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.

#### **C. 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. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
4. 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.

**10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

**Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)**

5. **Operator has the option to utilize a multi-bowl wellhead assembly.**
  - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
  - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
  - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
  - d. **Operator shall perform the 9-5/8" and 7-5/8 X 7" casing integrity tests to 70% of the casing burst. This will test the multi-bowl seals.**
  - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**
6. **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.**
  - 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.
- f. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

#### **D. DRILLING MUD**

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

#### **E. DRILL STEM TEST**

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

#### **F. 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 082318**

**PECOS DISTRICT  
SURFACE USE  
CONDITIONS OF APPROVAL**

|                       |                            |
|-----------------------|----------------------------|
| OPERATOR'S NAME:      | MATADOR PRODUCTION COMPANY |
| LEASE NO.:            | NMNM 086150                |
| WELL NAME & NO.:      | 221H:BRAD DYER FEDERAL     |
| SURFACE HOLE FOOTAGE: | 330'/S & 869'/W            |
| BOTTOM HOLE FOOTAGE   | 240'/N & 330'/W            |
| LOCATION:             | T-22S, R-32E, S35. NMPM    |
| COUNTY:               | LEA, NM                    |

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## **I. GENERAL PROVISIONS**

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

## **II. PERMIT EXPIRATION**

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

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

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

## **IV. NOXIOUS WEEDS**

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

## **V. SPECIAL REQUIREMENT(S)**

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

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

### **Timing Limitation Exceptions:**

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

**Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

### **Fence Requirement**

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

### **Cattle Guard Requirement**

Any new or existing cattle guards on the access 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. Once the road is abandoned, the fence would be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

### **Livestock Watering Requirement**

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

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

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

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control.

## **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**

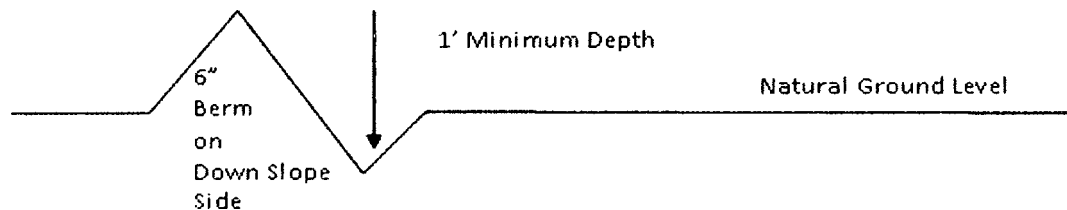
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

**Drainage**

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

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

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



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

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

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

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

#### **Cattle guards**

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

#### **Fence Requirement**

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

#### **Public Access**

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

### Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

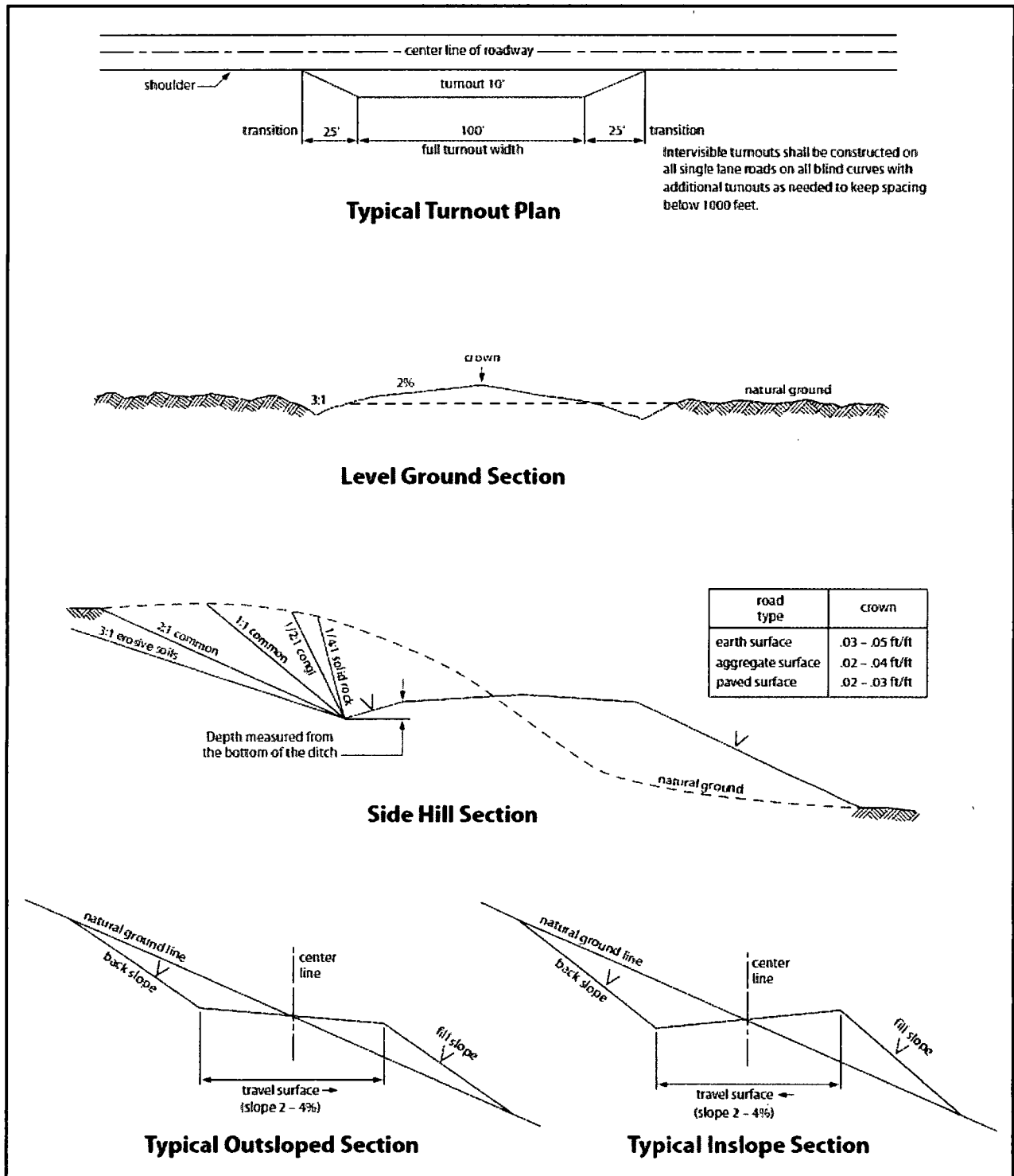


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

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

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

#### **Enclosure 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 Enclosure 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 enclosure 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 Enclosures**

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 enclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

#### **Containment Structures**

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

**Painting Requirement**

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

**B. ELECTRIC LINES**

**STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES**

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the

Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

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

**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

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

## **VIII. INTERIM RECLAMATION**

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

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

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

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

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

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

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

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

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

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

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

## Seed Mixture 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:

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

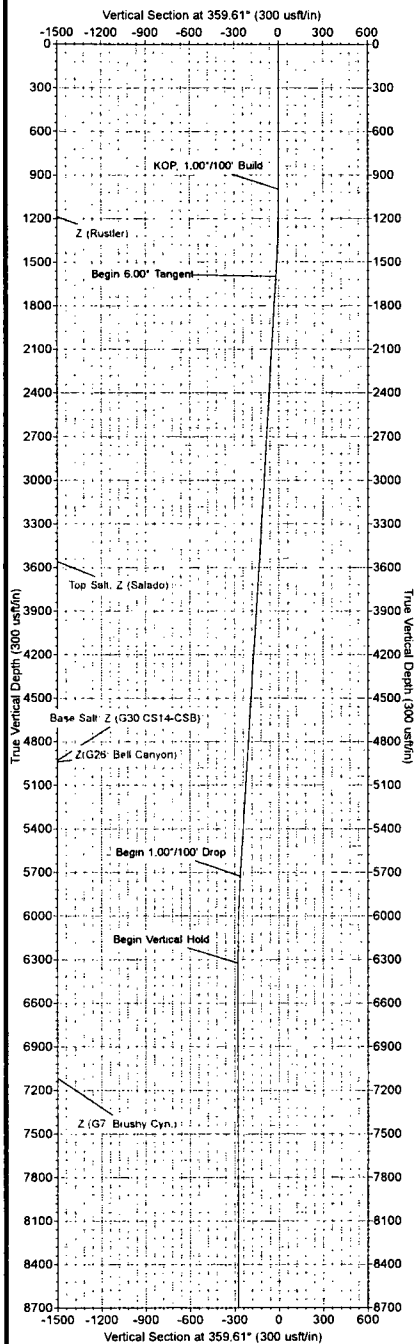
\*Pounds of pure live seed:

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

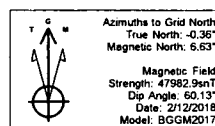


Company: Matador Resources  
Site: Brad Dyer 35-22S-32E AR  
Well: #221H  
Project: Lea County, New Mexico (NAD 27)  
Rig: Patterson 282

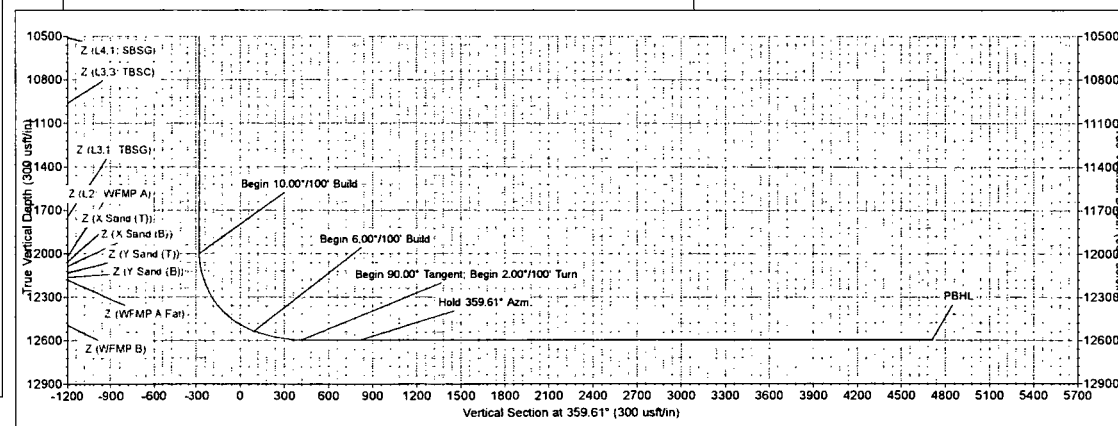
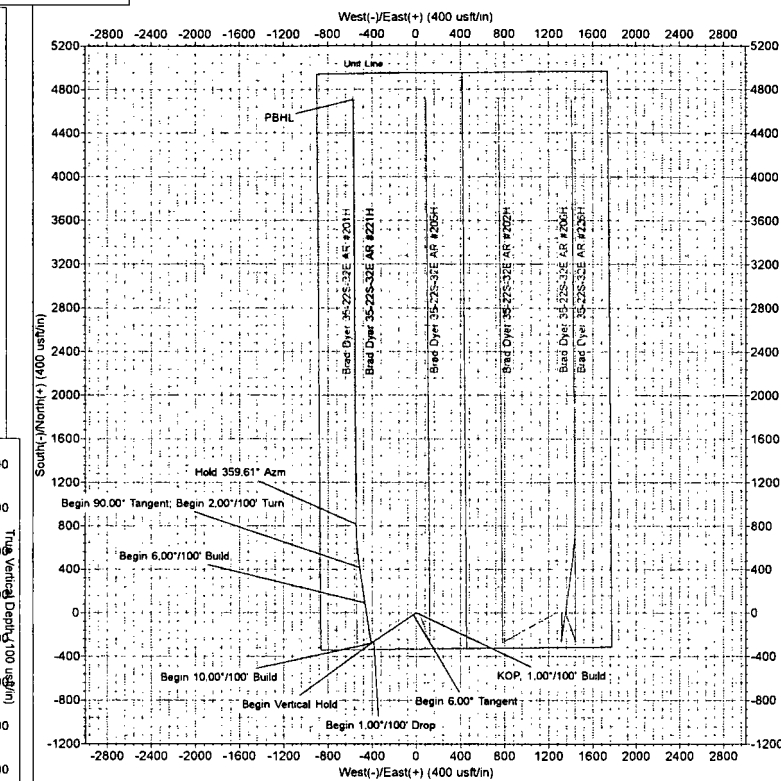
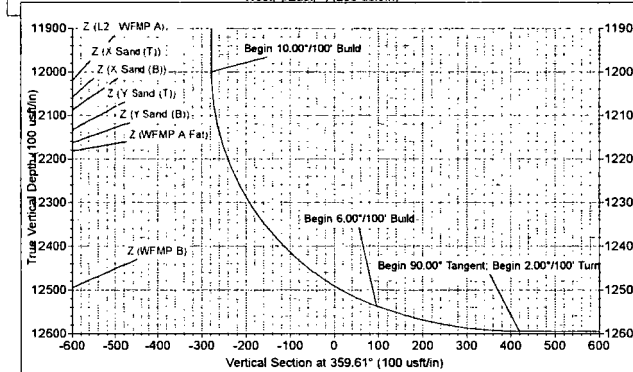
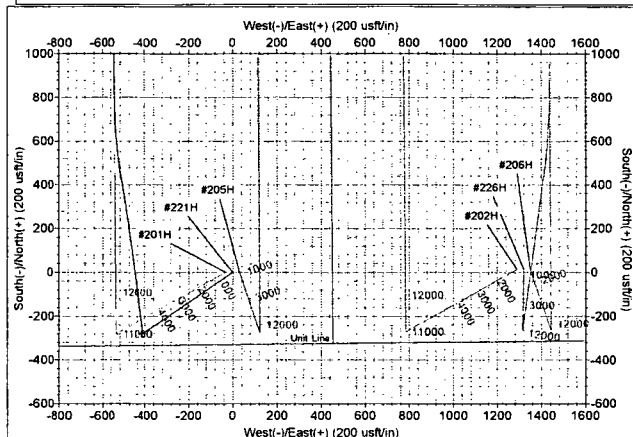
**MS** Directional



| ANNOTATIONS |       |        |          |         |         |         |           |                                             |  |
|-------------|-------|--------|----------|---------|---------|---------|-----------|---------------------------------------------|--|
| MD          | Inc   | Azi    | TVD      | +N-S    | +E-W    | V-Sect  | Departure | Annotation                                  |  |
| 1000.00     | 0.00  | 0.00   | 1000.00  | 0.00    | 0.00    | 0.00    | 0.00      | KOP: 1.00°/100' Build                       |  |
| 1600.00     | 6.00  | 235.66 | 1598.90  | -17.71  | -25.82  | -117.53 | 31.39     | Begin 1.00°/100' Tangent                    |  |
| 5749.93     | 6.00  | 235.66 | 5726.10  | -262.42 | -384.08 | -259.80 | 465.17    | Begin 1.00°/100' Drop                       |  |
| 6349.93     | 0.00  | 0.00   | 6325.00  | -280.13 | -410.00 | -277.33 | 496.56    | Begin Vertical Hold                         |  |
| 12023.94    | 0.00  | 0.00   | 11999.01 | -280.13 | -410.00 | -277.33 | 496.56    | Begin 10.00°/100' Build                     |  |
| 12723.94    | 70.00 | 351.55 | 12537.41 | 92.77   | -465.40 | 95.94   | 873.55    | Begin 6.00°/100' Build                      |  |
| 13057.27    | 90.00 | 351.55 | 12595.00 | 415.83  | -513.39 | 419.32  | 1200.16   | Begin 90.00° Tangent; Begin 2.00°/100' Turn |  |
| 13460.20    | 90.00 | 359.61 | 12595.00 | 817.23  | -544.42 | 820.92  | 1603.09   | Hold 359.61° Azm                            |  |
| 17350.06    | 90.00 | 359.61 | 12595.00 | 4707.00 | -571.00 | 4710.78 | 5492.95   | PBHL                                        |  |



| WELL DETAILS: #221H                                                 |      |           |                  |
|---------------------------------------------------------------------|------|-----------|------------------|
| +N-S                                                                | +E-W | Northing  | 3733.00          |
| 0.00                                                                | 0.00 | Easting   | 458710.00        |
|                                                                     |      | Latitude  | 32° 20' 30.237 N |
|                                                                     |      | Longitude | 103° 39' 2.465 W |
| US State Plane 1927 (Exact solution)<br>New Mexico East 3001        |      |           |                  |
| Created By: HLH<br>Date: 15.09. February 15 2018<br>Plan: Design #2 |      |           |                  |



# Matador Production Company

Brad Dyer Federal #221H  
H<sub>2</sub>S Contingency Plan:  
2 Mile Radius Map

Section 35, Township 22S, Range 32E  
Lea County, New Mexico

⊙ Surface Hole Location

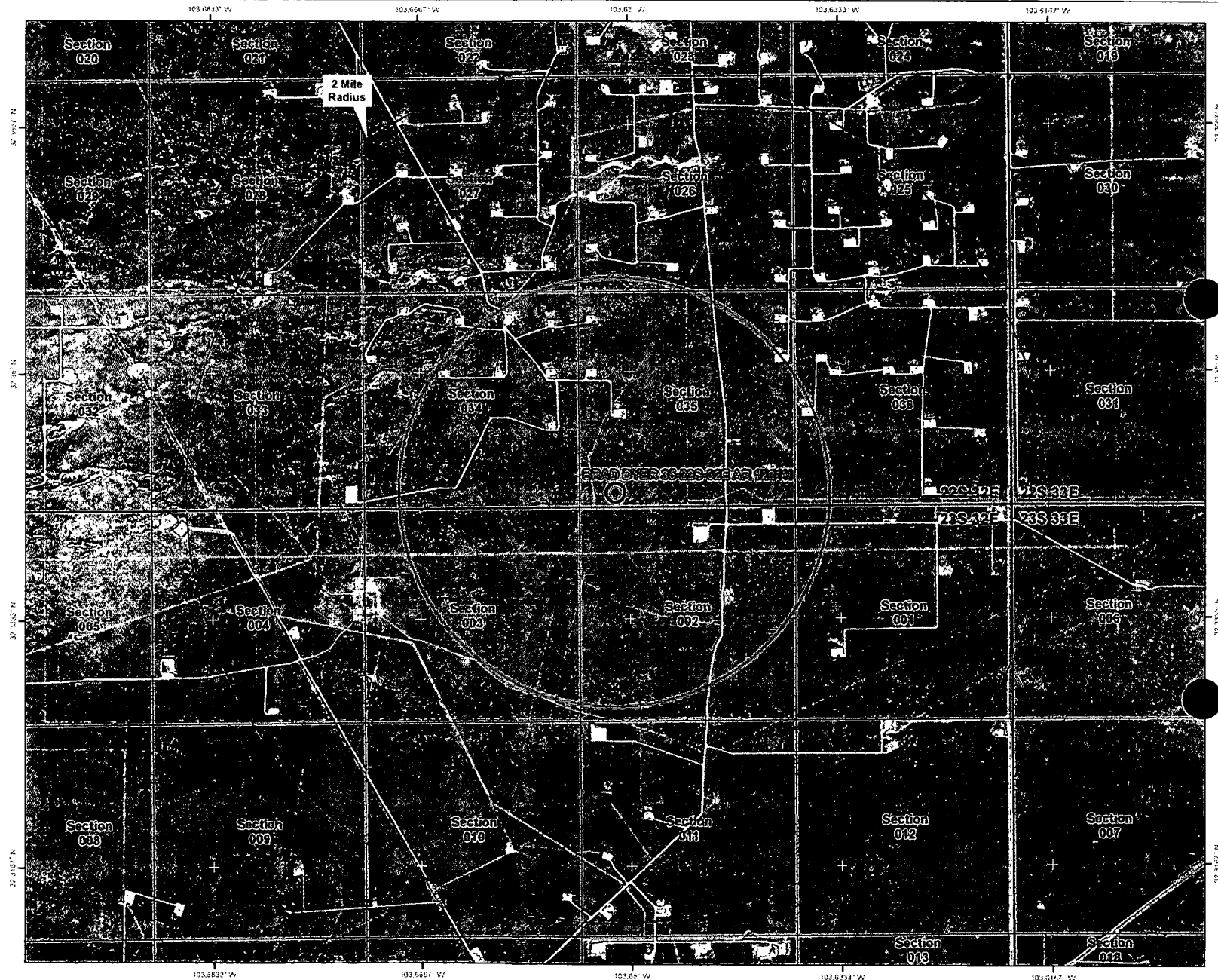
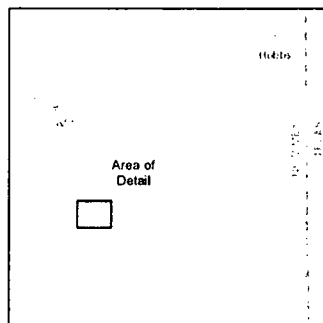
1:27,000  
0 0.25 0.5 1  
Miles



NAD 1983 New Mexico State Plane East  
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., March 28, 2018  
for Matador Production Company





# **Matador Resources**

**Lea County, New Mexico (NAD 27)**

**Brad Dyer 35-22S-32E AR**

**#221H**

**Wellbore #1**

**Plan: Design #2**

## **Standard Planning Report**

**15 February, 2018**





# MS Directional Planning Report



Database: EDM Conroe  
Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Site: Brad Dyer 35-22S-32E AR  
Well: #221H  
Wellbore: Wellbore #1  
Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County, New Mexico (NAD 27)      |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                             |              |                 |                            |                 |                                    |
|-----------------------------|--------------|-----------------|----------------------------|-----------------|------------------------------------|
| <b>Well</b>                 | #221H        |                 |                            |                 |                                    |
| <b>Well Position</b>        | <b>+N/-S</b> | 488,710.00 usft | <b>Northing:</b>           | 488,710.00 usft | <b>Latitude:</b> 32° 20' 30.237 N  |
|                             | <b>+E/-W</b> | 710,831.00 usft | <b>Easting:</b>            | 710,831.00 usft | <b>Longitude:</b> 103° 39' 2.465 W |
| <b>Position Uncertainty</b> |              | 0.00 usft       | <b>Wellhead Elevation:</b> |                 | <b>Ground Level:</b> 3,733.00 usft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2017          | 2/12/2018          | 7.00                   | 60.13                | 47,983                     |

|                          |                                |                     |                      |                      |  |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| <b>Design</b>            | Design #2                      |                     |                      |                      |  |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                  | PROTOTYPE           | <b>Tie On Depth:</b> | 0.00                 |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |  |
|                          | 0.00                           | 0.00                | 0.00                 | 359.61               |  |

|                                 |                        |                                   |                  |                     |  |
|---------------------------------|------------------------|-----------------------------------|------------------|---------------------|--|
| <b>Plan Survey Tool Program</b> |                        | <b>Date</b> 2/15/2018             |                  |                     |  |
| <b>Depth From (usft)</b>        | <b>Depth To (usft)</b> | <b>Survey (Wellbore)</b>          | <b>Tool Name</b> | <b>Remarks</b>      |  |
| 1                               | 0.00                   | 17,349.65 Design #2 (Wellbore #1) | MWD              | OWSG MWD - Standard |  |

## Plan Sections

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target              |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|---------------------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.00    |                     |
| 1,000.00              | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.00    |                     |
| 1,600.00              | 6.00            | 235.66      | 1,598.90              | -17.71       | -25.92       | 1.00                    | 1.00                   | 0.00                  | 235.66  |                     |
| 5,749.93              | 6.00            | 235.66      | 5,726.10              | -262.42      | -384.08      | 0.00                    | 0.00                   | 0.00                  | 0.00    |                     |
| 6,349.93              | 0.00            | 0.00        | 6,325.00              | -280.13      | -410.00      | 1.00                    | -1.00                  | 0.00                  | 180.00  | VP v2 - Brad Dyer # |
| 12,023.94             | 0.00            | 0.00        | 11,999.01             | -280.13      | -410.00      | 0.00                    | 0.00                   | 0.00                  | 0.00    |                     |
| 12,723.94             | 70.00           | 351.55      | 12,537.41             | 92.77        | -465.40      | 10.00                   | 10.00                  | 0.00                  | 351.55  |                     |
| 13,057.27             | 90.00           | 351.55      | 12,595.00             | 415.83       | -513.39      | 6.00                    | 6.00                   | 0.00                  | 0.00    |                     |
| 13,460.20             | 90.00           | 359.61      | 12,595.00             | 817.23       | -544.42      | 2.00                    | 0.00                   | 2.00                  | 90.00   |                     |
| 17,350.06             | 90.00           | 359.61      | 12,595.00             | 4,707.00     | -571.00      | 0.00                    | 0.00                   | 0.00                  | 0.00    | PBHL - Brad Dyer #  |



# MS Directional Planning Report



Database: EDM Conroe  
Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Site: Brad Dyer 35-22S-32E AR  
Well: #221H  
Wellbore: Wellbore #1  
Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

## 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                  |
| 1,000.00                     | 0.00            | 0.00        | 1,000.00              | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| <b>KOP, 1.00°/100' Build</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,100.00                     | 1.00            | 235.66      | 1,099.99              | -0.49        | -0.72        | -0.49                   | 1.00                    | 1.00                   | 0.00                  |
| 1,200.00                     | 2.00            | 235.66      | 1,199.96              | -1.97        | -2.88        | -1.95                   | 1.00                    | 1.00                   | 0.00                  |
| 1,300.00                     | 3.00            | 235.66      | 1,299.86              | -4.43        | -6.48        | -4.39                   | 1.00                    | 1.00                   | 0.00                  |
| 1,400.00                     | 4.00            | 235.66      | 1,399.68              | -7.87        | -11.52       | -7.80                   | 1.00                    | 1.00                   | 0.00                  |
| 1,500.00                     | 5.00            | 235.66      | 1,499.37              | -12.30       | -18.00       | -12.18                  | 1.00                    | 1.00                   | 0.00                  |
| 1,600.00                     | 6.00            | 235.66      | 1,598.90              | -17.71       | -25.92       | -17.53                  | 1.00                    | 1.00                   | 0.00                  |
| <b>Begin 6.00° Tangent</b>   |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,700.00                     | 6.00            | 235.66      | 1,698.36              | -23.60       | -34.55       | -23.37                  | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00                     | 6.00            | 235.66      | 1,797.81              | -29.50       | -43.18       | -29.21                  | 0.00                    | 0.00                   | 0.00                  |
| 1,900.00                     | 6.00            | 235.66      | 1,897.26              | -35.40       | -51.81       | -35.04                  | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00                     | 6.00            | 235.66      | 1,996.71              | -41.29       | -60.44       | -40.88                  | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00                     | 6.00            | 235.66      | 2,096.16              | -47.19       | -69.07       | -46.72                  | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00                     | 6.00            | 235.66      | 2,195.62              | -53.09       | -77.70       | -52.56                  | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00                     | 6.00            | 235.66      | 2,295.07              | -58.98       | -86.33       | -58.40                  | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00                     | 6.00            | 235.66      | 2,394.52              | -64.88       | -94.96       | -64.23                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00                     | 6.00            | 235.66      | 2,493.97              | -70.78       | -103.59      | -70.07                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00                     | 6.00            | 235.66      | 2,593.43              | -76.68       | -112.22      | -75.91                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00                     | 6.00            | 235.66      | 2,692.88              | -82.57       | -120.85      | -81.75                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00                     | 6.00            | 235.66      | 2,792.33              | -88.47       | -129.48      | -87.59                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00                     | 6.00            | 235.66      | 2,891.78              | -94.37       | -138.12      | -93.42                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00                     | 6.00            | 235.66      | 2,991.23              | -100.26      | -146.75      | -99.26                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00                     | 6.00            | 235.66      | 3,090.69              | -106.16      | -155.38      | -105.10                 | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00                     | 6.00            | 235.66      | 3,190.14              | -112.06      | -164.01      | -110.94                 | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00                     | 6.00            | 235.66      | 3,289.59              | -117.95      | -172.64      | -116.78                 | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00                     | 6.00            | 235.66      | 3,389.04              | -123.85      | -181.27      | -122.61                 | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00                     | 6.00            | 235.66      | 3,488.50              | -129.75      | -189.90      | -128.45                 | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00                     | 6.00            | 235.66      | 3,587.95              | -135.64      | -198.53      | -134.29                 | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00                     | 6.00            | 235.66      | 3,687.40              | -141.54      | -207.16      | -140.13                 | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00                     | 6.00            | 235.66      | 3,786.85              | -147.44      | -215.79      | -145.96                 | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00                     | 6.00            | 235.66      | 3,886.30              | -153.33      | -224.42      | -151.80                 | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00                     | 6.00            | 235.66      | 3,985.76              | -159.23      | -233.05      | -157.64                 | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00                     | 6.00            | 235.66      | 4,085.21              | -165.13      | -241.68      | -163.48                 | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00                     | 6.00            | 235.66      | 4,184.66              | -171.02      | -250.31      | -169.32                 | 0.00                    | 0.00                   | 0.00                  |
| 4,300.00                     | 6.00            | 235.66      | 4,284.11              | -176.92      | -258.95      | -175.15                 | 0.00                    | 0.00                   | 0.00                  |
| 4,400.00                     | 6.00            | 235.66      | 4,383.57              | -182.82      | -267.58      | -180.99                 | 0.00                    | 0.00                   | 0.00                  |
| 4,500.00                     | 6.00            | 235.66      | 4,483.02              | -188.72      | -276.21      | -186.83                 | 0.00                    | 0.00                   | 0.00                  |
| 4,600.00                     | 6.00            | 235.66      | 4,582.47              | -194.61      | -284.84      | -192.67                 | 0.00                    | 0.00                   | 0.00                  |
| 4,700.00                     | 6.00            | 235.66      | 4,681.92              | -200.51      | -293.47      | -198.51                 | 0.00                    | 0.00                   | 0.00                  |
| 4,800.00                     | 6.00            | 235.66      | 4,781.37              | -206.41      | -302.10      | -204.34                 | 0.00                    | 0.00                   | 0.00                  |
| 4,900.00                     | 6.00            | 235.66      | 4,880.83              | -212.30      | -310.73      | -210.18                 | 0.00                    | 0.00                   | 0.00                  |
| 5,000.00                     | 6.00            | 235.66      | 4,980.28              | -218.20      | -319.36      | -216.02                 | 0.00                    | 0.00                   | 0.00                  |
| 5,100.00                     | 6.00            | 235.66      | 5,079.73              | -224.10      | -327.99      | -221.86                 | 0.00                    | 0.00                   | 0.00                  |



MS Directional  
Planning Report



Database: EDM Conroe  
Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Site: Brad Dyer 35-22S-32E AR  
Well: #221H  
Wellbore: Wellbore #1  
Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,200.00              | 6.00            | 235.66      | 5,179.18              | -229.99      | -336.62      | -227.70                 | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00              | 6.00            | 235.66      | 5,278.64              | -235.89      | -345.25      | -233.53                 | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00              | 6.00            | 235.66      | 5,378.09              | -241.79      | -353.88      | -239.37                 | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00              | 6.00            | 235.66      | 5,477.54              | -247.68      | -362.51      | -245.21                 | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00              | 6.00            | 235.66      | 5,576.99              | -253.58      | -371.14      | -251.05                 | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00              | 6.00            | 235.66      | 5,676.44              | -259.48      | -379.78      | -256.89                 | 0.00                    | 0.00                   | 0.00                  |
| 5,749.93              | 6.00            | 235.66      | 5,726.10              | -262.42      | -384.08      | -259.80                 | 0.00                    | 0.00                   | 0.00                  |
| Begin 1.00°/100' Drop |                 |             |                       |              |              |                         |                         |                        |                       |
| 5,800.00              | 5.50            | 235.66      | 5,775.92              | -265.25      | -388.23      | -262.60                 | 1.00                    | -1.00                  | 0.00                  |
| 5,900.00              | 4.50            | 235.66      | 5,875.54              | -270.17      | -395.42      | -267.47                 | 1.00                    | -1.00                  | 0.00                  |
| 6,000.00              | 3.50            | 235.66      | 5,975.29              | -274.10      | -401.18      | -271.36                 | 1.00                    | -1.00                  | 0.00                  |
| 6,100.00              | 2.50            | 235.66      | 6,075.15              | -277.05      | -405.50      | -274.29                 | 1.00                    | -1.00                  | 0.00                  |
| 6,200.00              | 1.50            | 235.66      | 6,175.09              | -279.02      | -408.38      | -276.24                 | 1.00                    | -1.00                  | 0.00                  |
| 6,300.00              | 0.50            | 235.66      | 6,275.07              | -280.01      | -409.82      | -277.21                 | 1.00                    | -1.00                  | 0.00                  |
| 6,349.93              | 0.00            | 0.00        | 6,325.00              | -280.13      | -410.00      | -277.33                 | 1.00                    | -1.00                  | 0.00                  |
| Begin Vertical Hold   |                 |             |                       |              |              |                         |                         |                        |                       |
| 6,400.00              | 0.00            | 0.00        | 6,375.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00              | 0.00            | 0.00        | 6,475.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00              | 0.00            | 0.00        | 6,575.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00              | 0.00            | 0.00        | 6,675.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00              | 0.00            | 0.00        | 6,775.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 6,900.00              | 0.00            | 0.00        | 6,875.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,000.00              | 0.00            | 0.00        | 6,975.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,100.00              | 0.00            | 0.00        | 7,075.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,200.00              | 0.00            | 0.00        | 7,175.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,300.00              | 0.00            | 0.00        | 7,275.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,400.00              | 0.00            | 0.00        | 7,375.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,500.00              | 0.00            | 0.00        | 7,475.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,600.00              | 0.00            | 0.00        | 7,575.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,700.00              | 0.00            | 0.00        | 7,675.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,800.00              | 0.00            | 0.00        | 7,775.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00              | 0.00            | 0.00        | 7,875.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00              | 0.00            | 0.00        | 7,975.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00              | 0.00            | 0.00        | 8,075.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00              | 0.00            | 0.00        | 8,175.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00              | 0.00            | 0.00        | 8,275.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00              | 0.00            | 0.00        | 8,375.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00              | 0.00            | 0.00        | 8,475.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,600.00              | 0.00            | 0.00        | 8,575.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,700.00              | 0.00            | 0.00        | 8,675.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,800.00              | 0.00            | 0.00        | 8,775.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 8,900.00              | 0.00            | 0.00        | 8,875.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,000.00              | 0.00            | 0.00        | 8,975.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,100.00              | 0.00            | 0.00        | 9,075.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,200.00              | 0.00            | 0.00        | 9,175.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,300.00              | 0.00            | 0.00        | 9,275.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,400.00              | 0.00            | 0.00        | 9,375.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,500.00              | 0.00            | 0.00        | 9,475.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,600.00              | 0.00            | 0.00        | 9,575.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,700.00              | 0.00            | 0.00        | 9,675.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,800.00              | 0.00            | 0.00        | 9,775.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 9,900.00              | 0.00            | 0.00        | 9,875.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,000.00             | 0.00            | 0.00        | 9,975.07              | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,100.00             | 0.00            | 0.00        | 10,075.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |



MS Directional  
Planning Report



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North Reference: Grid  
Survey Calculation Method: Minimum Curvature

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) |
|----------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,200.00                                          | 0.00            | 0.00        | 10,175.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,300.00                                          | 0.00            | 0.00        | 10,275.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,400.00                                          | 0.00            | 0.00        | 10,375.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,500.00                                          | 0.00            | 0.00        | 10,475.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,600.00                                          | 0.00            | 0.00        | 10,575.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,700.00                                          | 0.00            | 0.00        | 10,675.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,800.00                                          | 0.00            | 0.00        | 10,775.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 10,900.00                                          | 0.00            | 0.00        | 10,875.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,000.00                                          | 0.00            | 0.00        | 10,975.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,100.00                                          | 0.00            | 0.00        | 11,075.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,200.00                                          | 0.00            | 0.00        | 11,175.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,300.00                                          | 0.00            | 0.00        | 11,275.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,400.00                                          | 0.00            | 0.00        | 11,375.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,500.00                                          | 0.00            | 0.00        | 11,475.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,600.00                                          | 0.00            | 0.00        | 11,575.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,700.00                                          | 0.00            | 0.00        | 11,675.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,800.00                                          | 0.00            | 0.00        | 11,775.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 11,900.00                                          | 0.00            | 0.00        | 11,875.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 12,000.00                                          | 0.00            | 0.00        | 11,975.07             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| 12,023.94                                          | 0.00            | 0.00        | 11,999.01             | -280.13      | -410.00      | -277.33                 | 0.00                    | 0.00                   | 0.00                  |
| <b>Begin 10.00°/100' Build</b>                     |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,050.00                                          | 2.61            | 351.55      | 12,025.07             | -279.54      | -410.09      | -276.74                 | 10.00                   | 10.00                  | 0.00                  |
| 12,100.00                                          | 7.61            | 351.55      | 12,074.85             | -275.14      | -410.74      | -272.34                 | 10.00                   | 10.00                  | 0.00                  |
| 12,150.00                                          | 12.61           | 351.55      | 12,124.06             | -266.47      | -412.03      | -263.65                 | 10.00                   | 10.00                  | 0.00                  |
| 12,200.00                                          | 17.61           | 351.55      | 12,172.32             | -253.58      | -413.94      | -250.76                 | 10.00                   | 10.00                  | 0.00                  |
| 12,250.00                                          | 22.61           | 351.55      | 12,219.25             | -236.58      | -416.47      | -233.74                 | 10.00                   | 10.00                  | 0.00                  |
| 12,300.00                                          | 27.61           | 351.55      | 12,264.52             | -215.61      | -419.59      | -212.74                 | 10.00                   | 10.00                  | 0.00                  |
| 12,350.00                                          | 32.61           | 351.55      | 12,307.76             | -190.81      | -423.27      | -187.92                 | 10.00                   | 10.00                  | 0.00                  |
| 12,400.00                                          | 37.61           | 351.55      | 12,348.65             | -162.37      | -427.49      | -159.46                 | 10.00                   | 10.00                  | 0.00                  |
| 12,450.00                                          | 42.61           | 351.55      | 12,386.88             | -130.52      | -432.23      | -127.58                 | 10.00                   | 10.00                  | 0.00                  |
| 12,500.00                                          | 47.61           | 351.55      | 12,422.16             | -95.50       | -437.43      | -92.52                  | 10.00                   | 10.00                  | 0.00                  |
| 12,550.00                                          | 52.61           | 351.55      | 12,454.22             | -57.56       | -443.06      | -54.55                  | 10.00                   | 10.00                  | 0.00                  |
| 12,600.00                                          | 57.61           | 351.55      | 12,482.81             | -17.01       | -449.09      | -13.95                  | 10.00                   | 10.00                  | 0.00                  |
| 12,650.00                                          | 62.61           | 351.55      | 12,507.72             | 25.85        | -455.46      | 28.95                   | 10.00                   | 10.00                  | 0.00                  |
| 12,700.00                                          | 67.61           | 351.55      | 12,528.76             | 70.70        | -462.12      | 73.85                   | 10.00                   | 10.00                  | 0.00                  |
| 12,723.94                                          | 70.00           | 351.55      | 12,537.41             | 92.77        | -465.40      | 95.94                   | 10.00                   | 10.00                  | 0.00                  |
| <b>Begin 6.00°/100' Build</b>                      |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,750.00                                          | 71.56           | 351.55      | 12,545.99             | 117.12       | -469.01      | 120.31                  | 6.00                    | 6.00                   | 0.00                  |
| 12,800.00                                          | 74.56           | 351.55      | 12,560.56             | 164.42       | -476.04      | 167.66                  | 6.00                    | 6.00                   | 0.00                  |
| 12,850.00                                          | 77.56           | 351.55      | 12,572.60             | 212.42       | -483.17      | 215.70                  | 6.00                    | 6.00                   | 0.00                  |
| 12,900.00                                          | 80.56           | 351.55      | 12,582.08             | 260.97       | -490.39      | 264.31                  | 6.00                    | 6.00                   | 0.00                  |
| 12,950.00                                          | 83.56           | 351.55      | 12,588.99             | 309.95       | -497.66      | 313.33                  | 6.00                    | 6.00                   | 0.00                  |
| 13,000.00                                          | 86.56           | 351.55      | 12,593.29             | 359.22       | -504.98      | 362.65                  | 6.00                    | 6.00                   | 0.00                  |
| 13,050.00                                          | 89.56           | 351.55      | 12,594.98             | 408.64       | -512.32      | 412.12                  | 6.00                    | 6.00                   | 0.00                  |
| 13,057.27                                          | 90.00           | 351.55      | 12,595.00             | 415.83       | -513.39      | 419.32                  | 6.00                    | 6.00                   | 0.00                  |
| <b>Begin 90.00° Tangent; Begin 2.00°/100' Turn</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 13,100.00                                          | 90.00           | 352.40      | 12,595.00             | 458.15       | -519.36      | 461.67                  | 2.00                    | 0.00                   | 2.00                  |
| 13,200.00                                          | 90.00           | 354.40      | 12,595.00             | 557.48       | -530.84      | 561.08                  | 2.00                    | 0.00                   | 2.00                  |
| 13,300.00                                          | 90.00           | 356.40      | 12,595.00             | 657.15       | -538.85      | 660.81                  | 2.00                    | 0.00                   | 2.00                  |
| 13,400.00                                          | 90.00           | 358.40      | 12,595.00             | 757.05       | -543.38      | 760.73                  | 2.00                    | 0.00                   | 2.00                  |
| 13,460.20                                          | 90.00           | 359.61      | 12,595.00             | 817.23       | -544.42      | 820.92                  | 2.00                    | 0.00                   | 2.00                  |
| <b>Hold 359.61° Azm</b>                            |                 |             |                       |              |              |                         |                         |                        |                       |
| 13,500.00                                          | 90.00           | 359.61      | 12,595.00             | 857.03       | -544.70      | 860.72                  | 0.00                    | 0.00                   | 0.00                  |



**MS Directional**  
Planning Report



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**Well:** #221H  
**Wellbore:** Wellbore #1  
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**Local Co-ordinate Reference:** Well #221H  
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**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

**Planned Survey**

| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 13,600.00                   | 90.00              | 359.61         | 12,595.00                   | 957.03          | -545.38         | 960.72                        | 0.00                          | 0.00                         | 0.00                        |
| 13,700.00                   | 90.00              | 359.61         | 12,595.00                   | 1,057.03        | -546.06         | 1,060.72                      | 0.00                          | 0.00                         | 0.00                        |
| 13,800.00                   | 90.00              | 359.61         | 12,595.00                   | 1,157.03        | -546.74         | 1,160.72                      | 0.00                          | 0.00                         | 0.00                        |
| 13,900.00                   | 90.00              | 359.61         | 12,595.00                   | 1,257.02        | -547.43         | 1,260.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,000.00                   | 90.00              | 359.61         | 12,595.00                   | 1,357.02        | -548.11         | 1,360.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,100.00                   | 90.00              | 359.61         | 12,595.00                   | 1,457.02        | -548.79         | 1,460.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,200.00                   | 90.00              | 359.61         | 12,595.00                   | 1,557.02        | -549.48         | 1,560.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,300.00                   | 90.00              | 359.61         | 12,595.00                   | 1,657.02        | -550.16         | 1,660.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,400.00                   | 90.00              | 359.61         | 12,595.00                   | 1,757.01        | -550.84         | 1,760.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,500.00                   | 90.00              | 359.61         | 12,595.00                   | 1,857.01        | -551.53         | 1,860.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,600.00                   | 90.00              | 359.61         | 12,595.00                   | 1,957.01        | -552.21         | 1,960.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,700.00                   | 90.00              | 359.61         | 12,595.00                   | 2,057.01        | -552.89         | 2,060.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,800.00                   | 90.00              | 359.61         | 12,595.00                   | 2,157.00        | -553.58         | 2,160.72                      | 0.00                          | 0.00                         | 0.00                        |
| 14,900.00                   | 90.00              | 359.61         | 12,595.00                   | 2,257.00        | -554.26         | 2,260.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,000.00                   | 90.00              | 359.61         | 12,595.00                   | 2,357.00        | -554.94         | 2,360.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,100.00                   | 90.00              | 359.61         | 12,595.00                   | 2,457.00        | -555.63         | 2,460.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,200.00                   | 90.00              | 359.61         | 12,595.00                   | 2,556.99        | -556.31         | 2,560.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,300.00                   | 90.00              | 359.61         | 12,595.00                   | 2,656.99        | -556.99         | 2,660.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,400.00                   | 90.00              | 359.61         | 12,595.00                   | 2,756.99        | -557.68         | 2,760.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,500.00                   | 90.00              | 359.61         | 12,595.00                   | 2,856.99        | -558.36         | 2,860.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,600.00                   | 90.00              | 359.61         | 12,595.00                   | 2,956.99        | -559.04         | 2,960.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,700.00                   | 90.00              | 359.61         | 12,595.00                   | 3,056.98        | -559.73         | 3,060.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,800.00                   | 90.00              | 359.61         | 12,595.00                   | 3,156.98        | -560.41         | 3,160.72                      | 0.00                          | 0.00                         | 0.00                        |
| 15,900.00                   | 90.00              | 359.61         | 12,595.00                   | 3,256.98        | -561.09         | 3,260.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,000.00                   | 90.00              | 359.61         | 12,595.00                   | 3,356.98        | -561.78         | 3,360.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,100.00                   | 90.00              | 359.61         | 12,595.00                   | 3,456.97        | -562.46         | 3,460.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,200.00                   | 90.00              | 359.61         | 12,595.00                   | 3,556.97        | -563.14         | 3,560.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,300.00                   | 90.00              | 359.61         | 12,595.00                   | 3,656.97        | -563.83         | 3,660.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,400.00                   | 90.00              | 359.61         | 12,595.00                   | 3,756.97        | -564.51         | 3,760.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,500.00                   | 90.00              | 359.61         | 12,595.00                   | 3,856.96        | -565.19         | 3,860.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,600.00                   | 90.00              | 359.61         | 12,595.00                   | 3,956.96        | -565.88         | 3,960.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,700.00                   | 90.00              | 359.61         | 12,595.00                   | 4,056.96        | -566.56         | 4,060.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,800.00                   | 90.00              | 359.61         | 12,595.00                   | 4,156.96        | -567.24         | 4,160.72                      | 0.00                          | 0.00                         | 0.00                        |
| 16,900.00                   | 90.00              | 359.61         | 12,595.00                   | 4,256.95        | -567.93         | 4,260.72                      | 0.00                          | 0.00                         | 0.00                        |
| 17,000.00                   | 90.00              | 359.61         | 12,595.00                   | 4,356.95        | -568.61         | 4,360.72                      | 0.00                          | 0.00                         | 0.00                        |
| 17,100.00                   | 90.00              | 359.61         | 12,595.00                   | 4,456.95        | -569.29         | 4,460.72                      | 0.00                          | 0.00                         | 0.00                        |
| 17,200.00                   | 90.00              | 359.61         | 12,595.00                   | 4,556.95        | -569.97         | 4,560.72                      | 0.00                          | 0.00                         | 0.00                        |
| 17,300.00                   | 90.00              | 359.61         | 12,595.00                   | 4,656.95        | -570.66         | 4,660.72                      | 0.00                          | 0.00                         | 0.00                        |
| 17,350.06                   | 90.00              | 359.61         | 12,595.00                   | 4,707.00        | -571.00         | 4,710.78                      | 0.00                          | 0.00                         | 0.00                        |
| PBHL                        |                    |                |                             |                 |                 |                               |                               |                              |                             |



# MS Directional Planning Report



Database: EDM Conroe  
Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Site: Brad Dyer 35-22S-32E AR  
Well: #221H  
Wellbore: Wellbore #1  
Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature

## Design Targets

### Target Name

| - hit/miss target<br>- Shape                                  | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude         | Longitude        |
|---------------------------------------------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|------------------|------------------|
| VP v2 - Brad Dyer #2;<br>- plan hits target center<br>- Point | 0.00             | 0.00            | 6,325.00      | -280.13         | -410.00         | 488,429.87         | 710,421.00        | 32° 20' 27.491 N | 103° 39' 7.264 W |
| PBHL - Brad Dyer #2;<br>- plan hits target center<br>- Point  | 0.00             | 0.00            | 12,595.00     | 4,707.00        | -571.00         | 493,417.00         | 710,260.00        | 32° 21' 16.851 N | 103° 39' 8.771 W |

## Formations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Name                        | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|-----------------------------|-----------------------------|-----------------------------|-----------|------------|-------------------------|
| 1,188.25                    | 1,188.22                    | Z (Rustler)                 |           | 0.00       |                         |
| 3,571.71                    | 3,559.81                    | Top Salt: Z (Salado)        |           | 0.00       |                         |
| 4,950.10                    | 4,930.65                    | Base Salt: Z (G30:CS14-CSB) |           | 0.00       |                         |
| 4,958.37                    | 4,938.88                    | Z(G26: Bell Canyon)         |           | 0.00       |                         |
| 7,143.44                    | 7,118.51                    | Z (G7: Brushy Cyn.)         |           | 0.00       |                         |
| 8,714.40                    | 8,689.47                    | Z(G4: BSGI (CS9))           |           | 0.00       |                         |
| 9,818.43                    | 9,793.50                    | Z(L5.3: FBSC)               |           | 0.00       |                         |
| 9,852.80                    | 9,827.87                    | Z (L5.1: FBSC)              |           | 0.00       |                         |
| 10,171.10                   | 10,146.17                   | Z (L4.3: SBSC)              |           | 0.00       |                         |
| 10,535.33                   | 10,510.40                   | Z (L4.1: SBSC)              |           | 0.00       |                         |
| 10,987.94                   | 10,963.01                   | Z (L3.3: TBSC)              |           | 0.00       |                         |
| 11,769.52                   | 11,744.59                   | Z (L3.1: TBSC)              |           | 0.00       |                         |
| 12,043.68                   | 12,018.75                   | Z (L2: WFMP A)              |           | 0.00       |                         |
| 12,082.36                   | 12,057.33                   | Z (X Sand (T))              |           | 0.00       |                         |
| 12,112.88                   | 12,087.60                   | Z (X Sand (B))              |           | 0.00       |                         |
| 12,158.87                   | 12,132.70                   | Z (Y Sand (T))              |           | 0.00       |                         |
| 12,190.55                   | 12,163.29                   | Z (Y Sand (B))              |           | 0.00       |                         |
| 12,210.43                   | 12,182.23                   | Z (WFMP A Fat)              |           | 0.00       |                         |
| 12,623.44                   | 12,494.96                   | Z (WFMP B)                  |           | 0.00       |                         |

## Plan Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                                     |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                             |
| 1,000.00                    | 1,000.00                    | 0.00              | 0.00            | KOP, 1.00°/100' Build                       |
| 1,600.00                    | 1,598.90                    | -17.71            | -25.92          | Begin 6.00° Tangent                         |
| 5,749.93                    | 5,726.10                    | -262.42           | -384.08         | Begin 1.00°/100' Drop                       |
| 6,349.93                    | 6,325.00                    | -280.13           | -410.00         | Begin Vertical Hold                         |
| 12,023.94                   | 11,999.01                   | -280.13           | -410.00         | Begin 10.00°/100' Build                     |
| 12,723.94                   | 12,537.41                   | 92.77             | -465.40         | Begin 6.00°/100' Build                      |
| 13,057.27                   | 12,595.00                   | 415.83            | -513.39         | Begin 90.00° Tangent; Begin 2.00°/100' Turn |
| 13,460.20                   | 12,595.00                   | 817.23            | -544.42         | Hold 359.61° Azm                            |
| 17,350.06                   | 12,595.00                   | 4,707.00          | -571.00         | PBHL                                        |



# **Matador Resources**

**Lea County, New Mexico (NAD 27)**

**Brad Dyer 35-22S-32E AR**

**#221H**

**Wellbore #1**

**Design #2**

## **Anticollision Report**

**15 February, 2018**





# MS Directional Anticollision Report



Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Reference Site: Brad Dyer 35-22S-32E AR  
Site Error: 0.00 usft  
Reference Well: #221H  
Well Error: 0.00 usft  
Reference Wellbore: Wellbore #1  
Reference Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Output errors are at: 2.00 sigma  
Database: EDM Conroe  
Offset TVD Reference: Offset Datum

|                              |                                                                     |
|------------------------------|---------------------------------------------------------------------|
| Reference                    | Design #2                                                           |
| Filter type:                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |
| Interpolation Method:        | MD + Stations Interval 100.00usft                                   |
| Depth Range:                 | Unlimited                                                           |
| Results Limited by:          | Maximum center-center distance of 10,000.00 u                       |
| Warning Levels Evaluated at: | 2.00 Sigma                                                          |
| Error Model:                 | ISCWSA                                                              |
| Scan Method:                 | Closest Approach 3D                                                 |
| Error Surface:               | Pedal Curve                                                         |
| Casing Method:               | Not applied                                                         |

Survey Tool Program Date 2/15/2018

| From (usft) | To (usft) | Survey (Wellbore)       | Tool Name | Description         |
|-------------|-----------|-------------------------|-----------|---------------------|
| 0.00        | 17,348.59 | Design #2 (Wellbore #1) | MWD       | OWSG MWD - Standard |

| Site Name                       | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
|---------------------------------|---------------------------------|------------------------------|---------------------------------|----------------------------------|-------------------|---------|
| Offset Well - Wellbore - Design |                                 |                              |                                 |                                  |                   |         |
| Brad Dyer 35-22S-32E AR         |                                 |                              |                                 |                                  |                   |         |
| #201H - Wellbore #1 - Design #1 | 600.00                          | 601.00                       | 30.00                           | 26.16                            | 7.803             | CC, ES  |
| #201H - Wellbore #1 - Design #1 | 11,700.00                       | 11,705.40                    | 127.40                          | 44.97                            | 1.545             | SF      |
| #202H - Wellbore #1 - Design #2 | 11,602.25                       | 11,605.62                    | 1,193.03                        | 1,111.38                         | 14.612            | CC      |
| #202H - Wellbore #1 - Design #2 | 11,800.00                       | 11,797.49                    | 1,193.37                        | 1,110.47                         | 14.395            | ES      |
| #202H - Wellbore #1 - Design #2 | 17,349.17                       | 16,936.03                    | 1,386.18                        | 1,213.27                         | 8.017             | SF      |
| #205H - Wellbore #1 - Design #2 | 1,000.00                        | 1,001.00                     | 30.00                           | 23.29                            | 4.469             | CC, ES  |
| #205H - Wellbore #1 - Design #2 | 17,349.17                       | 17,117.98                    | 697.65                          | 524.18                           | 4.022             | SF      |
| #206H - Wellbore #1 - Design #2 | 1,000.00                        | 999.00                       | 1,350.06                        | 1,343.36                         | 201.345           | CC, ES  |
| #206H - Wellbore #1 - Design #2 | 17,349.17                       | 17,137.30                    | 1,990.27                        | 1,810.11                         | 11.048            | SF      |
| #226H - Wellbore #1 - Design #2 | 1,008.29                        | 1,009.21                     | 1,319.75                        | 1,313.05                         | 197.192           | CC      |
| #226H - Wellbore #1 - Design #2 | 1,100.00                        | 1,100.69                     | 1,320.37                        | 1,313.03                         | 180.081           | ES      |
| #226H - Wellbore #1 - Design #2 | 17,349.17                       | 17,327.59                    | 1,980.09                        | 1,799.11                         | 10.941            | SF      |

| Offset Design Brad Dyer 35-22S-32E AR - #201H - Wellbore #1 - Design #1 |                       |                              |                       |                                  |               |                        |                                     |              |                                 |                                  |                           |                   | Offset Site Error: 0.00 usft |
|-------------------------------------------------------------------------|-----------------------|------------------------------|-----------------------|----------------------------------|---------------|------------------------|-------------------------------------|--------------|---------------------------------|----------------------------------|---------------------------|-------------------|------------------------------|
| Survey Program: 0-MWD                                                   |                       |                              |                       |                                  |               |                        |                                     |              |                                 |                                  |                           |                   | Offset Well Error: 0.00 usft |
| Reference Measured Depth (usft)                                         | Vertical Depth (usft) | Offset Measured Depth (usft) | Vertical Depth (usft) | Semi Major Axis Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning                      |
| 0.00                                                                    | 0.00                  | 1.00                         | 1.00                  | 0.00                             | 0.00          | -90.00                 | 0.00                                | -30.00       | 30.00                           |                                  |                           |                   |                              |
| 100.00                                                                  | 100.00                | 101.00                       | 101.00                | 0.13                             | 0.13          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 29.74                            | 0.26                      | 115.432           |                              |
| 200.00                                                                  | 200.00                | 201.00                       | 201.00                | 0.49                             | 0.49          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 29.02                            | 0.98                      | 30.711            |                              |
| 300.00                                                                  | 300.00                | 301.00                       | 301.00                | 0.85                             | 0.85          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 28.31                            | 1.69                      | 17.712            |                              |
| 400.00                                                                  | 400.00                | 401.00                       | 401.00                | 1.20                             | 1.21          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 27.59                            | 2.41                      | 12.444            |                              |
| 500.00                                                                  | 500.00                | 501.00                       | 501.00                | 1.56                             | 1.57          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 26.87                            | 3.13                      | 9.592             |                              |
| 600.00                                                                  | 600.00                | 601.00                       | 601.00                | 1.92                             | 1.92          | -90.00                 | 0.00                                | -30.00       | 30.00                           | 26.16                            | 3.84                      | 7.803             | CC, ES                       |
| 700.00                                                                  | 700.00                | 700.53                       | 700.52                | 2.28                             | 2.27          | -90.80                 | -0.43                               | -30.77       | 30.78                           | 26.23                            | 4.55                      | 6.769             |                              |
| 800.00                                                                  | 800.00                | 800.00                       | 799.96                | 2.64                             | 2.61          | -92.94                 | -1.70                               | -33.05       | 33.11                           | 27.87                            | 5.24                      | 6.317             |                              |
| 900.00                                                                  | 900.00                | 899.36                       | 899.22                | 3.00                             | 2.95          | -95.89                 | -3.80                               | -36.83       | 37.07                           | 31.13                            | 5.94                      | 6.242             |                              |
| 1,000.00                                                                | 1,000.00              | 998.53                       | 998.21                | 3.35                             | 3.30          | -99.09                 | -6.74                               | -42.11       | 42.73                           | 36.10                            | 6.64                      | 6.438             |                              |
| 1,100.00                                                                | 1,099.99              | 1,097.53                     | 1,096.91              | 3.70                             | 3.65          | -101.74                | -10.50                              | -48.86       | 49.34                           | 42.02                            | 7.32                      | 6.739             |                              |
| 1,200.00                                                                | 1,199.96              | 1,203.61                     | 1,195.31              | 4.03                             | 4.04          | -103.60                | -15.08                              | -57.10       | 56.06                           | 48.04                            | 8.02                      | 6.990             |                              |
| 1,300.00                                                                | 1,299.86              | 1,303.80                     | 1,294.57              | 4.37                             | 4.41          | -104.75                | -20.15                              | -66.21       | 62.08                           | 53.37                            | 8.71                      | 7.126             |                              |
| 1,400.00                                                                | 1,399.68              | 1,403.90                     | 1,393.93              | 4.72                             | 4.79          | -105.22                | -25.23                              | -75.34       | 66.47                           | 57.06                            | 9.41                      | 7.064             |                              |
| 1,500.00                                                                | 1,499.37              | 1,503.94                     | 1,493.34              | 5.07                             | 5.17          | -105.17                | -30.32                              | -84.47       | 69.22                           | 59.11                            | 10.11                     | 6.844             |                              |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #201H - Wellbore #1 - Design #1 |                             |                             |                             |                     |                  |                              |                        |                |                              |                               |                                 |                      | Offset Site Error: 0.00 usft |
|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------------|------------------------------|------------------------|----------------|------------------------------|-------------------------------|---------------------------------|----------------------|------------------------------|
| Survey Program: 0-MWD                                                   |                             |                             |                             |                     |                  |                              |                        |                |                              |                               |                                 |                      | Offset Well Error: 0.00 usft |
| Reference                                                               |                             | Offset                      |                             | Semi Major Axis     |                  | Azimuth<br>from North<br>(°) | Offset Wellbore Centre |                | Distance                     |                               | Minimum<br>Separation<br>(usft) | Separation<br>Factor | Warning                      |
| Measured<br>Depth<br>(usft)                                             | Vertical<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Reference<br>(usft) | Offset<br>(usft) |                              | +N-S<br>(usft)         | +E-W<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                                 |                      |                              |
| 1,576.67                                                                | 1,575.69                    | 1,572.72                    | 1,569.58                    | 5.34                | 5.43             | -104.81                      | -34.21                 | -91.47         | 70.21                        | 59.58                         | 10.63                           | 6.606                |                              |
| 1,600.00                                                                | 1,598.91                    | 1,603.95                    | 1,592.78                    | 5.43                | 5.55             | -104.66                      | -35.40                 | -93.60         | 70.36                        | 59.54                         | 10.82                           | 6.502                |                              |
| 1,700.00                                                                | 1,698.40                    | 1,703.96                    | 1,692.23                    | 5.79                | 5.94             | -104.03                      | -40.48                 | -102.73        | 71.03                        | 59.49                         | 11.54                           | 6.158                |                              |
| 1,800.00                                                                | 1,797.90                    | 1,803.96                    | 1,791.68                    | 6.16                | 6.32             | -103.41                      | -45.56                 | -111.86        | 71.70                        | 59.45                         | 12.25                           | 5.852                |                              |
| 1,900.00                                                                | 1,897.39                    | 1,903.97                    | 1,891.12                    | 6.52                | 6.71             | -102.81                      | -50.65                 | -121.00        | 72.39                        | 59.42                         | 12.97                           | 5.580                |                              |
| 2,000.00                                                                | 1,996.88                    | 2,003.97                    | 1,990.57                    | 6.90                | 7.10             | -102.21                      | -55.73                 | -130.13        | 73.08                        | 59.38                         | 13.70                           | 5.336                |                              |
| 2,100.00                                                                | 2,096.38                    | 2,103.98                    | 2,090.02                    | 7.27                | 7.49             | -101.63                      | -60.81                 | -139.26        | 73.78                        | 59.36                         | 14.42                           | 5.116                |                              |
| 2,200.00                                                                | 2,195.87                    | 2,196.02                    | 2,189.47                    | 7.65                | 7.84             | -101.05                      | -65.90                 | -148.40        | 74.49                        | 59.37                         | 15.12                           | 4.926                |                              |
| 2,300.00                                                                | 2,295.37                    | 2,303.99                    | 2,288.91                    | 8.03                | 8.27             | -100.49                      | -70.98                 | -157.53        | 75.20                        | 59.32                         | 15.88                           | 4.736                |                              |
| 2,400.00                                                                | 2,394.86                    | 2,403.99                    | 2,388.36                    | 8.41                | 8.66             | -99.94                       | -76.06                 | -166.66        | 75.92                        | 59.31                         | 16.61                           | 4.571                |                              |
| 2,500.00                                                                | 2,494.35                    | 2,504.00                    | 2,487.81                    | 8.79                | 9.05             | -99.40                       | -81.15                 | -175.79        | 76.65                        | 59.30                         | 17.34                           | 4.419                |                              |
| 2,600.00                                                                | 2,593.85                    | 2,604.00                    | 2,587.25                    | 9.17                | 9.44             | -98.87                       | -86.23                 | -184.93        | 77.38                        | 59.30                         | 18.08                           | 4.280                |                              |
| 2,700.00                                                                | 2,693.34                    | 2,704.01                    | 2,686.70                    | 9.55                | 9.83             | -98.34                       | -91.31                 | -194.06        | 78.12                        | 59.31                         | 18.82                           | 4.152                |                              |
| 2,800.00                                                                | 2,792.84                    | 2,804.01                    | 2,786.15                    | 9.94                | 10.23            | -97.83                       | -96.40                 | -203.19        | 78.87                        | 59.31                         | 19.56                           | 4.033                |                              |
| 2,900.00                                                                | 2,892.33                    | 2,904.02                    | 2,885.59                    | 10.32               | 10.62            | -97.33                       | -101.48                | -212.33        | 79.62                        | 59.33                         | 20.30                           | 3.923                |                              |
| 3,000.00                                                                | 2,991.82                    | 3,004.02                    | 2,985.04                    | 10.71               | 11.01            | -96.84                       | -106.56                | -221.46        | 80.38                        | 59.35                         | 21.04                           | 3.821                |                              |
| 3,100.00                                                                | 3,091.32                    | 3,104.03                    | 3,084.49                    | 11.09               | 11.41            | -96.36                       | -111.65                | -230.59        | 81.15                        | 59.37                         | 21.78                           | 3.726                |                              |
| 3,200.00                                                                | 3,190.81                    | 3,204.03                    | 3,183.94                    | 11.48               | 11.80            | -95.88                       | -116.73                | -239.73        | 81.92                        | 59.39                         | 22.52                           | 3.637                |                              |
| 3,300.00                                                                | 3,290.31                    | 3,304.04                    | 3,283.38                    | 11.87               | 12.20            | -95.42                       | -121.81                | -248.86        | 82.69                        | 59.43                         | 23.27                           | 3.554                |                              |
| 3,400.00                                                                | 3,389.80                    | 3,404.04                    | 3,382.83                    | 12.26               | 12.59            | -94.96                       | -126.90                | -257.99        | 83.47                        | 59.46                         | 24.01                           | 3.476                |                              |
| 3,500.00                                                                | 3,489.29                    | 3,504.05                    | 3,482.28                    | 12.64               | 12.98            | -94.52                       | -131.98                | -267.12        | 84.26                        | 59.50                         | 24.76                           | 3.403                |                              |
| 3,600.00                                                                | 3,588.79                    | 3,604.06                    | 3,581.72                    | 13.03               | 13.38            | -94.08                       | -137.06                | -276.26        | 85.05                        | 59.54                         | 25.51                           | 3.334                |                              |
| 3,700.00                                                                | 3,688.28                    | 3,704.06                    | 3,681.17                    | 13.42               | 13.77            | -93.65                       | -142.15                | -285.39        | 85.85                        | 59.59                         | 26.26                           | 3.269                |                              |
| 3,800.00                                                                | 3,787.78                    | 3,804.07                    | 3,780.62                    | 13.81               | 14.17            | -93.22                       | -147.23                | -294.52        | 86.65                        | 59.64                         | 27.01                           | 3.208                |                              |
| 3,900.00                                                                | 3,887.27                    | 3,904.07                    | 3,880.06                    | 14.20               | 14.56            | -92.81                       | -152.31                | -303.66        | 87.46                        | 59.70                         | 27.76                           | 3.150                |                              |
| 4,000.00                                                                | 3,986.76                    | 3,995.92                    | 3,979.51                    | 14.59               | 14.93            | -92.40                       | -157.40                | -312.79        | 88.27                        | 59.78                         | 28.48                           | 3.099                |                              |
| 4,100.00                                                                | 4,086.26                    | 4,104.08                    | 4,078.96                    | 14.98               | 15.35            | -92.00                       | -162.48                | -321.92        | 89.08                        | 59.82                         | 29.26                           | 3.044                |                              |
| 4,200.00                                                                | 4,185.75                    | 4,204.09                    | 4,178.41                    | 15.37               | 15.75            | -91.61                       | -167.56                | -331.05        | 89.90                        | 59.88                         | 30.02                           | 2.995                |                              |
| 4,300.00                                                                | 4,285.25                    | 4,304.09                    | 4,277.85                    | 15.76               | 16.14            | -91.22                       | -172.65                | -340.19        | 90.72                        | 59.95                         | 30.77                           | 2.948                |                              |
| 4,400.00                                                                | 4,384.74                    | 4,404.10                    | 4,377.30                    | 16.15               | 16.54            | -90.84                       | -177.73                | -349.32        | 91.55                        | 60.02                         | 31.53                           | 2.904                |                              |
| 4,500.00                                                                | 4,484.23                    | 4,504.10                    | 4,476.75                    | 16.54               | 16.94            | -90.47                       | -182.81                | -358.45        | 92.38                        | 60.09                         | 32.28                           | 2.861                |                              |
| 4,600.00                                                                | 4,583.73                    | 4,604.11                    | 4,576.19                    | 16.93               | 17.33            | -90.10                       | -187.90                | -367.59        | 93.21                        | 60.17                         | 33.04                           | 2.821                |                              |
| 4,700.00                                                                | 4,683.22                    | 4,704.11                    | 4,675.64                    | 17.32               | 17.73            | -89.75                       | -192.98                | -376.72        | 94.05                        | 60.25                         | 33.80                           | 2.783                |                              |
| 4,800.00                                                                | 4,782.71                    | 4,804.12                    | 4,775.09                    | 17.72               | 18.12            | -89.39                       | -198.06                | -385.85        | 94.89                        | 60.34                         | 34.56                           | 2.746                |                              |
| 4,900.00                                                                | 4,882.21                    | 4,904.12                    | 4,874.53                    | 18.11               | 18.52            | -89.05                       | -203.15                | -394.98        | 95.74                        | 60.42                         | 35.32                           | 2.711                |                              |
| 5,000.00                                                                | 4,981.70                    | 4,995.87                    | 4,973.98                    | 18.50               | 18.88            | -88.71                       | -208.23                | -404.12        | 96.59                        | 60.54                         | 36.04                           | 2.680                |                              |
| 5,100.00                                                                | 5,081.20                    | 5,104.13                    | 5,073.43                    | 18.89               | 19.31            | -88.37                       | -213.31                | -413.25        | 97.44                        | 60.60                         | 36.84                           | 2.645                |                              |
| 5,200.00                                                                | 5,180.69                    | 5,204.14                    | 5,172.88                    | 19.28               | 19.71            | -88.04                       | -218.40                | -422.38        | 98.30                        | 60.70                         | 37.60                           | 2.614                |                              |
| 5,300.00                                                                | 5,280.18                    | 5,304.14                    | 5,272.32                    | 19.67               | 20.10            | -87.72                       | -223.48                | -431.52        | 99.15                        | 60.80                         | 38.36                           | 2.585                |                              |
| 5,400.00                                                                | 5,379.68                    | 5,404.15                    | 5,371.77                    | 20.07               | 20.50            | -87.40                       | -228.56                | -440.65        | 100.02                       | 60.90                         | 39.12                           | 2.557                |                              |
| 5,500.00                                                                | 5,479.17                    | 5,504.15                    | 5,471.22                    | 20.46               | 20.89            | -87.09                       | -233.65                | -449.78        | 100.88                       | 61.00                         | 39.88                           | 2.529                |                              |
| 5,600.00                                                                | 5,578.67                    | 5,604.16                    | 5,570.66                    | 20.85               | 21.29            | -86.79                       | -238.73                | -458.92        | 101.75                       | 61.10                         | 40.65                           | 2.503                |                              |
| 5,700.00                                                                | 5,678.16                    | 5,704.16                    | 5,670.11                    | 21.24               | 21.69            | -86.49                       | -243.81                | -468.05        | 102.62                       | 61.21                         | 41.41                           | 2.478                |                              |
| 5,800.00                                                                | 5,777.65                    | 5,804.17                    | 5,769.56                    | 21.63               | 22.08            | -86.19                       | -248.90                | -477.18        | 103.49                       | 61.32                         | 42.17                           | 2.454                |                              |
| 5,900.00                                                                | 5,877.15                    | 5,895.82                    | 5,869.00                    | 22.03               | 22.45            | -85.90                       | -253.98                | -486.31        | 104.37                       | 61.46                         | 42.91                           | 2.432                |                              |
| 5,941.51                                                                | 5,918.45                    | 5,937.33                    | 5,910.29                    | 22.19               | 22.61            | -85.78                       | -256.09                | -490.11        | 104.73                       | 61.51                         | 43.22                           | 2.423                |                              |
| 6,000.00                                                                | 5,976.67                    | 6,004.18                    | 5,968.45                    | 22.42               | 22.88            | -85.71                       | -259.06                | -495.45        | 105.48                       | 61.78                         | 43.70                           | 2.414                |                              |
| 6,100.00                                                                | 6,076.34                    | 6,104.21                    | 6,067.87                    | 22.80               | 23.27            | -86.06                       | -264.15                | -504.58        | 107.84                       | 63.41                         | 44.43                           | 2.427                |                              |
| 6,200.00                                                                | 6,176.13                    | 6,196.43                    | 6,167.98                    | 23.17               | 23.64            | -86.92                       | -269.18                | -513.62        | 111.45                       | 66.34                         | 45.11                           | 2.471                |                              |
| 6,300.00                                                                | 6,276.02                    | 6,298.06                    | 6,269.21                    | 23.53               | 24.03            | -87.88                       | -273.53                | -521.43        | 115.21                       | 69.40                         | 45.81                           | 2.515                |                              |
| 6,400.00                                                                | 6,375.97                    | 6,399.76                    | 6,370.66                    | 23.89               | 24.41            | -88.82                       | -277.00                | -527.68        | 118.88                       | 72.39                         | 46.49                           | 2.557                |                              |
| 6,500.00                                                                | 6,475.96                    | 6,501.54                    | 6,472.30                    | 24.23               | 24.78            | -89.76                       | -279.61                | -532.35        | 122.47                       | 75.32                         | 47.15                           | 2.597                |                              |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #201H - Wellbore #1 - Design #1 |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|--------------|------------------------|-------------------------|---------------------------|-------------------|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Well Error: | 0.00 usft |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                            |              |                        |                         |                           |                   |                    | Warning   |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                    |           |
| 6,518.18                                                                | 6,494.14              | 6,520.05              | 6,490.79              | 24.29            | 24.85         | -89.93                 | -279.99                             | -533.04      | 123.11                 | 75.85                   | 47.27                     | 2.605             |                    |           |
| 6,600.00                                                                | 6,575.96              | 6,603.41              | 6,574.11              | 24.55            | 25.14         | -90.55                 | -281.33                             | -535.45      | 125.49                 | 77.71                   | 47.78                     | 2.626             |                    |           |
| 6,700.00                                                                | 6,675.96              | 6,705.37              | 6,676.05              | 24.87            | 25.49         | -90.92                 | -282.18                             | -536.97      | 126.99                 | 78.57                   | 48.42                     | 2.623             |                    |           |
| 6,800.00                                                                | 6,775.96              | 6,806.28              | 6,776.96              | 25.19            | 25.81         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 78.10                   | 49.06                     | 2.592             |                    |           |
| 6,900.00                                                                | 6,875.96              | 6,906.28              | 6,876.96              | 25.51            | 26.12         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 77.44                   | 49.71                     | 2.558             |                    |           |
| 7,000.00                                                                | 6,975.96              | 7,006.28              | 6,976.96              | 25.83            | 26.44         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 76.79                   | 50.37                     | 2.525             |                    |           |
| 7,100.00                                                                | 7,075.96              | 7,106.28              | 7,076.96              | 26.16            | 26.75         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 76.13                   | 51.02                     | 2.492             |                    |           |
| 7,200.00                                                                | 7,175.96              | 7,206.28              | 7,176.96              | 26.48            | 27.07         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 75.47                   | 51.68                     | 2.460             |                    |           |
| 7,300.00                                                                | 7,275.96              | 7,306.28              | 7,276.96              | 26.80            | 27.38         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 74.82                   | 52.34                     | 2.429             |                    |           |
| 7,400.00                                                                | 7,375.96              | 7,406.28              | 7,376.96              | 27.13            | 27.70         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 74.15                   | 53.00                     | 2.399             |                    |           |
| 7,500.00                                                                | 7,475.96              | 7,506.28              | 7,476.96              | 27.46            | 28.02         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 73.49                   | 53.66                     | 2.369             |                    |           |
| 7,600.00                                                                | 7,575.96              | 7,606.28              | 7,576.96              | 27.78            | 28.34         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 72.83                   | 54.33                     | 2.341             |                    |           |
| 7,700.00                                                                | 7,675.96              | 7,706.28              | 7,676.96              | 28.11            | 28.66         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 72.16                   | 54.99                     | 2.312             |                    |           |
| 7,800.00                                                                | 7,775.96              | 7,806.28              | 7,776.96              | 28.44            | 28.98         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 71.50                   | 55.66                     | 2.285             |                    |           |
| 7,900.00                                                                | 7,875.96              | 7,906.28              | 7,876.96              | 28.77            | 29.31         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 70.83                   | 56.33                     | 2.257             |                    |           |
| 8,000.00                                                                | 7,975.96              | 8,006.28              | 7,976.96              | 29.10            | 29.63         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 70.16                   | 57.00                     | 2.231             |                    |           |
| 8,100.00                                                                | 8,075.96              | 8,106.28              | 8,076.96              | 29.43            | 29.95         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 69.49                   | 57.67                     | 2.205             |                    |           |
| 8,200.00                                                                | 8,175.96              | 8,206.28              | 8,176.96              | 29.76            | 30.28         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 68.82                   | 58.34                     | 2.180             |                    |           |
| 8,300.00                                                                | 8,275.96              | 8,306.28              | 8,276.96              | 30.09            | 30.61         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 68.14                   | 59.01                     | 2.155             |                    |           |
| 8,400.00                                                                | 8,375.96              | 8,406.28              | 8,376.96              | 30.43            | 30.93         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 67.47                   | 59.68                     | 2.130             |                    |           |
| 8,500.00                                                                | 8,475.96              | 8,506.28              | 8,476.96              | 30.76            | 31.26         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 66.80                   | 60.36                     | 2.107             |                    |           |
| 8,600.00                                                                | 8,575.96              | 8,606.28              | 8,576.96              | 31.09            | 31.59         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 66.12                   | 61.03                     | 2.083             |                    |           |
| 8,700.00                                                                | 8,675.96              | 8,706.28              | 8,676.96              | 31.43            | 31.92         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 65.45                   | 61.71                     | 2.061             |                    |           |
| 8,800.00                                                                | 8,775.96              | 8,806.28              | 8,776.96              | 31.76            | 32.24         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 64.77                   | 62.39                     | 2.038             |                    |           |
| 8,900.00                                                                | 8,875.96              | 8,906.28              | 8,876.96              | 32.10            | 32.57         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 64.09                   | 63.06                     | 2.016             |                    |           |
| 9,000.00                                                                | 8,975.96              | 9,006.28              | 8,976.96              | 32.43            | 32.90         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 63.41                   | 63.74                     | 1.995             |                    |           |
| 9,100.00                                                                | 9,075.96              | 9,106.28              | 9,076.96              | 32.77            | 33.24         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 62.73                   | 64.42                     | 1.974             |                    |           |
| 9,200.00                                                                | 9,175.96              | 9,206.28              | 9,176.96              | 33.11            | 33.57         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 62.05                   | 65.10                     | 1.953             |                    |           |
| 9,300.00                                                                | 9,275.96              | 9,306.28              | 9,276.96              | 33.44            | 33.90         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 61.37                   | 65.79                     | 1.933             |                    |           |
| 9,400.00                                                                | 9,375.96              | 9,406.28              | 9,376.96              | 33.78            | 34.23         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 60.69                   | 66.47                     | 1.913             |                    |           |
| 9,500.00                                                                | 9,475.96              | 9,506.28              | 9,476.96              | 34.12            | 34.57         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 60.00                   | 67.15                     | 1.894             |                    |           |
| 9,600.00                                                                | 9,575.96              | 9,606.28              | 9,576.96              | 34.46            | 34.90         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 59.32                   | 67.83                     | 1.875             |                    |           |
| 9,700.00                                                                | 9,675.96              | 9,706.28              | 9,676.96              | 34.80            | 35.23         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 58.64                   | 68.52                     | 1.856             |                    |           |
| 9,800.00                                                                | 9,775.96              | 9,806.28              | 9,776.96              | 35.14            | 35.57         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 57.95                   | 69.20                     | 1.837             |                    |           |
| 9,900.00                                                                | 9,875.96              | 9,906.28              | 9,876.96              | 35.47            | 35.90         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 57.27                   | 69.89                     | 1.819             |                    |           |
| 10,000.00                                                               | 9,975.96              | 10,006.28             | 9,976.96              | 35.81            | 36.24         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 56.58                   | 70.57                     | 1.802             |                    |           |
| 10,100.00                                                               | 10,075.96             | 10,106.28             | 10,076.96             | 36.16            | 36.57         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 55.89                   | 71.26                     | 1.784             |                    |           |
| 10,200.00                                                               | 10,175.96             | 10,206.28             | 10,176.96             | 36.50            | 36.91         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 55.21                   | 71.95                     | 1.767             |                    |           |
| 10,300.00                                                               | 10,275.96             | 10,306.28             | 10,276.96             | 36.84            | 37.25         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 54.52                   | 72.64                     | 1.751             |                    |           |
| 10,400.00                                                               | 10,375.96             | 10,406.28             | 10,376.96             | 37.18            | 37.58         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 53.83                   | 73.32                     | 1.734             |                    |           |
| 10,500.00                                                               | 10,475.96             | 10,506.28             | 10,476.96             | 37.52            | 37.92         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 53.14                   | 74.01                     | 1.718             |                    |           |
| 10,600.00                                                               | 10,575.96             | 10,606.28             | 10,576.96             | 37.86            | 38.26         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 52.45                   | 74.70                     | 1.702             |                    |           |
| 10,700.00                                                               | 10,675.96             | 10,706.28             | 10,676.96             | 38.20            | 38.60         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 51.76                   | 75.39                     | 1.687             |                    |           |
| 10,800.00                                                               | 10,775.96             | 10,806.28             | 10,776.96             | 38.55            | 38.94         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 51.07                   | 76.08                     | 1.671             |                    |           |
| 10,900.00                                                               | 10,875.96             | 10,906.28             | 10,876.96             | 38.89            | 39.28         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 50.38                   | 76.77                     | 1.656             |                    |           |
| 11,000.00                                                               | 10,975.96             | 11,006.28             | 10,976.96             | 39.23            | 39.62         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 49.69                   | 77.47                     | 1.641             |                    |           |
| 11,100.00                                                               | 11,075.96             | 11,106.28             | 11,076.96             | 39.58            | 39.96         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 49.00                   | 78.16                     | 1.627             |                    |           |
| 11,200.00                                                               | 11,175.96             | 11,206.28             | 11,176.96             | 39.92            | 40.30         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 48.30                   | 78.85                     | 1.613             |                    |           |
| 11,300.00                                                               | 11,275.96             | 11,306.28             | 11,276.96             | 40.26            | 40.64         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 47.61                   | 79.54                     | 1.599             |                    |           |
| 11,400.00                                                               | 11,375.96             | 11,406.28             | 11,376.96             | 40.61            | 40.98         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 46.92                   | 80.24                     | 1.585             |                    |           |
| 11,500.00                                                               | 11,475.96             | 11,506.28             | 11,476.96             | 40.95            | 41.32         | -90.96                 | -282.27                             | -537.14      | 127.16                 | 46.22                   | 80.93                     | 1.571             |                    |           |
| 11,600.00                                                               | 11,575.97             | 11,606.29             | 11,576.97             | 41.30            | 41.66         | -90.96                 | -282.26                             | -537.14      | 127.15                 | 45.53                   | 81.62                     | 1.558             |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #201H - Wellbore #1 - Design #1 |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |  |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|--|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |  |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               |                        |                                     |                                     | Distance               |                         |                           |                   |                              |  |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning                      |  |
| 11,634.37                                                               | 11,610.33             | 11,640.68             | 11,611.33             | 41.42            | 41.77         | -90.39                 | -281.00                             | -537.15                             | 127.15                 | 45.27                   | 81.88                     | 1.553             |                              |  |
| 11,700.00                                                               | 11,675.97             | 11,705.40             | 11,675.53             | 41.64            | 41.98         | -86.82                 | -273.06                             | -537.20                             | 127.40                 | 44.97                   | 82.44                     | 1.545 SF          |                              |  |
| 11,800.00                                                               | 11,775.97             | 11,798.70             | 11,765.57             | 41.99            | 42.26         | -76.28                 | -249.02                             | -537.36                             | 131.60                 | 48.28                   | 83.32                     | 1.579             |                              |  |
| 11,900.00                                                               | 11,875.97             | 11,882.37             | 11,842.06             | 42.33            | 42.47         | -63.06                 | -215.29                             | -537.59                             | 147.31                 | 64.19                   | 83.13                     | 1.772             |                              |  |
| 12,000.00                                                               | 11,975.97             | 11,954.86             | 11,903.76             | 42.68            | 42.62         | -51.20                 | -177.33                             | -537.85                             | 179.64                 | 98.78                   | 80.87                     | 2.221             |                              |  |
| 12,023.05                                                               | 11,999.01             | 11,969.98             | 11,915.99             | 42.76            | 42.65         | -48.87                 | -168.45                             | -537.91                             | 189.45                 | 109.33                  | 80.13                     | 2.364             |                              |  |
| 12,050.00                                                               | 12,025.96             | 11,987.24             | 11,929.66             | 42.85            | 42.68         | -46.45                 | -157.91                             | -537.98                             | 201.50                 | 122.30                  | 79.21                     | 2.544             |                              |  |
| 12,100.00                                                               | 12,075.73             | 12,018.82             | 11,953.84             | 43.02            | 42.73         | -42.82                 | -137.60                             | -538.12                             | 224.08                 | 146.65                  | 77.43                     | 2.894             |                              |  |
| 12,150.00                                                               | 12,124.93             | 12,050.00             | 11,976.57             | 43.18            | 42.78         | -40.07                 | -116.26                             | -538.26                             | 246.45                 | 170.85                  | 75.60                     | 3.260             |                              |  |
| 12,200.00                                                               | 12,173.17             | 12,080.58             | 11,997.71             | 43.33            | 42.81         | -38.02                 | -94.16                              | -538.41                             | 268.23                 | 194.50                  | 73.73                     | 3.638             |                              |  |
| 12,250.00                                                               | 12,220.08             | 12,110.88             | 12,017.46             | 43.48            | 42.85         | -36.48                 | -71.19                              | -538.57                             | 289.14                 | 217.26                  | 71.88                     | 4.023             |                              |  |
| 12,300.00                                                               | 12,265.31             | 12,140.86             | 12,035.77             | 43.61            | 42.88         | -35.37                 | -47.46                              | -538.73                             | 308.97                 | 238.93                  | 70.04                     | 4.411             |                              |  |
| 12,350.00                                                               | 12,308.51             | 12,170.56             | 12,052.67             | 43.72            | 42.90         | -34.64                 | -23.05                              | -538.90                             | 327.57                 | 259.34                  | 68.23                     | 4.801             |                              |  |
| 12,400.00                                                               | 12,349.35             | 12,200.00             | 12,068.15             | 43.83            | 42.92         | -34.24                 | 1.99                                | -539.07                             | 344.83                 | 278.36                  | 66.47                     | 5.188             |                              |  |
| 12,450.00                                                               | 12,387.53             | 12,229.27             | 12,082.25             | 43.92            | 42.93         | -34.16                 | 27.64                               | -539.24                             | 360.65                 | 295.88                  | 64.78                     | 5.568             |                              |  |
| 12,500.00                                                               | 12,422.76             | 12,258.34             | 12,094.93             | 44.00            | 42.95         | -34.43                 | 53.78                               | -539.42                             | 374.97                 | 311.80                  | 63.16                     | 5.936             |                              |  |
| 12,550.00                                                               | 12,454.76             | 12,287.24             | 12,106.21             | 44.06            | 42.95         | -35.09                 | 80.40                               | -539.60                             | 387.71                 | 326.05                  | 61.65                     | 6.288             |                              |  |
| 12,600.00                                                               | 12,483.29             | 12,316.02             | 12,116.10             | 44.11            | 42.96         | -36.22                 | 107.42                              | -539.78                             | 398.83                 | 338.56                  | 60.27                     | 6.618             |                              |  |
| 12,650.00                                                               | 12,508.13             | 12,350.00             | 12,126.01             | 44.15            | 42.96         | -36.70                 | 139.92                              | -540.00                             | 408.34                 | 349.07                  | 59.28                     | 6.889             |                              |  |
| 12,700.00                                                               | 12,529.10             | 12,373.25             | 12,131.67             | 44.19            | 42.97         | -40.59                 | 162.47                              | -540.16                             | 416.04                 | 358.10                  | 57.94                     | 7.181             |                              |  |
| 12,723.05                                                               | 12,537.41             | 12,386.40             | 12,134.46             | 44.21            | 42.97         | -42.20                 | 175.31                              | -540.24                             | 419.04                 | 361.54                  | 57.50                     | 7.288             |                              |  |
| 12,750.00                                                               | 12,546.27             | 12,402.56             | 12,137.49             | 44.24            | 42.98         | -44.20                 | 191.18                              | -540.35                             | 422.32                 | 365.26                  | 57.06                     | 7.401             |                              |  |
| 12,800.00                                                               | 12,560.79             | 12,435.64             | 12,142.67             | 44.33            | 43.02         | -47.71                 | 223.86                              | -540.57                             | 428.07                 | 371.60                  | 56.46                     | 7.581             |                              |  |
| 12,850.00                                                               | 12,572.79             | 12,469.63             | 12,146.81             | 44.46            | 43.08         | -52.38                 | 257.59                              | -540.80                             | 433.10                 | 377.09                  | 56.02                     | 7.731             |                              |  |
| 12,900.00                                                               | 12,582.23             | 12,500.00             | 12,149.49             | 44.61            | 43.16         | -62.76                 | 287.84                              | -541.01                             | 437.44                 | 381.76                  | 55.67                     | 7.857             |                              |  |
| 12,950.00                                                               | 12,589.08             | 12,537.38             | 12,151.47             | 44.77            | 43.26         | -71.75                 | 325.17                              | -541.26                             | 441.00                 | 385.47                  | 55.52                     | 7.943             |                              |  |
| 13,000.00                                                               | 12,593.34             | 12,572.08             | 12,152.00             | 44.94            | 43.36         | -90.39                 | 359.85                              | -541.50                             | 443.83                 | 388.36                  | 55.47                     | 8.001             |                              |  |
| 13,050.00                                                               | 12,594.98             | 12,621.55             | 12,152.00             | 45.11            | 43.51         | -90.39                 | 409.33                              | -541.83                             | 444.95                 | 389.51                  | 55.44                     | 8.026             |                              |  |
| 13,056.38                                                               | 12,595.00             | 12,627.87             | 12,152.00             | 45.14            | 43.53         | -90.39                 | 415.64                              | -541.87                             | 444.92                 | 389.48                  | 55.44                     | 8.026             |                              |  |
| 13,100.00                                                               | 12,595.00             | 12,671.10             | 12,152.00             | 45.30            | 43.68         | -90.39                 | 458.87                              | -542.17                             | 444.58                 | 389.15                  | 55.44                     | 8.020             |                              |  |
| 13,200.00                                                               | 12,595.00             | 12,770.51             | 12,152.00             | 45.70            | 44.06         | -90.39                 | 558.28                              | -542.84                             | 444.16                 | 388.61                  | 55.56                     | 7.995             |                              |  |
| 13,300.00                                                               | 12,595.00             | 12,870.24             | 12,152.00             | 46.15            | 44.49         | -90.39                 | 658.01                              | -543.52                             | 444.03                 | 388.22                  | 55.81                     | 7.957             |                              |  |
| 13,400.00                                                               | 12,595.00             | 12,970.16             | 12,152.00             | 46.65            | 44.98         | -90.39                 | 757.93                              | -544.20                             | 444.00                 | 387.84                  | 56.16                     | 7.906             |                              |  |
| 13,459.31                                                               | 12,595.00             | 13,029.46             | 12,152.00             | 46.96            | 45.29         | -90.42                 | 817.23                              | -544.60                             | 444.00                 | 387.59                  | 56.41                     | 7.871             |                              |  |
| 13,500.00                                                               | 12,595.00             | 13,070.16             | 12,152.00             | 47.18            | 45.52         | -90.42                 | 857.92                              | -544.88                             | 444.00                 | 387.40                  | 56.60                     | 7.845             |                              |  |
| 13,600.00                                                               | 12,595.00             | 13,170.16             | 12,152.00             | 47.76            | 46.11         | -90.42                 | 957.92                              | -545.55                             | 444.00                 | 386.92                  | 57.09                     | 7.778             |                              |  |
| 13,700.00                                                               | 12,595.00             | 13,270.16             | 12,152.00             | 48.39            | 46.75         | -90.42                 | 1,057.92                            | -546.23                             | 444.00                 | 386.39                  | 57.61                     | 7.707             |                              |  |
| 13,800.00                                                               | 12,595.00             | 13,370.16             | 12,152.00             | 49.06            | 47.44         | -90.42                 | 1,157.92                            | -546.91                             | 444.00                 | 385.83                  | 58.18                     | 7.632             |                              |  |
| 13,900.00                                                               | 12,595.00             | 13,470.16             | 12,152.00             | 49.78            | 48.17         | -90.42                 | 1,257.91                            | -547.59                             | 444.00                 | 385.23                  | 58.78                     | 7.554             |                              |  |
| 14,000.00                                                               | 12,595.00             | 13,570.16             | 12,152.00             | 50.54            | 48.95         | -90.42                 | 1,357.91                            | -548.27                             | 444.00                 | 384.59                  | 59.41                     | 7.473             |                              |  |
| 14,100.00                                                               | 12,595.00             | 13,670.16             | 12,152.00             | 51.35            | 49.77         | -90.42                 | 1,457.91                            | -548.95                             | 444.00                 | 383.92                  | 60.08                     | 7.390             |                              |  |
| 14,200.00                                                               | 12,595.00             | 13,770.16             | 12,152.00             | 52.19            | 50.63         | -90.42                 | 1,557.91                            | -549.63                             | 444.00                 | 383.22                  | 60.78                     | 7.305             |                              |  |
| 14,300.00                                                               | 12,595.00             | 13,870.16             | 12,152.00             | 53.07            | 51.53         | -90.42                 | 1,657.90                            | -550.31                             | 444.00                 | 382.48                  | 61.52                     | 7.217             |                              |  |
| 14,400.00                                                               | 12,595.00             | 13,970.16             | 12,152.00             | 53.99            | 52.47         | -90.42                 | 1,757.90                            | -550.98                             | 444.00                 | 381.72                  | 62.28                     | 7.129             |                              |  |
| 14,500.00                                                               | 12,595.00             | 14,070.16             | 12,152.00             | 54.95            | 53.44         | -90.43                 | 1,857.90                            | -551.66                             | 444.00                 | 380.92                  | 63.08                     | 7.039             |                              |  |
| 14,600.00                                                               | 12,595.00             | 14,170.16             | 12,152.00             | 55.93            | 54.45         | -90.43                 | 1,957.90                            | -552.34                             | 444.00                 | 380.10                  | 63.90                     | 6.948             |                              |  |
| 14,700.00                                                               | 12,595.00             | 14,270.16             | 12,152.00             | 56.95            | 55.48         | -90.43                 | 2,057.90                            | -553.02                             | 444.00                 | 379.25                  | 64.75                     | 6.857             |                              |  |
| 14,800.00                                                               | 12,595.00             | 14,370.16             | 12,152.00             | 57.99            | 56.55         | -90.43                 | 2,157.89                            | -553.70                             | 444.00                 | 378.37                  | 65.63                     | 6.765             |                              |  |
| 14,900.00                                                               | 12,595.00             | 14,470.16             | 12,152.00             | 59.07            | 57.64         | -90.43                 | 2,257.89                            | -554.38                             | 444.00                 | 377.47                  | 66.54                     | 6.673             |                              |  |
| 15,000.00                                                               | 12,595.00             | 14,570.16             | 12,152.00             | 60.17            | 58.76         | -90.43                 | 2,357.89                            | -555.06                             | 444.00                 | 376.54                  | 67.46                     | 6.581             |                              |  |
| 15,100.00                                                               | 12,595.00             | 14,670.16             | 12,152.00             | 61.29            | 59.91         | -90.44                 | 2,457.89                            | -555.73                             | 444.00                 | 375.59                  | 68.41                     | 6.490             |                              |  |
| 15,200.00                                                               | 12,595.00             | 14,770.16             | 12,152.00             | 62.44            | 61.07         | -90.44                 | 2,557.88                            | -556.41                             | 444.00                 | 374.61                  | 69.39                     | 6.399             |                              |  |

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



MS Directional  
Anticollision Report



Company: Matador Resources  
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Reference Site: Brad Dyer 35-22S-32E AR  
Site Error: 0.00 usft  
Reference Well: #221H  
Well Error: 0.00 usft  
Reference Wellbore: Wellbore #1  
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Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Output errors are at: 2.00 sigma  
Database: EDM Conroe  
Offset TVD Reference: Offset Datum

| Offset Design         |                       |                       |                       |                  |               |                        |                              |                     |                        |                         |                           |                   | Brad Dyer 35-22S-32E AR - #201H - Wellbore #1 - Design #1 |         | Offset Site Error: |  | 0.00 usft |  |
|-----------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|------------------------------|---------------------|------------------------|-------------------------|---------------------------|-------------------|-----------------------------------------------------------|---------|--------------------|--|-----------|--|
| Survey Program: 0-MWD |                       |                       |                       |                  |               |                        |                              |                     |                        |                         |                           |                   | Offset Well Error:                                        |         | 0.00 usft          |  |           |  |
| Reference             |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                     |                     |                        |                         |                           |                   |                                                           | Warning |                    |  |           |  |
| Measured Depth (usft) | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore +N/-S (usft) | Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                                                           |         |                    |  |           |  |
| 15,300.00             | 12,595.00             | 14,870.16             | 12,152.00             | 63.62            | 62.27         | -90.44                 | 2,657.88                     | -557.09             | 444.00                 | 373.62                  | 70.38                     | 6.308             |                                                           |         |                    |  |           |  |
| 15,400.00             | 12,595.00             | 14,970.16             | 12,152.00             | 64.81            | 63.48         | -90.44                 | 2,757.88                     | -557.77             | 444.00                 | 372.60                  | 71.40                     | 6.219             |                                                           |         |                    |  |           |  |
| 15,500.00             | 12,595.00             | 15,070.16             | 12,152.00             | 66.02            | 64.71         | -90.45                 | 2,857.88                     | -558.45             | 444.00                 | 371.57                  | 72.44                     | 6.130             |                                                           |         |                    |  |           |  |
| 15,600.00             | 12,595.00             | 15,170.16             | 12,152.00             | 67.25            | 65.96         | -90.45                 | 2,957.88                     | -559.13             | 444.00                 | 370.51                  | 73.49                     | 6.042             |                                                           |         |                    |  |           |  |
| 15,700.00             | 12,595.00             | 15,270.16             | 12,152.00             | 68.50            | 67.23         | -90.45                 | 3,057.87                     | -559.81             | 444.00                 | 369.44                  | 74.56                     | 5.955             |                                                           |         |                    |  |           |  |
| 15,800.00             | 12,595.00             | 15,370.16             | 12,152.00             | 69.77            | 68.51         | -90.46                 | 3,157.87                     | -560.49             | 444.00                 | 368.35                  | 75.65                     | 5.869             |                                                           |         |                    |  |           |  |
| 15,900.00             | 12,595.00             | 15,470.16             | 12,152.00             | 71.05            | 69.81         | -90.46                 | 3,257.87                     | -561.16             | 444.00                 | 367.24                  | 76.76                     | 5.784             |                                                           |         |                    |  |           |  |
| 16,000.00             | 12,595.00             | 15,570.16             | 12,152.00             | 72.35            | 71.12         | -90.47                 | 3,357.87                     | -561.84             | 444.00                 | 366.12                  | 77.88                     | 5.701             |                                                           |         |                    |  |           |  |
| 16,100.00             | 12,595.00             | 15,670.16             | 12,152.00             | 73.67            | 72.45         | -90.47                 | 3,457.86                     | -562.52             | 444.00                 | 364.98                  | 79.02                     | 5.619             |                                                           |         |                    |  |           |  |
| 16,200.00             | 12,595.00             | 15,770.16             | 12,152.00             | 74.99            | 73.80         | -90.48                 | 3,557.86                     | -563.20             | 444.00                 | 363.83                  | 80.17                     | 5.538             |                                                           |         |                    |  |           |  |
| 16,300.00             | 12,595.00             | 15,870.16             | 12,152.00             | 76.33            | 75.15         | -90.49                 | 3,657.86                     | -563.88             | 444.00                 | 362.66                  | 81.34                     | 5.459             |                                                           |         |                    |  |           |  |
| 16,400.00             | 12,595.00             | 15,970.16             | 12,152.00             | 77.68            | 76.52         | -90.50                 | 3,757.86                     | -564.56             | 444.00                 | 361.48                  | 82.52                     | 5.381             |                                                           |         |                    |  |           |  |
| 16,500.00             | 12,595.00             | 16,070.16             | 12,152.00             | 79.05            | 77.90         | -90.51                 | 3,857.85                     | -565.24             | 444.00                 | 360.29                  | 83.71                     | 5.304             |                                                           |         |                    |  |           |  |
| 16,600.00             | 12,595.00             | 16,170.16             | 12,152.00             | 80.42            | 79.29         | -90.53                 | 3,957.85                     | -565.92             | 444.00                 | 359.09                  | 84.91                     | 5.229             |                                                           |         |                    |  |           |  |
| 16,700.00             | 12,595.00             | 16,270.16             | 12,152.00             | 81.81            | 80.68         | -90.55                 | 4,057.85                     | -566.59             | 444.00                 | 357.87                  | 86.13                     | 5.155             |                                                           |         |                    |  |           |  |
| 16,800.00             | 12,595.00             | 16,370.16             | 12,152.00             | 83.20            | 82.09         | -90.58                 | 4,157.85                     | -567.27             | 444.00                 | 356.64                  | 87.36                     | 5.082             |                                                           |         |                    |  |           |  |
| 16,900.00             | 12,595.00             | 16,470.16             | 12,152.00             | 84.61            | 83.51         | -90.62                 | 4,257.85                     | -567.95             | 444.00                 | 355.40                  | 88.60                     | 5.011             |                                                           |         |                    |  |           |  |
| 17,000.00             | 12,595.00             | 16,570.16             | 12,152.00             | 86.02            | 84.94         | -90.69                 | 4,357.84                     | -568.63             | 444.00                 | 354.15                  | 89.85                     | 4.942             |                                                           |         |                    |  |           |  |
| 17,100.00             | 12,595.00             | 16,670.16             | 12,152.00             | 87.45            | 86.37         | -90.81                 | 4,457.84                     | -569.31             | 444.00                 | 352.90                  | 91.11                     | 4.873             |                                                           |         |                    |  |           |  |
| 17,200.00             | 12,595.00             | 16,770.16             | 12,152.00             | 88.88            | 87.82         | -91.09                 | 4,557.84                     | -569.99             | 444.00                 | 351.63                  | 92.37                     | 4.807             |                                                           |         |                    |  |           |  |
| 17,300.00             | 12,595.00             | 16,870.16             | 12,152.00             | 90.31            | 89.27         | -92.50                 | 4,657.84                     | -570.67             | 444.00                 | 350.35                  | 93.65                     | 4.741             |                                                           |         |                    |  |           |  |
| 17,349.17             | 12,595.00             | 16,919.32             | 12,152.00             | 90.97            | 89.98         | 0.00                   | 4,707.00                     | -571.00             | 444.00                 | 349.87                  | 94.13                     | 4.717             |                                                           |         |                    |  |           |  |



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #202H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |         |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|---------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |         |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                            |                     |                        |                         |                           |                   |                              | Warning |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |         |
| 0.00                                                                    | 0.00                  | 2.00                  | -2.00                 | 0.00             | 0.00          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               |                         |                           |                   |                              |         |
| 100.00                                                                  | 100.00                | 102.00                | 98.00                 | 0.13             | 0.14          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,289.80                | 0.26                      | 4,896.313         |                              |         |
| 200.00                                                                  | 200.00                | 202.00                | 198.00                | 0.49             | 0.49          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,289.09                | 0.98                      | 1,315.829         |                              |         |
| 300.00                                                                  | 300.00                | 302.00                | 298.00                | 0.85             | 0.85          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,288.37                | 1.70                      | 760.041           |                              |         |
| 400.00                                                                  | 400.00                | 402.00                | 398.00                | 1.20             | 1.21          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,287.65                | 2.41                      | 534.342           |                              |         |
| 500.00                                                                  | 500.00                | 502.00                | 498.00                | 1.56             | 1.57          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,286.93                | 3.13                      | 411.997           |                              |         |
| 600.00                                                                  | 600.00                | 602.00                | 598.00                | 1.92             | 1.93          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,286.22                | 3.85                      | 335.239           |                              |         |
| 700.00                                                                  | 700.00                | 702.00                | 698.00                | 2.28             | 2.29          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,285.50                | 4.57                      | 282.591           |                              |         |
| 800.00                                                                  | 800.00                | 802.00                | 798.00                | 2.64             | 2.64          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,284.78                | 5.28                      | 244.234           |                              |         |
| 900.00                                                                  | 900.00                | 902.00                | 898.00                | 3.00             | 3.00          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,284.07                | 6.00                      | 215.046           |                              |         |
| 1,000.00                                                                | 1,000.00              | 998.00                | 998.00                | 3.35             | 3.35          | 89.42                  | 13.00                               | 1,290.00            | 1,290.07               | 1,283.36                | 6.70                      | 192.500           |                              |         |
| 1,100.00                                                                | 1,099.99              | 1,122.10              | 1,122.09              | 3.70             | 3.77          | 89.43                  | 12.36                               | 1,288.87            | 1,289.88               | 1,282.40                | 7.47                      | 172.632           |                              |         |
| 1,200.00                                                                | 1,199.96              | 1,246.68              | 1,246.60              | 4.03             | 4.20          | 89.45                  | 10.40                               | 1,285.37            | 1,289.23               | 1,281.01                | 8.22                      | 156.793           |                              |         |
| 1,300.00                                                                | 1,299.86              | 1,371.23              | 1,370.97              | 4.37             | 4.62          | 89.49                  | 7.11                                | 1,279.52            | 1,288.13               | 1,279.15                | 8.98                      | 143.444           |                              |         |
| 1,400.00                                                                | 1,399.68              | 1,495.74              | 1,495.12              | 4.72             | 5.06          | 89.54                  | 2.50                                | 1,271.31            | 1,286.58               | 1,276.83                | 9.74                      | 132.048           |                              |         |
| 1,500.00                                                                | 1,499.37              | 1,620.19              | 1,618.98              | 5.07             | 5.50          | 89.60                  | -3.43                               | 1,260.77            | 1,284.57               | 1,274.06                | 10.51                     | 122.198           |                              |         |
| 1,576.67                                                                | 1,575.69              | 1,707.03              | 1,691.37              | 5.34             | 5.82          | 89.59                  | -7.14                               | 1,254.16            | 1,283.54               | 1,272.45                | 11.09                     | 115.753           |                              |         |
| 1,600.00                                                                | 1,598.91              | 1,716.31              | 1,714.57              | 5.43             | 5.86          | 89.58                  | -8.34                               | 1,252.03            | 1,283.35               | 1,272.14                | 11.20                     | 114.550           |                              |         |
| 1,700.00                                                                | 1,698.40              | 1,816.30              | 1,814.02              | 5.79             | 6.22          | 89.56                  | -13.46                              | 1,242.91            | 1,282.53               | 1,270.62                | 11.91                     | 107.667           |                              |         |
| 1,800.00                                                                | 1,797.90              | 1,916.30              | 1,913.47              | 6.16             | 6.60          | 89.53                  | -18.58                              | 1,233.79            | 1,281.71               | 1,269.08                | 12.63                     | 101.518           |                              |         |
| 1,900.00                                                                | 1,897.39              | 2,016.29              | 2,012.91              | 6.52             | 6.97          | 89.51                  | -23.71                              | 1,224.67            | 1,280.89               | 1,267.55                | 13.34                     | 95.998            |                              |         |
| 2,000.00                                                                | 1,996.88              | 2,116.29              | 2,112.36              | 6.90             | 7.35          | 89.48                  | -28.83                              | 1,215.55            | 1,280.07               | 1,266.01                | 14.06                     | 91.019            |                              |         |
| 2,100.00                                                                | 2,096.38              | 2,216.28              | 2,211.80              | 7.27             | 7.73          | 89.46                  | -33.96                              | 1,206.44            | 1,279.25               | 1,264.46                | 14.79                     | 86.509            |                              |         |
| 2,200.00                                                                | 2,195.87              | 2,316.28              | 2,311.25              | 7.65             | 8.11          | 89.43                  | -39.08                              | 1,197.32            | 1,278.43               | 1,262.92                | 15.51                     | 82.406            |                              |         |
| 2,300.00                                                                | 2,295.37              | 2,416.27              | 2,410.70              | 8.03             | 8.49          | 89.41                  | -44.21                              | 1,188.20            | 1,277.61               | 1,261.37                | 16.24                     | 78.660            |                              |         |
| 2,400.00                                                                | 2,394.86              | 2,516.27              | 2,510.14              | 8.41             | 8.87          | 89.38                  | -49.33                              | 1,179.08            | 1,276.80               | 1,259.82                | 16.97                     | 75.228            |                              |         |
| 2,500.00                                                                | 2,494.35              | 2,616.26              | 2,609.59              | 8.79             | 9.26          | 89.36                  | -54.46                              | 1,169.96            | 1,275.98               | 1,258.27                | 17.70                     | 72.072            |                              |         |
| 2,600.00                                                                | 2,593.85              | 2,716.26              | 2,709.04              | 9.17             | 9.64          | 89.33                  | -59.58                              | 1,160.84            | 1,275.16               | 1,256.72                | 18.44                     | 69.161            |                              |         |
| 2,700.00                                                                | 2,693.34              | 2,816.25              | 2,808.48              | 9.55             | 10.03         | 89.31                  | -64.70                              | 1,151.72            | 1,274.34               | 1,255.17                | 19.17                     | 66.469            |                              |         |
| 2,800.00                                                                | 2,792.84              | 2,916.25              | 2,907.93              | 9.94             | 10.42         | 89.28                  | -69.83                              | 1,142.60            | 1,273.53               | 1,253.62                | 19.91                     | 63.971            |                              |         |
| 2,900.00                                                                | 2,892.33              | 3,016.24              | 3,007.38              | 10.32            | 10.81         | 89.26                  | -74.95                              | 1,133.48            | 1,272.71               | 1,252.07                | 20.64                     | 61.649            |                              |         |
| 3,000.00                                                                | 2,991.82              | 3,116.24              | 3,106.82              | 10.71            | 11.19         | 89.23                  | -80.08                              | 1,124.36            | 1,271.89               | 1,250.51                | 21.38                     | 59.485            |                              |         |
| 3,100.00                                                                | 3,091.32              | 3,216.23              | 3,206.27              | 11.09            | 11.58         | 89.21                  | -85.20                              | 1,115.24            | 1,271.08               | 1,248.96                | 22.12                     | 57.462            |                              |         |
| 3,200.00                                                                | 3,190.81              | 3,316.23              | 3,305.72              | 11.48            | 11.97         | 89.18                  | -90.33                              | 1,106.13            | 1,270.26               | 1,247.40                | 22.86                     | 55.569            |                              |         |
| 3,300.00                                                                | 3,290.31              | 3,416.22              | 3,405.16              | 11.87            | 12.36         | 89.16                  | -95.45                              | 1,097.01            | 1,269.45               | 1,245.85                | 23.60                     | 53.793            |                              |         |
| 3,400.00                                                                | 3,389.80              | 3,516.22              | 3,504.61              | 12.26            | 12.75         | 89.13                  | -100.57                             | 1,087.89            | 1,268.63               | 1,244.29                | 24.34                     | 52.123            |                              |         |
| 3,500.00                                                                | 3,489.29              | 3,616.21              | 3,604.06              | 12.64            | 13.14         | 89.11                  | -105.70                             | 1,078.77            | 1,267.81               | 1,242.74                | 25.08                     | 50.552            |                              |         |
| 3,600.00                                                                | 3,588.79              | 3,716.21              | 3,703.50              | 13.03            | 13.54         | 89.08                  | -110.82                             | 1,069.65            | 1,267.00               | 1,241.18                | 25.82                     | 49.069            |                              |         |
| 3,700.00                                                                | 3,688.28              | 3,816.20              | 3,802.95              | 13.42            | 13.93         | 89.06                  | -115.95                             | 1,060.53            | 1,266.18               | 1,239.62                | 26.56                     | 47.668            |                              |         |
| 3,800.00                                                                | 3,787.78              | 3,916.20              | 3,902.40              | 13.81            | 14.32         | 89.03                  | -121.07                             | 1,051.41            | 1,265.37               | 1,238.07                | 27.30                     | 46.343            |                              |         |
| 3,900.00                                                                | 3,887.27              | 4,016.19              | 4,001.84              | 14.20            | 14.71         | 89.01                  | -126.20                             | 1,042.29            | 1,264.56               | 1,236.51                | 28.05                     | 45.087            |                              |         |
| 4,000.00                                                                | 3,986.76              | 4,116.19              | 4,101.29              | 14.59            | 15.10         | 88.98                  | -131.32                             | 1,033.17            | 1,263.74               | 1,234.95                | 28.79                     | 43.896            |                              |         |
| 4,100.00                                                                | 4,086.26              | 4,216.18              | 4,200.74              | 14.98            | 15.50         | 88.95                  | -136.44                             | 1,024.05            | 1,262.93               | 1,233.40                | 29.53                     | 42.764            |                              |         |
| 4,200.00                                                                | 4,185.75              | 4,316.18              | 4,300.18              | 15.37            | 15.89         | 88.93                  | -141.57                             | 1,014.93            | 1,262.11               | 1,231.84                | 30.28                     | 41.688            |                              |         |
| 4,300.00                                                                | 4,285.25              | 4,416.17              | 4,399.63              | 15.76            | 16.28         | 88.90                  | -146.69                             | 1,005.82            | 1,261.30               | 1,230.28                | 31.02                     | 40.662            |                              |         |
| 4,400.00                                                                | 4,384.74              | 4,516.17              | 4,499.07              | 16.15            | 16.68         | 88.88                  | -151.82                             | 996.70              | 1,260.49               | 1,228.73                | 31.76                     | 39.685            |                              |         |
| 4,500.00                                                                | 4,484.23              | 4,616.17              | 4,598.52              | 16.54            | 17.07         | 88.85                  | -156.94                             | 987.58              | 1,259.68               | 1,227.17                | 32.51                     | 38.752            |                              |         |
| 4,600.00                                                                | 4,583.73              | 4,716.16              | 4,697.97              | 16.93            | 17.46         | 88.83                  | -162.07                             | 978.46              | 1,258.86               | 1,225.61                | 33.25                     | 37.860            |                              |         |
| 4,700.00                                                                | 4,683.22              | 4,816.16              | 4,797.41              | 17.32            | 17.86         | 88.80                  | -167.19                             | 969.34              | 1,258.05               | 1,224.06                | 33.99                     | 37.007            |                              |         |
| 4,800.00                                                                | 4,782.71              | 4,916.15              | 4,896.86              | 17.72            | 18.25         | 88.78                  | -172.31                             | 960.22              | 1,257.24               | 1,222.50                | 34.74                     | 36.191            |                              |         |
| 4,900.00                                                                | 4,882.21              | 5,016.15              | 4,996.31              | 18.11            | 18.65         | 88.75                  | -177.44                             | 951.10              | 1,256.43               | 1,220.94                | 35.48                     | 35.409            |                              |         |
| 5,000.00                                                                | 4,981.70              | 5,116.14              | 5,095.75              | 18.50            | 19.04         | 88.72                  | -182.56                             | 941.98              | 1,255.62               | 1,219.39                | 36.23                     | 34.658            |                              |         |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #202H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |  |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|--|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |  |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                            |                                     |                        |                         |                           |                   | Warning                      |  |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |  |
| 5,100.00                                                                | 5,081.20              | 5,216.14              | 5,195.20              | 18.89            | 19.43         | 88.70                  | -187.69                             | 932.86                              | 1,254.80               | 1,217.83                | 36.97                     | 33.938            |                              |  |
| 5,200.00                                                                | 5,180.69              | 5,316.13              | 5,294.65              | 19.28            | 19.83         | 88.67                  | -192.81                             | 923.74                              | 1,253.99               | 1,216.27                | 37.72                     | 33.247            |                              |  |
| 5,300.00                                                                | 5,280.18              | 5,416.13              | 5,394.09              | 19.67            | 20.22         | 88.65                  | -197.94                             | 914.62                              | 1,253.18               | 1,214.72                | 38.46                     | 32.582            |                              |  |
| 5,400.00                                                                | 5,379.68              | 5,516.12              | 5,493.54              | 20.07            | 20.62         | 88.62                  | -203.06                             | 905.51                              | 1,252.37               | 1,213.16                | 39.21                     | 31.942            |                              |  |
| 5,500.00                                                                | 5,479.17              | 5,616.12              | 5,592.99              | 20.46            | 21.01         | 88.59                  | -208.18                             | 896.39                              | 1,251.56               | 1,211.61                | 39.95                     | 31.326            |                              |  |
| 5,600.00                                                                | 5,578.67              | 5,716.11              | 5,692.43              | 20.85            | 21.41         | 88.57                  | -213.31                             | 887.27                              | 1,250.75               | 1,210.05                | 40.70                     | 30.732            |                              |  |
| 5,700.00                                                                | 5,678.16              | 5,816.11              | 5,791.88              | 21.24            | 21.80         | 88.54                  | -218.43                             | 878.15                              | 1,249.94               | 1,208.50                | 41.44                     | 30.160            |                              |  |
| 5,800.00                                                                | 5,777.65              | 5,916.10              | 5,891.33              | 21.63            | 22.20         | 88.52                  | -223.56                             | 869.03                              | 1,249.13               | 1,206.94                | 42.19                     | 29.608            |                              |  |
| 5,900.00                                                                | 5,877.15              | 6,016.10              | 5,990.77              | 22.03            | 22.59         | 88.49                  | -228.68                             | 859.91                              | 1,248.32               | 1,205.39                | 42.93                     | 29.075            |                              |  |
| 5,941.51                                                                | 5,918.45              | 6,057.61              | 6,032.05              | 22.19            | 22.76         | 88.48                  | -230.81                             | 856.12                              | 1,247.99               | 1,204.74                | 43.24                     | 28.859            |                              |  |
| 6,000.00                                                                | 5,976.67              | 6,116.09              | 6,090.22              | 22.42            | 22.99         | 88.47                  | -233.81                             | 850.79                              | 1,247.26               | 1,203.58                | 43.68                     | 28.555            |                              |  |
| 6,100.00                                                                | 6,076.34              | 6,216.06              | 6,189.64              | 22.80            | 23.38         | 88.49                  | -238.93                             | 841.67                              | 1,244.86               | 1,200.44                | 44.42                     | 28.023            |                              |  |
| 6,200.00                                                                | 6,176.13              | 6,315.97              | 6,289.00              | 23.17            | 23.78         | 88.56                  | -244.05                             | 832.56                              | 1,240.99               | 1,195.83                | 45.16                     | 27.479            |                              |  |
| 6,300.00                                                                | 6,276.02              | 6,415.80              | 6,388.28              | 23.53            | 24.17         | 88.67                  | -249.16                             | 823.46                              | 1,235.66               | 1,189.76                | 45.90                     | 26.922            |                              |  |
| 6,400.00                                                                | 6,375.97              | 6,515.51              | 6,487.45              | 23.89            | 24.57         | 88.82                  | -254.27                             | 814.37                              | 1,228.87               | 1,182.24                | 46.63                     | 26.353            |                              |  |
| 6,500.00                                                                | 6,475.96              | 6,606.21              | 6,577.67              | 24.23            | 24.92         | 89.00                  | -258.83                             | 806.26                              | 1,220.84               | 1,173.51                | 47.33                     | 25.793            |                              |  |
| 6,518.18                                                                | 6,494.14              | 6,621.45              | 6,592.84              | 24.29            | 24.98         | 89.03                  | -259.54                             | 805.00                              | 1,219.34               | 1,171.89                | 47.45                     | 25.696            |                              |  |
| 6,600.00                                                                | 6,575.96              | 6,690.12              | 6,661.25              | 24.55            | 25.25         | 89.16                  | -262.49                             | 799.74                              | 1,213.02               | 1,165.03                | 47.98                     | 25.280            |                              |  |
| 6,700.00                                                                | 6,675.96              | 6,774.24              | 6,745.13              | 24.87            | 25.57         | 89.31                  | -265.56                             | 794.28                              | 1,206.47               | 1,157.85                | 48.62                     | 24.813            |                              |  |
| 6,800.00                                                                | 6,775.96              | 6,858.52              | 6,829.26              | 25.19            | 25.88         | 89.42                  | -268.03                             | 789.89                              | 1,201.22               | 1,151.97                | 49.25                     | 24.389            |                              |  |
| 6,900.00                                                                | 6,875.96              | 6,942.93              | 6,913.58              | 25.51            | 26.18         | 89.51                  | -269.90                             | 786.56                              | 1,197.26               | 1,147.39                | 49.87                     | 24.006            |                              |  |
| 7,000.00                                                                | 6,975.96              | 7,027.44              | 6,998.05              | 25.83            | 26.48         | 89.57                  | -271.16                             | 784.32                              | 1,194.60               | 1,144.12                | 50.49                     | 23.662            |                              |  |
| 7,100.00                                                                | 7,075.96              | 7,112.00              | 7,082.60              | 26.16            | 26.77         | 89.60                  | -271.80                             | 783.17                              | 1,193.23               | 1,142.14                | 51.09                     | 23.357            |                              |  |
| 7,175.82                                                                | 7,151.78              | 7,179.18              | 7,149.78              | 26.40            | 26.99         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,141.48                | 51.54                     | 23.146            |                              |  |
| 7,200.00                                                                | 7,175.96              | 7,203.37              | 7,173.96              | 26.48            | 27.06         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,141.32                | 51.70                     | 23.074            |                              |  |
| 7,300.00                                                                | 7,275.96              | 7,303.37              | 7,273.96              | 26.80            | 27.38         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,140.67                | 52.36                     | 22.784            |                              |  |
| 7,400.00                                                                | 7,375.96              | 7,403.37              | 7,373.96              | 27.13            | 27.70         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,140.00                | 53.02                     | 22.500            |                              |  |
| 7,500.00                                                                | 7,475.96              | 7,503.37              | 7,473.96              | 27.46            | 28.02         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,139.34                | 53.69                     | 22.223            |                              |  |
| 7,600.00                                                                | 7,575.96              | 7,603.37              | 7,573.96              | 27.78            | 28.34         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,138.68                | 54.35                     | 21.951            |                              |  |
| 7,700.00                                                                | 7,675.96              | 7,703.37              | 7,673.96              | 28.11            | 28.66         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,138.01                | 55.01                     | 21.686            |                              |  |
| 7,800.00                                                                | 7,775.96              | 7,803.37              | 7,773.96              | 28.44            | 28.98         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,137.35                | 55.68                     | 21.427            |                              |  |
| 7,900.00                                                                | 7,875.96              | 7,903.37              | 7,873.96              | 28.77            | 29.30         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,136.68                | 56.35                     | 21.173            |                              |  |
| 8,000.00                                                                | 7,975.96              | 8,003.37              | 7,973.96              | 29.10            | 29.63         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,136.01                | 57.02                     | 20.924            |                              |  |
| 8,100.00                                                                | 8,075.96              | 8,103.37              | 8,073.96              | 29.43            | 29.95         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,135.34                | 57.69                     | 20.682            |                              |  |
| 8,200.00                                                                | 8,175.96              | 8,203.37              | 8,173.96              | 29.76            | 30.27         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,134.67                | 58.36                     | 20.444            |                              |  |
| 8,300.00                                                                | 8,275.96              | 8,303.37              | 8,273.96              | 30.09            | 30.60         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,134.00                | 59.03                     | 20.211            |                              |  |
| 8,400.00                                                                | 8,375.96              | 8,403.37              | 8,373.96              | 30.43            | 30.93         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,133.33                | 59.70                     | 19.983            |                              |  |
| 8,500.00                                                                | 8,475.96              | 8,503.37              | 8,473.96              | 30.76            | 31.25         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,132.65                | 60.38                     | 19.760            |                              |  |
| 8,600.00                                                                | 8,575.96              | 8,603.37              | 8,573.96              | 31.09            | 31.58         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,131.98                | 61.05                     | 19.542            |                              |  |
| 8,700.00                                                                | 8,675.96              | 8,703.37              | 8,673.96              | 31.43            | 31.91         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,131.30                | 61.73                     | 19.328            |                              |  |
| 8,800.00                                                                | 8,775.96              | 8,803.37              | 8,773.96              | 31.76            | 32.24         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,130.63                | 62.40                     | 19.118            |                              |  |
| 8,900.00                                                                | 8,875.96              | 8,903.37              | 8,873.96              | 32.10            | 32.57         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,129.95                | 63.08                     | 18.913            |                              |  |
| 9,000.00                                                                | 8,975.96              | 9,003.37              | 8,973.96              | 32.43            | 32.90         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,129.27                | 63.76                     | 18.711            |                              |  |
| 9,100.00                                                                | 9,075.96              | 9,103.37              | 9,073.96              | 32.77            | 33.23         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,128.59                | 64.44                     | 18.514            |                              |  |
| 9,200.00                                                                | 9,175.96              | 9,203.37              | 9,173.96              | 33.11            | 33.56         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,127.91                | 65.12                     | 18.321            |                              |  |
| 9,300.00                                                                | 9,275.96              | 9,303.37              | 9,273.96              | 33.44            | 33.89         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,127.23                | 65.80                     | 18.131            |                              |  |
| 9,400.00                                                                | 9,375.96              | 9,403.37              | 9,373.96              | 33.78            | 34.23         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,126.55                | 66.48                     | 17.945            |                              |  |
| 9,500.00                                                                | 9,475.96              | 9,503.37              | 9,473.96              | 34.12            | 34.56         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,125.86                | 67.16                     | 17.763            |                              |  |
| 9,600.00                                                                | 9,575.96              | 9,603.37              | 9,573.96              | 34.46            | 34.89         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,125.18                | 67.85                     | 17.584            |                              |  |
| 9,700.00                                                                | 9,675.96              | 9,703.37              | 9,673.96              | 34.80            | 35.23         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,124.50                | 68.53                     | 17.408            |                              |  |
| 9,800.00                                                                | 9,775.96              | 9,803.37              | 9,773.96              | 35.14            | 35.56         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,123.81                | 69.22                     | 17.236            |                              |  |
| 9,900.00                                                                | 9,875.96              | 9,903.37              | 9,873.96              | 35.47            | 35.90         | 89.60                  | -271.90                             | 783.00                              | 1,193.03               | 1,123.13                | 69.90                     | 17.067            |                              |  |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #202H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|--------------|------------------------|-------------------------|---------------------------|-------------------|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Well Error: | 0.00 usft |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     |              |                        |                         |                           |                   | Warning            |           |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                    |           |
| 10,000.00                                                               | 9,975.96              | 10,003.37             | 9,973.96              | 35.81            | 36.23         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,122.44                | 70.59                     | 16.902            |                    |           |
| 10,100.00                                                               | 10,075.96             | 10,103.37             | 10,073.96             | 36.16            | 36.57         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,121.75                | 71.27                     | 16.739            |                    |           |
| 10,200.00                                                               | 10,175.96             | 10,203.37             | 10,173.96             | 36.50            | 36.90         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,121.07                | 71.96                     | 16.579            |                    |           |
| 10,300.00                                                               | 10,275.96             | 10,303.37             | 10,273.96             | 36.84            | 37.24         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,120.38                | 72.65                     | 16.422            |                    |           |
| 10,400.00                                                               | 10,375.96             | 10,403.37             | 10,373.96             | 37.18            | 37.58         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,119.69                | 73.34                     | 16.268            |                    |           |
| 10,500.00                                                               | 10,475.96             | 10,503.37             | 10,473.96             | 37.52            | 37.91         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,119.00                | 74.03                     | 16.117            |                    |           |
| 10,600.00                                                               | 10,575.96             | 10,603.37             | 10,573.96             | 37.86            | 38.25         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,118.31                | 74.71                     | 15.968            |                    |           |
| 10,700.00                                                               | 10,675.96             | 10,703.37             | 10,673.96             | 38.20            | 38.59         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,117.62                | 75.40                     | 15.822            |                    |           |
| 10,800.00                                                               | 10,775.96             | 10,803.37             | 10,773.96             | 38.55            | 38.93         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,116.93                | 76.09                     | 15.678            |                    |           |
| 10,900.00                                                               | 10,875.96             | 10,903.37             | 10,873.96             | 38.89            | 39.27         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,116.24                | 76.79                     | 15.537            |                    |           |
| 11,000.00                                                               | 10,975.96             | 11,003.37             | 10,973.96             | 39.23            | 39.61         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,115.55                | 77.48                     | 15.399            |                    |           |
| 11,100.00                                                               | 11,075.96             | 11,103.37             | 11,073.96             | 39.58            | 39.95         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,114.86                | 78.17                     | 15.262            |                    |           |
| 11,200.00                                                               | 11,175.96             | 11,203.37             | 11,173.96             | 39.92            | 40.29         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,114.17                | 78.86                     | 15.128            |                    |           |
| 11,300.00                                                               | 11,275.96             | 11,303.37             | 11,273.96             | 40.26            | 40.63         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,113.48                | 79.55                     | 14.997            |                    |           |
| 11,400.00                                                               | 11,375.96             | 11,403.37             | 11,373.96             | 40.61            | 40.97         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,112.78                | 80.25                     | 14.867            |                    |           |
| 11,500.00                                                               | 11,475.96             | 11,503.37             | 11,473.96             | 40.95            | 41.31         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,112.09                | 80.94                     | 14.740            |                    |           |
| 11,600.00                                                               | 11,575.97             | 11,603.37             | 11,573.97             | 41.30            | 41.65         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,111.40                | 81.63                     | 14.615            |                    |           |
| 11,602.25                                                               | 11,578.21             | 11,605.62             | 11,576.21             | 41.31            | 41.66         | 89.60                  | -271.90                             | 783.00       | 1,193.03               | 1,111.38                | 81.65                     | 14.612 CC         |                    |           |
| 11,700.00                                                               | 11,675.97             | 11,702.78             | 11,673.10             | 41.64            | 41.98         | 89.32                  | -266.02                             | 782.96       | 1,193.04               | 1,110.74                | 82.31                     | 14.495            |                    |           |
| 11,800.00                                                               | 11,775.97             | 11,797.49             | 11,765.30             | 41.99            | 42.26         | 88.30                  | -244.82                             | 782.82       | 1,193.37               | 1,110.47                | 82.90                     | 14.395 ES         |                    |           |
| 11,900.00                                                               | 11,875.97             | 11,883.24             | 11,844.74             | 42.33            | 42.49         | 86.77                  | -212.77                             | 782.60       | 1,194.86               | 1,111.46                | 83.39                     | 14.328            |                    |           |
| 12,000.00                                                               | 11,975.97             | 11,958.02             | 11,909.45             | 42.68            | 42.65         | 84.98                  | -175.41                             | 782.34       | 1,198.67               | 1,114.91                | 83.76                     | 14.311            |                    |           |
| 12,023.05                                                               | 11,999.01             | 11,973.66             | 11,922.34             | 42.76            | 42.68         | 84.56                  | -166.55                             | 782.28       | 1,200.01               | 1,116.19                | 83.82                     | 14.317            |                    |           |
| 12,050.00                                                               | 12,025.96             | 11,991.51             | 11,936.75             | 42.85            | 42.72         | 84.09                  | -156.01                             | 782.21       | 1,201.85               | 1,117.97                | 83.88                     | 14.328            |                    |           |
| 12,100.00                                                               | 12,075.73             | 12,024.13             | 11,962.20             | 43.02            | 42.77         | 83.33                  | -135.60                             | 782.07       | 1,206.12               | 1,122.14                | 83.97                     | 14.363            |                    |           |
| 12,150.00                                                               | 12,124.93             | 12,056.20             | 11,986.04             | 43.18            | 42.82         | 82.74                  | -114.17                             | 781.93       | 1,211.39               | 1,127.36                | 84.03                     | 14.415            |                    |           |
| 12,200.00                                                               | 12,173.17             | 12,087.79             | 12,008.32             | 43.33            | 42.86         | 82.31                  | -91.79                              | 781.77       | 1,217.56               | 1,133.49                | 84.06                     | 14.484            |                    |           |
| 12,250.00                                                               | 12,220.08             | 12,118.95             | 12,029.06             | 43.48            | 42.90         | 82.03                  | -68.53                              | 781.61       | 1,224.49               | 1,140.43                | 84.06                     | 14.566            |                    |           |
| 12,300.00                                                               | 12,265.31             | 12,150.00             | 12,048.44             | 43.61            | 42.93         | 81.90                  | -44.27                              | 781.45       | 1,232.08               | 1,148.04                | 84.04                     | 14.661            |                    |           |
| 12,350.00                                                               | 12,308.51             | 12,180.25             | 12,066.02             | 43.72            | 42.95         | 81.94                  | -19.67                              | 781.28       | 1,240.19               | 1,156.20                | 83.99                     | 14.765            |                    |           |
| 12,400.00                                                               | 12,349.35             | 12,210.46             | 12,082.27             | 43.83            | 42.98         | 82.10                  | 5.80                                | 781.11       | 1,248.71               | 1,164.78                | 83.94                     | 14.877            |                    |           |
| 12,450.00                                                               | 12,387.53             | 12,240.43             | 12,097.03             | 43.92            | 42.99         | 82.40                  | 31.88                               | 780.93       | 1,257.53               | 1,173.65                | 83.87                     | 14.993            |                    |           |
| 12,500.00                                                               | 12,422.76             | 12,270.20             | 12,110.33             | 44.00            | 43.00         | 82.83                  | 58.50                               | 780.75       | 1,266.52               | 1,182.71                | 83.81                     | 15.111            |                    |           |
| 12,550.00                                                               | 12,454.76             | 12,300.00             | 12,122.24             | 44.06            | 43.01         | 83.35                  | 85.82                               | 780.56       | 1,275.59               | 1,191.83                | 83.76                     | 15.229            |                    |           |
| 12,600.00                                                               | 12,483.29             | 12,329.22             | 12,132.52             | 44.11            | 43.02         | 83.99                  | 113.17                              | 780.38       | 1,284.62               | 1,200.90                | 83.72                     | 15.344            |                    |           |
| 12,650.00                                                               | 12,508.13             | 12,358.53             | 12,141.42             | 44.15            | 43.02         | 84.71                  | 141.09                              | 780.19       | 1,293.53               | 1,209.83                | 83.70                     | 15.454            |                    |           |
| 12,700.00                                                               | 12,529.10             | 12,387.73             | 12,148.85             | 44.19            | 43.03         | 85.50                  | 169.33                              | 779.99       | 1,302.22               | 1,218.51                | 83.71                     | 15.556            |                    |           |
| 12,723.05                                                               | 12,537.41             | 12,400.00             | 12,151.54             | 44.21            | 43.03         | 85.93                  | 181.30                              | 779.91       | 1,306.14               | 1,222.42                | 83.72                     | 15.602            |                    |           |
| 12,750.00                                                               | 12,546.27             | 12,416.83             | 12,154.82             | 44.24            | 43.04         | 86.34                  | 197.81                              | 779.80       | 1,310.69               | 1,226.94                | 83.74                     | 15.651            |                    |           |
| 12,800.00                                                               | 12,560.79             | 12,450.00             | 12,160.15             | 44.33            | 43.07         | 87.02                  | 230.54                              | 779.58       | 1,319.12               | 1,235.30                | 83.82                     | 15.737            |                    |           |
| 12,850.00                                                               | 12,572.79             | 12,485.22             | 12,164.55             | 44.46            | 43.13         | 87.63                  | 265.48                              | 779.34       | 1,327.41               | 1,243.48                | 83.93                     | 15.815            |                    |           |
| 12,900.00                                                               | 12,582.23             | 12,519.65             | 12,167.61             | 44.61            | 43.22         | 88.29                  | 299.77                              | 779.11       | 1,335.53               | 1,251.46                | 84.06                     | 15.887            |                    |           |
| 12,950.00                                                               | 12,589.08             | 12,554.02             | 12,169.42             | 44.77            | 43.31         | 88.96                  | 334.09                              | 778.87       | 1,343.45               | 1,259.23                | 84.22                     | 15.952            |                    |           |
| 13,000.00                                                               | 12,593.34             | 12,588.78             | 12,170.00             | 44.94            | 43.41         | 89.61                  | 368.84                              | 778.64       | 1,351.15               | 1,266.75                | 84.40                     | 16.008            |                    |           |
| 13,050.00                                                               | 12,594.98             | 12,638.25             | 12,170.00             | 45.11            | 43.56         | 89.61                  | 418.32                              | 778.30       | 1,358.32               | 1,273.64                | 84.68                     | 16.041            |                    |           |
| 13,056.38                                                               | 12,595.00             | 12,644.57             | 12,170.00             | 45.14            | 43.58         | 89.61                  | 424.63                              | 778.26       | 1,359.18               | 1,274.46                | 84.72                     | 16.043            |                    |           |
| 13,100.00                                                               | 12,595.00             | 12,687.80             | 12,170.00             | 45.30            | 43.73         | 89.61                  | 467.87                              | 777.96       | 1,364.68               | 1,279.69                | 84.99                     | 16.057            |                    |           |
| 13,200.00                                                               | 12,595.00             | 12,787.22             | 12,170.00             | 45.70            | 44.10         | 89.61                  | 567.28                              | 777.28       | 1,374.93               | 1,289.23                | 85.69                     | 16.045            |                    |           |
| 13,300.00                                                               | 12,595.00             | 12,886.95             | 12,170.00             | 46.15            | 44.53         | 89.61                  | 667.00                              | 776.61       | 1,381.88               | 1,295.38                | 86.49                     | 15.977            |                    |           |
| 13,400.00                                                               | 12,595.00             | 12,986.87             | 12,170.00             | 46.65            | 45.01         | 89.61                  | 766.92                              | 775.92       | 1,385.51               | 1,298.13                | 87.38                     | 15.855            |                    |           |
| 13,459.31                                                               | 12,595.00             | 13,046.17             | 12,170.00             | 46.96            | 45.33         | 89.61                  | 826.22                              | 775.52       | 1,386.10               | 1,298.14                | 87.96                     | 15.759            |                    |           |
| 13,500.00                                                               | 12,595.00             | 13,086.86             | 12,170.00             | 47.18            | 45.55         | 89.61                  | 866.91                              | 775.24       | 1,386.10               | 1,297.73                | 88.36                     | 15.686            |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #202H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                              |                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |         |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|------------------------------|---------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|---------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                              |                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |         |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                     |                     |                        |                         |                           |                   |                              | Warning |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore +N/-S (usft) | Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |         |
| 13,600.00                                                               | 12,595.00             | 13,186.86             | 12,170.00             | 47.76            | 46.14         | 89.61                  | 966.91                       | 774.56              | 1,386.10               | 1,296.66                | 89.44                     | 15.497            |                              |         |
| 13,700.00                                                               | 12,595.00             | 13,286.86             | 12,170.00             | 48.39            | 46.78         | 89.61                  | 1,066.91                     | 773.88              | 1,386.10               | 1,295.48                | 90.62                     | 15.295            |                              |         |
| 13,800.00                                                               | 12,595.00             | 13,386.86             | 12,170.00             | 49.06            | 47.46         | 89.61                  | 1,166.91                     | 773.20              | 1,386.10               | 1,294.21                | 91.90                     | 15.083            |                              |         |
| 13,900.00                                                               | 12,595.00             | 13,486.86             | 12,170.00             | 49.78            | 48.20         | 89.61                  | 1,266.91                     | 772.52              | 1,386.11               | 1,292.84                | 93.27                     | 14.862            |                              |         |
| 14,000.00                                                               | 12,595.00             | 13,586.86             | 12,170.00             | 50.54            | 48.97         | 89.61                  | 1,366.90                     | 771.84              | 1,386.11               | 1,291.39                | 94.72                     | 14.633            |                              |         |
| 14,100.00                                                               | 12,595.00             | 13,686.86             | 12,170.00             | 51.35            | 49.79         | 89.61                  | 1,466.90                     | 771.16              | 1,386.11               | 1,289.85                | 96.26                     | 14.399            |                              |         |
| 14,200.00                                                               | 12,595.00             | 13,786.86             | 12,170.00             | 52.19            | 50.65         | 89.61                  | 1,566.90                     | 770.48              | 1,386.11               | 1,288.23                | 97.88                     | 14.161            |                              |         |
| 14,300.00                                                               | 12,595.00             | 13,886.86             | 12,170.00             | 53.07            | 51.55         | 89.61                  | 1,666.90                     | 769.79              | 1,386.11               | 1,286.53                | 99.58                     | 13.920            |                              |         |
| 14,400.00                                                               | 12,595.00             | 13,986.86             | 12,170.00             | 53.99            | 52.48         | 89.61                  | 1,766.89                     | 769.11              | 1,386.12               | 1,284.77                | 101.35                    | 13.677            |                              |         |
| 14,500.00                                                               | 12,595.00             | 14,086.86             | 12,170.00             | 54.95            | 53.45         | 89.61                  | 1,866.89                     | 768.43              | 1,386.12               | 1,282.93                | 103.19                    | 13.433            |                              |         |
| 14,600.00                                                               | 12,595.00             | 14,186.86             | 12,170.00             | 55.93            | 54.46         | 89.61                  | 1,966.89                     | 767.75              | 1,386.12               | 1,281.03                | 105.09                    | 13.190            |                              |         |
| 14,700.00                                                               | 12,595.00             | 14,286.86             | 12,170.00             | 56.95            | 55.49         | 89.61                  | 2,066.89                     | 767.07              | 1,386.12               | 1,279.07                | 107.06                    | 12.948            |                              |         |
| 14,800.00                                                               | 12,595.00             | 14,386.86             | 12,170.00             | 57.99            | 56.55         | 89.61                  | 2,166.88                     | 766.39              | 1,386.12               | 1,277.04                | 109.08                    | 12.708            |                              |         |
| 14,900.00                                                               | 12,595.00             | 14,486.86             | 12,170.00             | 59.07            | 57.65         | 89.61                  | 2,266.88                     | 765.71              | 1,386.13               | 1,274.97                | 111.16                    | 12.470            |                              |         |
| 15,000.00                                                               | 12,595.00             | 14,586.86             | 12,170.00             | 60.17            | 58.76         | 89.61                  | 2,366.88                     | 765.03              | 1,386.13               | 1,272.84                | 113.29                    | 12.235            |                              |         |
| 15,100.00                                                               | 12,595.00             | 14,686.86             | 12,170.00             | 61.29            | 59.91         | 89.61                  | 2,466.88                     | 764.35              | 1,386.13               | 1,270.66                | 115.47                    | 12.004            |                              |         |
| 15,200.00                                                               | 12,595.00             | 14,786.86             | 12,170.00             | 62.44            | 61.07         | 89.61                  | 2,566.88                     | 763.67              | 1,386.13               | 1,268.44                | 117.69                    | 11.777            |                              |         |
| 15,300.00                                                               | 12,595.00             | 14,886.86             | 12,170.00             | 63.62            | 62.26         | 89.61                  | 2,666.87                     | 762.98              | 1,386.13               | 1,266.17                | 119.96                    | 11.555            |                              |         |
| 15,400.00                                                               | 12,595.00             | 14,986.86             | 12,170.00             | 64.81            | 63.47         | 89.61                  | 2,766.87                     | 762.30              | 1,386.14               | 1,263.86                | 122.28                    | 11.336            |                              |         |
| 15,500.00                                                               | 12,595.00             | 15,086.86             | 12,170.00             | 66.02            | 64.70         | 89.61                  | 2,866.87                     | 761.62              | 1,386.14               | 1,261.51                | 124.63                    | 11.122            |                              |         |
| 15,600.00                                                               | 12,595.00             | 15,186.86             | 12,170.00             | 67.25            | 65.95         | 89.61                  | 2,966.87                     | 760.94              | 1,386.14               | 1,259.13                | 127.01                    | 10.913            |                              |         |
| 15,700.00                                                               | 12,595.00             | 15,286.86             | 12,170.00             | 68.50            | 67.22         | 89.61                  | 3,066.86                     | 760.26              | 1,386.14               | 1,256.70                | 129.44                    | 10.709            |                              |         |
| 15,800.00                                                               | 12,595.00             | 15,386.86             | 12,170.00             | 69.77            | 68.50         | 89.61                  | 3,166.86                     | 759.58              | 1,386.14               | 1,254.25                | 131.89                    | 10.510            |                              |         |
| 15,900.00                                                               | 12,595.00             | 15,486.86             | 12,170.00             | 71.05            | 69.80         | 89.61                  | 3,266.86                     | 758.90              | 1,386.15               | 1,251.77                | 134.38                    | 10.315            |                              |         |
| 16,000.00                                                               | 12,595.00             | 15,586.86             | 12,170.00             | 72.35            | 71.11         | 89.61                  | 3,366.86                     | 758.22              | 1,386.15               | 1,249.25                | 136.90                    | 10.125            |                              |         |
| 16,100.00                                                               | 12,595.00             | 15,686.86             | 12,170.00             | 73.67            | 72.44         | 89.61                  | 3,466.85                     | 757.54              | 1,386.15               | 1,246.71                | 139.44                    | 9.941             |                              |         |
| 16,200.00                                                               | 12,595.00             | 15,786.86             | 12,170.00             | 74.99            | 73.78         | 89.61                  | 3,566.85                     | 756.85              | 1,386.15               | 1,244.14                | 142.01                    | 9.761             |                              |         |
| 16,300.00                                                               | 12,595.00             | 15,886.86             | 12,170.00             | 76.33            | 75.13         | 89.61                  | 3,666.85                     | 756.17              | 1,386.15               | 1,241.55                | 144.61                    | 9.586             |                              |         |
| 16,400.00                                                               | 12,595.00             | 15,986.86             | 12,170.00             | 77.68            | 76.50         | 89.61                  | 3,766.85                     | 755.49              | 1,386.16               | 1,238.93                | 147.23                    | 9.415             |                              |         |
| 16,500.00                                                               | 12,595.00             | 16,086.86             | 12,170.00             | 79.05            | 77.88         | 89.61                  | 3,866.85                     | 754.81              | 1,386.16               | 1,236.29                | 149.87                    | 9.249             |                              |         |
| 16,600.00                                                               | 12,595.00             | 16,186.86             | 12,170.00             | 80.42            | 79.26         | 89.61                  | 3,966.84                     | 754.13              | 1,386.16               | 1,233.63                | 152.53                    | 9.088             |                              |         |
| 16,700.00                                                               | 12,595.00             | 16,286.86             | 12,170.00             | 81.81            | 80.66         | 89.61                  | 4,066.84                     | 753.45              | 1,386.16               | 1,230.95                | 155.22                    | 8.931             |                              |         |
| 16,800.00                                                               | 12,595.00             | 16,386.86             | 12,170.00             | 83.20            | 82.07         | 89.61                  | 4,166.84                     | 752.77              | 1,386.16               | 1,228.25                | 157.92                    | 8.778             |                              |         |
| 16,900.00                                                               | 12,595.00             | 16,486.86             | 12,170.00             | 84.61            | 83.49         | 89.61                  | 4,266.84                     | 752.09              | 1,386.17               | 1,225.53                | 160.64                    | 8.629             |                              |         |
| 17,000.00                                                               | 12,595.00             | 16,586.86             | 12,170.00             | 86.02            | 84.91         | 89.61                  | 4,366.83                     | 751.41              | 1,386.17               | 1,222.79                | 163.38                    | 8.485             |                              |         |
| 17,100.00                                                               | 12,595.00             | 16,686.86             | 12,170.00             | 87.45            | 86.35         | 89.61                  | 4,466.83                     | 750.72              | 1,386.17               | 1,220.04                | 166.13                    | 8.344             |                              |         |
| 17,200.00                                                               | 12,595.00             | 16,786.86             | 12,170.00             | 88.88            | 87.79         | 89.61                  | 4,566.83                     | 750.04              | 1,386.17               | 1,217.27                | 168.90                    | 8.207             |                              |         |
| 17,300.00                                                               | 12,595.00             | 16,886.86             | 12,170.00             | 90.31            | 89.24         | 89.61                  | 4,666.83                     | 749.36              | 1,386.17               | 1,214.49                | 171.69                    | 8.074             |                              |         |
| 17,349.17                                                               | 12,595.00             | 16,936.03             | 12,170.00             | 90.97            | 89.91         | 89.61                  | 4,715.99                     | 749.03              | 1,386.18               | 1,213.27                | 172.91                    | 8.017 SF          |                              |         |

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



**MS Directional**  
Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #205H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |         |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|---------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |         |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     |                                     |                        |                         |                           |                   |                              | Warning |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |         |
| 0.00                                                                    | 0.00                  | 1.00                  | 1.00                  | 0.00             | 0.00          | 90.00                  | 0.00                                | 30.00                               | 30.00                  |                         |                           |                   |                              |         |
| 100.00                                                                  | 100.00                | 101.00                | 101.00                | 0.13             | 0.13          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 29.74                   | 0.26                      | 115.432           |                              |         |
| 200.00                                                                  | 200.00                | 201.00                | 201.00                | 0.49             | 0.49          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 29.02                   | 0.98                      | 30.711            |                              |         |
| 300.00                                                                  | 300.00                | 301.00                | 301.00                | 0.85             | 0.85          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 28.31                   | 1.69                      | 17.712            |                              |         |
| 400.00                                                                  | 400.00                | 401.00                | 401.00                | 1.20             | 1.21          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 27.59                   | 2.41                      | 12.444            |                              |         |
| 500.00                                                                  | 500.00                | 501.00                | 501.00                | 1.56             | 1.57          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 26.87                   | 3.13                      | 9.592             |                              |         |
| 600.00                                                                  | 600.00                | 601.00                | 601.00                | 1.92             | 1.92          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 26.16                   | 3.84                      | 7.803             |                              |         |
| 700.00                                                                  | 700.00                | 701.00                | 701.00                | 2.28             | 2.28          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 25.44                   | 4.56                      | 6.577             |                              |         |
| 800.00                                                                  | 800.00                | 801.00                | 801.00                | 2.64             | 2.64          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 24.72                   | 5.28                      | 5.683             |                              |         |
| 900.00                                                                  | 900.00                | 901.00                | 901.00                | 3.00             | 3.00          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 24.00                   | 6.00                      | 5.004             |                              |         |
| 1,000.00                                                                | 1,000.00              | 1,001.00              | 1,001.00              | 3.35             | 3.36          | 90.00                  | 0.00                                | 30.00                               | 30.00                  | 23.29                   | 6.71                      | 4.469 CC, ES      |                              |         |
| 1,100.00                                                                | 1,099.99              | 1,100.82              | 1,100.82              | 3.70             | 3.70          | 90.64                  | -0.84                               | 30.28                               | 31.00                  | 23.61                   | 7.40                      | 4.191             |                              |         |
| 1,200.00                                                                | 1,199.96              | 1,200.58              | 1,200.54              | 4.03             | 4.03          | 92.29                  | -3.33                               | 31.11                               | 34.03                  | 25.97                   | 8.06                      | 4.222             |                              |         |
| 1,300.00                                                                | 1,299.86              | 1,300.20              | 1,300.06              | 4.37             | 4.36          | 94.44                  | -7.46                               | 32.49                               | 39.10                  | 30.37                   | 8.73                      | 4.480             |                              |         |
| 1,400.00                                                                | 1,399.68              | 1,400.37              | 1,399.30              | 4.72             | 4.70          | 96.63                  | -13.21                              | 34.42                               | 46.27                  | 36.86                   | 9.41                      | 4.917             |                              |         |
| 1,500.00                                                                | 1,499.37              | 1,500.78              | 1,498.66              | 5.07             | 5.05          | 97.82                  | -19.80                              | 36.62                               | 55.17                  | 45.06                   | 10.10                     | 5.461             |                              |         |
| 1,576.67                                                                | 1,575.69              | 1,575.50              | 1,574.75              | 5.34             | 5.31          | 97.76                  | -24.85                              | 38.31                               | 62.86                  | 52.23                   | 10.63                     | 5.914             |                              |         |
| 1,600.00                                                                | 1,598.91              | 1,601.29              | 1,597.90              | 5.43             | 5.40          | 97.66                  | -26.38                              | 38.83                               | 65.32                  | 54.51                   | 10.80                     | 6.047             |                              |         |
| 1,700.00                                                                | 1,698.40              | 1,701.85              | 1,697.10              | 5.79             | 5.75          | 97.28                  | -32.96                              | 41.03                               | 75.85                  | 64.34                   | 11.51                     | 6.591             |                              |         |
| 1,800.00                                                                | 1,797.90              | 1,802.41              | 1,796.30              | 6.16             | 6.11          | 97.00                  | -39.54                              | 43.23                               | 86.38                  | 74.16                   | 12.22                     | 7.069             |                              |         |
| 1,900.00                                                                | 1,897.39              | 1,902.97              | 1,895.50              | 6.52             | 6.47          | 96.78                  | -46.12                              | 45.43                               | 96.92                  | 83.98                   | 12.94                     | 7.492             |                              |         |
| 2,000.00                                                                | 1,996.88              | 2,003.52              | 1,994.70              | 6.90             | 6.83          | 96.60                  | -52.69                              | 47.63                               | 107.45                 | 93.79                   | 13.66                     | 7.868             |                              |         |
| 2,100.00                                                                | 2,096.38              | 2,104.08              | 2,093.90              | 7.27             | 7.20          | 96.45                  | -59.27                              | 49.83                               | 117.99                 | 103.61                  | 14.38                     | 8.205             |                              |         |
| 2,200.00                                                                | 2,195.87              | 2,204.64              | 2,193.10              | 7.65             | 7.56          | 96.33                  | -65.85                              | 52.03                               | 128.53                 | 113.42                  | 15.11                     | 8.507             |                              |         |
| 2,300.00                                                                | 2,295.37              | 2,305.19              | 2,292.30              | 8.03             | 7.93          | 96.22                  | -72.43                              | 54.23                               | 139.06                 | 123.23                  | 15.84                     | 8.781             |                              |         |
| 2,400.00                                                                | 2,394.86              | 2,405.75              | 2,391.50              | 8.41             | 8.30          | 96.13                  | -79.01                              | 56.44                               | 149.60                 | 133.03                  | 16.57                     | 9.029             |                              |         |
| 2,500.00                                                                | 2,494.35              | 2,506.31              | 2,490.70              | 8.79             | 8.66          | 96.06                  | -85.59                              | 58.64                               | 160.14                 | 142.84                  | 17.30                     | 9.256             |                              |         |
| 2,600.00                                                                | 2,593.85              | 2,606.87              | 2,589.90              | 9.17             | 9.03          | 95.99                  | -92.16                              | 60.84                               | 170.68                 | 152.64                  | 18.04                     | 9.463             |                              |         |
| 2,700.00                                                                | 2,693.34              | 2,707.42              | 2,689.10              | 9.55             | 9.40          | 95.93                  | -98.74                              | 63.04                               | 181.22                 | 162.44                  | 18.77                     | 9.653             |                              |         |
| 2,800.00                                                                | 2,792.84              | 2,807.98              | 2,788.30              | 9.94             | 9.78          | 95.88                  | -105.32                             | 65.24                               | 191.76                 | 172.25                  | 19.51                     | 9.828             |                              |         |
| 2,900.00                                                                | 2,892.33              | 2,908.54              | 2,887.50              | 10.32            | 10.15         | 95.83                  | -111.90                             | 67.44                               | 202.30                 | 182.05                  | 20.25                     | 9.989             |                              |         |
| 3,000.00                                                                | 2,991.82              | 3,009.09              | 2,986.71              | 10.71            | 10.52         | 95.78                  | -118.48                             | 69.64                               | 212.84                 | 191.85                  | 20.99                     | 10.139            |                              |         |
| 3,100.00                                                                | 3,091.32              | 3,109.65              | 3,085.91              | 11.09            | 10.89         | 95.74                  | -125.06                             | 71.84                               | 223.38                 | 201.64                  | 21.73                     | 10.278            |                              |         |
| 3,200.00                                                                | 3,190.81              | 3,189.79              | 3,185.11              | 11.48            | 11.19         | 95.71                  | -131.63                             | 74.04                               | 233.92                 | 211.52                  | 22.40                     | 10.443            |                              |         |
| 3,300.00                                                                | 3,290.31              | 3,289.23              | 3,284.31              | 11.87            | 11.56         | 95.68                  | -138.21                             | 76.25                               | 244.46                 | 221.32                  | 23.14                     | 10.565            |                              |         |
| 3,400.00                                                                | 3,389.80              | 3,388.68              | 3,383.51              | 12.26            | 11.93         | 95.65                  | -144.79                             | 78.45                               | 255.00                 | 231.12                  | 23.88                     | 10.679            |                              |         |
| 3,500.00                                                                | 3,489.29              | 3,488.12              | 3,482.71              | 12.64            | 12.30         | 95.62                  | -151.37                             | 80.65                               | 265.54                 | 240.92                  | 24.62                     | 10.787            |                              |         |
| 3,600.00                                                                | 3,588.79              | 3,587.56              | 3,581.91              | 13.03            | 12.67         | 95.59                  | -157.95                             | 82.85                               | 276.08                 | 250.72                  | 25.36                     | 10.887            |                              |         |
| 3,700.00                                                                | 3,688.28              | 3,687.01              | 3,681.11              | 13.42            | 13.04         | 95.57                  | -164.53                             | 85.05                               | 286.62                 | 260.52                  | 26.10                     | 10.982            |                              |         |
| 3,800.00                                                                | 3,787.78              | 3,786.45              | 3,780.31              | 13.81            | 13.41         | 95.55                  | -171.10                             | 87.25                               | 297.16                 | 270.32                  | 26.84                     | 11.071            |                              |         |
| 3,900.00                                                                | 3,887.27              | 3,885.89              | 3,879.51              | 14.20            | 13.78         | 95.53                  | -177.68                             | 89.45                               | 307.70                 | 280.11                  | 27.58                     | 11.156            |                              |         |
| 4,000.00                                                                | 3,986.76              | 3,985.33              | 3,978.71              | 14.59            | 14.15         | 95.51                  | -184.26                             | 91.65                               | 318.24                 | 289.91                  | 28.32                     | 11.235            |                              |         |
| 4,100.00                                                                | 4,086.26              | 4,084.78              | 4,077.91              | 14.98            | 14.52         | 95.49                  | -190.84                             | 93.85                               | 328.78                 | 299.71                  | 29.07                     | 11.311            |                              |         |
| 4,200.00                                                                | 4,185.75              | 4,184.22              | 4,177.11              | 15.37            | 14.89         | 95.47                  | -197.42                             | 96.05                               | 339.32                 | 309.51                  | 29.81                     | 11.382            |                              |         |
| 4,300.00                                                                | 4,285.25              | 4,283.66              | 4,276.31              | 15.76            | 15.27         | 95.46                  | -204.00                             | 98.26                               | 349.86                 | 319.30                  | 30.55                     | 11.450            |                              |         |
| 4,400.00                                                                | 4,384.74              | 4,383.11              | 4,375.52              | 16.15            | 15.64         | 95.44                  | -210.57                             | 100.46                              | 360.40                 | 329.10                  | 31.30                     | 11.515            |                              |         |
| 4,500.00                                                                | 4,484.23              | 4,482.55              | 4,474.72              | 16.54            | 16.01         | 95.43                  | -217.15                             | 102.66                              | 370.94                 | 338.90                  | 32.04                     | 11.577            |                              |         |
| 4,600.00                                                                | 4,583.73              | 4,581.99              | 4,573.92              | 16.93            | 16.38         | 95.42                  | -223.73                             | 104.86                              | 381.48                 | 348.69                  | 32.79                     | 11.635            |                              |         |
| 4,700.00                                                                | 4,683.22              | 4,681.44              | 4,673.12              | 17.32            | 16.76         | 95.40                  | -230.31                             | 107.06                              | 392.02                 | 358.49                  | 33.53                     | 11.691            |                              |         |
| 4,800.00                                                                | 4,782.71              | 4,780.88              | 4,772.32              | 17.72            | 17.13         | 95.39                  | -236.89                             | 109.26                              | 402.56                 | 368.28                  | 34.28                     | 11.745            |                              |         |
| 4,900.00                                                                | 4,882.21              | 4,880.32              | 4,871.52              | 18.11            | 17.50         | 95.38                  | -243.46                             | 111.46                              | 413.10                 | 378.08                  | 35.02                     | 11.796            |                              |         |
| 5,000.00                                                                | 4,981.70              | 4,979.76              | 4,970.72              | 18.50            | 17.87         | 95.37                  | -250.04                             | 113.66                              | 423.64                 | 387.87                  | 35.77                     | 11.845            |                              |         |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #205H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|--------------|------------------------|-------------------------|---------------------------|-------------------|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Well Error: | 0.00 usft |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     | Warning      |                        |                         |                           |                   |                    |           |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                    |           |
| 5,100.00                                                                | 5,081.20              | 5,079.21              | 5,069.92              | 18.89            | 18.25         | 95.36                  | -256.62                             | 115.86       | 434.18                 | 397.67                  | 36.51                     | 11.891            |                    |           |
| 5,200.00                                                                | 5,180.69              | 5,178.65              | 5,169.12              | 19.28            | 18.62         | 95.35                  | -263.20                             | 118.07       | 444.72                 | 407.46                  | 37.26                     | 11.936            |                    |           |
| 5,300.00                                                                | 5,280.18              | 5,280.68              | 5,270.94              | 19.67            | 19.00         | 95.30                  | -269.41                             | 120.14       | 455.04                 | 417.02                  | 38.02                     | 11.969            |                    |           |
| 5,400.00                                                                | 5,379.68              | 5,383.52              | 5,373.66              | 20.07            | 19.37         | 95.05                  | -273.97                             | 121.67       | 464.66                 | 425.88                  | 38.78                     | 11.983            |                    |           |
| 5,500.00                                                                | 5,479.17              | 5,486.39              | 5,476.49              | 20.46            | 19.74         | 94.61                  | -276.78                             | 122.61       | 473.58                 | 434.06                  | 39.52                     | 11.983            |                    |           |
| 5,600.00                                                                | 5,578.67              | 5,589.23              | 5,579.32              | 20.85            | 20.09         | 93.98                  | -277.84                             | 122.96       | 481.85                 | 441.61                  | 40.25                     | 11.973            |                    |           |
| 5,700.00                                                                | 5,678.16              | 5,689.07              | 5,679.16              | 21.24            | 20.42         | 93.25                  | -277.85                             | 122.97       | 489.78                 | 448.84                  | 40.94                     | 11.964            |                    |           |
| 5,800.00                                                                | 5,777.65              | 5,788.56              | 5,778.65              | 21.63            | 20.74         | 92.54                  | -277.85                             | 122.97       | 497.78                 | 456.15                  | 41.63                     | 11.958            |                    |           |
| 5,900.00                                                                | 5,877.15              | 5,888.05              | 5,878.15              | 22.03            | 21.06         | 91.86                  | -277.85                             | 122.97       | 505.85                 | 463.53                  | 42.32                     | 11.954            |                    |           |
| 5,941.51                                                                | 5,918.45              | 5,929.36              | 5,919.45              | 22.19            | 21.20         | 91.58                  | -277.85                             | 122.97       | 509.22                 | 466.62                  | 42.60                     | 11.953            |                    |           |
| 6,000.00                                                                | 5,978.67              | 5,987.58              | 5,977.67              | 22.42            | 21.39         | 91.22                  | -277.85                             | 122.97       | 513.75                 | 470.74                  | 43.00                     | 11.946            |                    |           |
| 6,100.00                                                                | 6,076.34              | 6,087.24              | 6,077.34              | 22.80            | 21.72         | 90.70                  | -277.85                             | 122.97       | 520.41                 | 476.72                  | 43.69                     | 11.911            |                    |           |
| 6,200.00                                                                | 6,176.13              | 6,187.03              | 6,177.13              | 23.17            | 22.04         | 90.29                  | -277.85                             | 122.97       | 525.68                 | 481.30                  | 44.38                     | 11.845            |                    |           |
| 6,300.00                                                                | 6,276.02              | 6,286.92              | 6,277.02              | 23.53            | 22.37         | 90.01                  | -277.85                             | 122.97       | 529.54                 | 484.47                  | 45.06                     | 11.751            |                    |           |
| 6,400.00                                                                | 6,375.97              | 6,386.88              | 6,376.97              | 23.89            | 22.70         | 89.83                  | -277.85                             | 122.97       | 531.96                 | 486.22                  | 45.75                     | 11.629            |                    |           |
| 6,500.00                                                                | 6,475.96              | 6,486.87              | 6,476.96              | 24.23            | 23.03         | 89.76                  | -277.85                             | 122.97       | 532.95                 | 486.52                  | 46.43                     | 11.479            |                    |           |
| 6,518.18                                                                | 6,494.14              | 6,505.05              | 6,495.14              | 24.29            | 23.09         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 486.42                  | 46.55                     | 11.450            |                    |           |
| 6,600.00                                                                | 6,575.96              | 6,586.87              | 6,576.96              | 24.55            | 23.37         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 485.88                  | 47.09                     | 11.319            |                    |           |
| 6,700.00                                                                | 6,675.96              | 6,686.87              | 6,676.96              | 24.87            | 23.70         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 485.22                  | 47.75                     | 11.162            |                    |           |
| 6,800.00                                                                | 6,775.96              | 6,786.87              | 6,776.96              | 25.19            | 24.03         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 484.56                  | 48.41                     | 11.010            |                    |           |
| 6,900.00                                                                | 6,875.96              | 6,886.87              | 6,876.96              | 25.51            | 24.37         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 483.90                  | 49.07                     | 10.861            |                    |           |
| 7,000.00                                                                | 6,975.96              | 6,986.87              | 6,976.96              | 25.83            | 24.70         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 483.23                  | 49.74                     | 10.716            |                    |           |
| 7,100.00                                                                | 7,075.96              | 7,086.87              | 7,076.96              | 26.16            | 25.04         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 482.57                  | 50.40                     | 10.574            |                    |           |
| 7,200.00                                                                | 7,175.96              | 7,186.87              | 7,176.96              | 26.48            | 25.37         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 481.90                  | 51.07                     | 10.436            |                    |           |
| 7,300.00                                                                | 7,275.96              | 7,286.87              | 7,276.96              | 26.80            | 25.71         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 481.23                  | 51.74                     | 10.301            |                    |           |
| 7,400.00                                                                | 7,375.96              | 7,386.87              | 7,376.96              | 27.13            | 26.05         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 480.56                  | 52.41                     | 10.169            |                    |           |
| 7,500.00                                                                | 7,475.96              | 7,486.87              | 7,476.96              | 27.46            | 26.38         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 479.89                  | 53.08                     | 10.041            |                    |           |
| 7,600.00                                                                | 7,575.96              | 7,586.87              | 7,576.96              | 27.78            | 26.72         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 479.22                  | 53.75                     | 9.915             |                    |           |
| 7,700.00                                                                | 7,675.96              | 7,686.87              | 7,676.96              | 28.11            | 27.06         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 478.55                  | 54.43                     | 9.793             |                    |           |
| 7,800.00                                                                | 7,775.96              | 7,786.87              | 7,776.96              | 28.44            | 27.40         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 477.87                  | 55.10                     | 9.673             |                    |           |
| 7,900.00                                                                | 7,875.96              | 7,886.87              | 7,876.96              | 28.77            | 27.74         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 477.20                  | 55.78                     | 9.555             |                    |           |
| 8,000.00                                                                | 7,975.96              | 7,986.87              | 7,976.96              | 29.10            | 28.08         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 476.52                  | 56.45                     | 9.441             |                    |           |
| 8,100.00                                                                | 8,075.96              | 8,086.87              | 8,076.96              | 29.43            | 28.42         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 475.84                  | 57.13                     | 9.329             |                    |           |
| 8,200.00                                                                | 8,175.96              | 8,186.87              | 8,176.96              | 29.76            | 28.76         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 475.16                  | 57.81                     | 9.219             |                    |           |
| 8,300.00                                                                | 8,275.96              | 8,286.87              | 8,276.96              | 30.09            | 29.10         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 474.48                  | 58.49                     | 9.112             |                    |           |
| 8,400.00                                                                | 8,375.96              | 8,386.87              | 8,376.96              | 30.43            | 29.45         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 473.80                  | 59.17                     | 9.007             |                    |           |
| 8,500.00                                                                | 8,475.96              | 8,486.87              | 8,476.96              | 30.76            | 29.79         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 473.12                  | 59.85                     | 8.905             |                    |           |
| 8,600.00                                                                | 8,575.96              | 8,586.87              | 8,576.96              | 31.09            | 30.13         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 472.44                  | 60.53                     | 8.805             |                    |           |
| 8,700.00                                                                | 8,675.96              | 8,686.87              | 8,676.96              | 31.43            | 30.47         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 471.76                  | 61.22                     | 8.706             |                    |           |
| 8,800.00                                                                | 8,775.96              | 8,786.87              | 8,776.96              | 31.76            | 30.82         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 471.07                  | 61.90                     | 8.610             |                    |           |
| 8,900.00                                                                | 8,875.96              | 8,886.87              | 8,876.96              | 32.10            | 31.16         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 470.39                  | 62.58                     | 8.516             |                    |           |
| 9,000.00                                                                | 8,975.96              | 8,986.87              | 8,976.96              | 32.43            | 31.51         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 469.70                  | 63.27                     | 8.424             |                    |           |
| 9,100.00                                                                | 9,075.96              | 9,086.87              | 9,076.96              | 32.77            | 31.85         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 469.02                  | 63.96                     | 8.334             |                    |           |
| 9,200.00                                                                | 9,175.96              | 9,186.87              | 9,176.96              | 33.11            | 32.19         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 468.33                  | 64.64                     | 8.245             |                    |           |
| 9,300.00                                                                | 9,275.96              | 9,286.87              | 9,276.96              | 33.44            | 32.54         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 467.64                  | 65.33                     | 8.158             |                    |           |
| 9,400.00                                                                | 9,375.96              | 9,386.87              | 9,376.96              | 33.78            | 32.88         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 466.96                  | 66.02                     | 8.073             |                    |           |
| 9,500.00                                                                | 9,475.96              | 9,486.87              | 9,476.96              | 34.12            | 33.23         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 466.27                  | 66.71                     | 7.990             |                    |           |
| 9,600.00                                                                | 9,575.96              | 9,586.87              | 9,576.96              | 34.46            | 33.58         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 465.58                  | 67.39                     | 7.908             |                    |           |
| 9,700.00                                                                | 9,675.96              | 9,686.87              | 9,676.96              | 34.80            | 33.92         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 464.89                  | 68.08                     | 7.828             |                    |           |
| 9,800.00                                                                | 9,775.96              | 9,786.87              | 9,776.96              | 35.14            | 34.27         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 464.20                  | 68.77                     | 7.750             |                    |           |
| 9,900.00                                                                | 9,875.96              | 9,886.87              | 9,876.96              | 35.47            | 34.62         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 463.51                  | 69.46                     | 7.673             |                    |           |
| 10,000.00                                                               | 9,975.96              | 9,986.87              | 9,976.96              | 35.81            | 34.96         | 89.75                  | -277.85                             | 122.97       | 532.97                 | 462.82                  | 70.16                     | 7.597             |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #205H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Site Error: 0.00 usft |  |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|--|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                         |                           |                   | Offset Well Error: 0.00 usft |  |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     |                                     |                        |                         |                           |                   | Warning                      |  |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |  |
| 10,100.00                                                               | 10,075.96             | 10,086.87             | 10,076.96             | 36.16            | 35.31         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 462.12                  | 70.85                     | 7.523             |                              |  |
| 10,200.00                                                               | 10,175.96             | 10,186.87             | 10,176.96             | 36.50            | 35.66         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 461.43                  | 71.54                     | 7.450             |                              |  |
| 10,300.00                                                               | 10,275.96             | 10,286.87             | 10,276.96             | 36.84            | 36.00         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 460.74                  | 72.23                     | 7.379             |                              |  |
| 10,400.00                                                               | 10,375.96             | 10,386.87             | 10,376.96             | 37.18            | 36.35         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 460.05                  | 72.93                     | 7.308             |                              |  |
| 10,500.00                                                               | 10,475.96             | 10,486.87             | 10,476.96             | 37.52            | 36.70         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 459.35                  | 73.62                     | 7.240             |                              |  |
| 10,600.00                                                               | 10,575.96             | 10,586.87             | 10,576.96             | 37.86            | 37.05         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 458.66                  | 74.31                     | 7.172             |                              |  |
| 10,700.00                                                               | 10,675.96             | 10,686.87             | 10,676.96             | 38.20            | 37.40         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 457.96                  | 75.01                     | 7.106             |                              |  |
| 10,800.00                                                               | 10,775.96             | 10,786.87             | 10,776.96             | 38.55            | 37.75         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 457.27                  | 75.70                     | 7.040             |                              |  |
| 10,900.00                                                               | 10,875.96             | 10,886.87             | 10,876.96             | 38.89            | 38.09         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 456.57                  | 76.40                     | 6.976             |                              |  |
| 11,000.00                                                               | 10,975.96             | 10,986.87             | 10,976.96             | 39.23            | 38.44         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 455.88                  | 77.09                     | 6.913             |                              |  |
| 11,100.00                                                               | 11,075.96             | 11,086.87             | 11,076.96             | 39.58            | 38.79         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 455.18                  | 77.79                     | 6.851             |                              |  |
| 11,200.00                                                               | 11,175.96             | 11,186.87             | 11,176.96             | 39.92            | 39.14         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 454.49                  | 78.49                     | 6.791             |                              |  |
| 11,300.00                                                               | 11,275.96             | 11,286.87             | 11,276.96             | 40.26            | 39.49         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 453.79                  | 79.18                     | 6.731             |                              |  |
| 11,400.00                                                               | 11,375.96             | 11,386.87             | 11,376.96             | 40.61            | 39.84         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 453.09                  | 79.88                     | 6.672             |                              |  |
| 11,500.00                                                               | 11,475.96             | 11,486.87             | 11,476.96             | 40.95            | 40.19         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 452.39                  | 80.58                     | 6.614             |                              |  |
| 11,600.00                                                               | 11,575.97             | 11,586.87             | 11,576.97             | 41.30            | 40.54         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 451.70                  | 81.28                     | 6.558             |                              |  |
| 11,700.00                                                               | 11,675.97             | 11,686.87             | 11,676.97             | 41.64            | 40.89         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 451.00                  | 81.97                     | 6.502             |                              |  |
| 11,800.00                                                               | 11,775.97             | 11,786.87             | 11,776.97             | 41.99            | 41.24         | 89.75                  | -277.85                             | 122.97                              | 532.97                 | 450.30                  | 82.67                     | 6.447             |                              |  |
| 11,853.54                                                               | 11,829.51             | 11,840.45             | 11,830.51             | 42.17            | 41.43         | 89.61                  | -276.50                             | 122.96                              | 532.97                 | 449.93                  | 83.04                     | 6.418             |                              |  |
| 11,900.00                                                               | 11,875.97             | 11,886.87             | 11,876.97             | 42.33            | 41.58         | 89.07                  | -271.51                             | 122.92                              | 532.99                 | 449.64                  | 83.35                     | 6.394             |                              |  |
| 12,000.00                                                               | 11,975.97             | 11,981.14             | 11,968.29             | 42.68            | 41.87         | 86.74                  | -249.81                             | 122.78                              | 533.71                 | 449.75                  | 83.95                     | 6.357             |                              |  |
| 12,023.05                                                               | 11,999.01             | 12,001.78             | 11,987.80             | 42.76            | 41.94         | 86.02                  | -243.08                             | 122.73                              | 534.16                 | 450.08                  | 84.08                     | 6.353             |                              |  |
| 12,050.00                                                               | 12,025.96             | 12,025.47             | 12,009.87             | 42.85            | 42.00         | 85.17                  | -234.50                             | 122.67                              | 534.94                 | 450.73                  | 84.21                     | 6.353             |                              |  |
| 12,100.00                                                               | 12,075.73             | 12,068.61             | 12,049.09             | 43.02            | 42.12         | 83.74                  | -216.55                             | 122.55                              | 537.22                 | 452.79                  | 84.42                     | 6.363             |                              |  |
| 12,150.00                                                               | 12,124.93             | 12,110.82             | 12,086.05             | 43.18            | 42.23         | 82.53                  | -196.18                             | 122.41                              | 540.52                 | 455.93                  | 84.59                     | 6.390             |                              |  |
| 12,200.00                                                               | 12,173.17             | 12,152.19             | 12,120.73             | 43.33            | 42.34         | 81.55                  | -173.64                             | 122.26                              | 544.76                 | 460.05                  | 84.71                     | 6.431             |                              |  |
| 12,250.00                                                               | 12,220.08             | 12,192.80             | 12,153.10             | 43.48            | 42.43         | 80.81                  | -149.12                             | 122.09                              | 549.83                 | 465.06                  | 84.77                     | 6.486             |                              |  |
| 12,300.00                                                               | 12,265.31             | 12,232.74             | 12,183.16             | 43.61            | 42.52         | 80.32                  | -122.84                             | 121.91                              | 555.63                 | 470.85                  | 84.78                     | 6.553             |                              |  |
| 12,350.00                                                               | 12,308.51             | 12,272.07             | 12,210.91             | 43.72            | 42.61         | 80.08                  | -94.97                              | 121.72                              | 562.06                 | 477.30                  | 84.76                     | 6.631             |                              |  |
| 12,400.00                                                               | 12,349.35             | 12,310.88             | 12,236.34             | 43.83            | 42.69         | 80.07                  | -65.68                              | 121.52                              | 568.99                 | 484.30                  | 84.70                     | 6.718             |                              |  |
| 12,450.00                                                               | 12,387.53             | 12,350.00             | 12,259.92             | 43.92            | 42.78         | 80.22                  | -34.47                              | 121.31                              | 576.33                 | 491.70                  | 84.62                     | 6.810             |                              |  |
| 12,500.00                                                               | 12,422.76             | 12,387.11             | 12,280.27             | 44.00            | 42.85         | 80.71                  | -3.44                               | 121.10                              | 583.96                 | 499.44                  | 84.52                     | 6.909             |                              |  |
| 12,550.00                                                               | 12,454.76             | 12,424.66             | 12,298.77             | 44.06            | 42.93         | 81.32                  | 29.22                               | 120.88                              | 591.78                 | 507.35                  | 84.43                     | 7.009             |                              |  |
| 12,600.00                                                               | 12,483.29             | 12,461.89             | 12,314.96             | 44.11            | 43.01         | 82.11                  | 62.74                               | 120.65                              | 599.70                 | 515.35                  | 84.35                     | 7.110             |                              |  |
| 12,650.00                                                               | 12,508.13             | 12,500.00             | 12,329.25             | 44.15            | 43.10         | 82.93                  | 98.06                               | 120.41                              | 607.63                 | 523.31                  | 84.31                     | 7.207             |                              |  |
| 12,700.00                                                               | 12,529.10             | 12,535.61             | 12,340.45             | 44.19            | 43.17         | 84.09                  | 131.85                              | 120.18                              | 615.48                 | 531.19                  | 84.29                     | 7.302             |                              |  |
| 12,723.05                                                               | 12,537.41             | 12,550.00             | 12,344.38             | 44.21            | 43.21         | 84.83                  | 145.70                              | 120.08                              | 619.06                 | 534.79                  | 84.28                     | 7.345             |                              |  |
| 12,750.00                                                               | 12,546.27             | 12,572.16             | 12,349.74             | 44.24            | 43.25         | 85.22                  | 167.20                              | 119.94                              | 623.26                 | 538.94                  | 84.32                     | 7.392             |                              |  |
| 12,800.00                                                               | 12,560.79             | 12,609.32             | 12,356.88             | 44.33            | 43.34         | 86.31                  | 203.66                              | 119.69                              | 631.28                 | 546.91                  | 84.37                     | 7.482             |                              |  |
| 12,850.00                                                               | 12,572.79             | 12,650.00             | 12,362.74             | 44.46            | 43.43         | 87.09                  | 243.91                              | 119.42                              | 639.33                 | 554.86                  | 84.47                     | 7.568             |                              |  |
| 12,900.00                                                               | 12,582.23             | 12,689.97             | 12,366.83             | 44.61            | 43.53         | 87.95                  | 283.67                              | 119.15                              | 647.29                 | 562.69                  | 84.61                     | 7.651             |                              |  |
| 12,950.00                                                               | 12,589.08             | 12,730.12             | 12,369.26             | 44.77            | 43.63         | 88.80                  | 323.74                              | 118.87                              | 655.14                 | 570.36                  | 84.78                     | 7.728             |                              |  |
| 13,000.00                                                               | 12,593.34             | 12,770.73             | 12,370.00             | 44.94            | 43.74         | 89.61                  | 364.34                              | 118.60                              | 662.84                 | 577.86                  | 84.98                     | 7.800             |                              |  |
| 13,050.00                                                               | 12,594.98             | 12,820.21             | 12,370.00             | 45.11            | 43.88         | 89.61                  | 413.82                              | 118.26                              | 669.99                 | 584.71                  | 85.28                     | 7.856             |                              |  |
| 13,056.38                                                               | 12,595.00             | 12,826.52             | 12,370.00             | 45.14            | 43.90         | 89.61                  | 420.13                              | 118.22                              | 670.84                 | 585.51                  | 85.32                     | 7.862             |                              |  |
| 13,100.00                                                               | 12,595.00             | 12,869.76             | 12,370.00             | 45.30            | 44.04         | 89.61                  | 463.37                              | 117.92                              | 676.29                 | 590.65                  | 85.64                     | 7.897             |                              |  |
| 13,200.00                                                               | 12,595.00             | 12,969.17             | 12,370.00             | 45.70            | 44.40         | 89.61                  | 562.78                              | 117.25                              | 686.46                 | 600.04                  | 86.42                     | 7.944             |                              |  |
| 13,300.00                                                               | 12,595.00             | 13,068.90             | 12,370.00             | 46.15            | 44.82         | 89.61                  | 662.50                              | 116.57                              | 693.36                 | 606.09                  | 87.27                     | 7.945             |                              |  |
| 13,400.00                                                               | 12,595.00             | 13,168.82             | 12,370.00             | 46.65            | 45.30         | 89.61                  | 762.42                              | 115.89                              | 696.97                 | 608.77                  | 88.20                     | 7.902             |                              |  |
| 13,459.31                                                               | 12,595.00             | 13,228.12             | 12,370.00             | 46.96            | 45.61         | 89.61                  | 821.72                              | 115.48                              | 697.55                 | 608.77                  | 88.78                     | 7.857             |                              |  |
| 13,500.00                                                               | 12,595.00             | 13,268.82             | 12,370.00             | 47.18            | 45.83         | 89.61                  | 862.42                              | 115.21                              | 697.55                 | 608.35                  | 89.20                     | 7.820             |                              |  |
| 13,600.00                                                               | 12,595.00             | 13,368.82             | 12,370.00             | 47.76            | 46.42         | 89.61                  | 962.41                              | 114.53                              | 697.55                 | 607.26                  | 90.29                     | 7.726             |                              |  |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #205H - Wellbore #1 - Design #2 |                             |                             |                             |                     |                  |                              |                |                |                                 |                      |         |                              | Offset Site Error:            | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------------|------------------------------|----------------|----------------|---------------------------------|----------------------|---------|------------------------------|-------------------------------|-----------|
| Survey Program: 0-MWD                                                   |                             |                             |                             |                     |                  |                              |                |                |                                 |                      |         |                              | Offset Well Error:            | 0.00 usft |
| Reference                                                               |                             | Offset                      |                             | Semi Major Axis     |                  | Azimuth<br>from North<br>(°) | Distance       |                | Minimum<br>Separation<br>(usft) | Separation<br>Factor | Warning |                              |                               |           |
| Measured<br>Depth<br>(usft)                                             | Vertical<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Reference<br>(usft) | Offset<br>(usft) |                              | +N-S<br>(usft) | +E-W<br>(usft) |                                 |                      |         | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |           |
| 13,700.00                                                               | 12,595.00                   | 13,468.82                   | 12,370.00                   | 48.39               | 47.06            | 89.61                        | 1,062.41       | 113.85         | 697.55                          | 606.07               | 91.48   | 7.625                        |                               |           |
| 13,800.00                                                               | 12,595.00                   | 13,568.82                   | 12,370.00                   | 49.06               | 47.74            | 89.61                        | 1,162.41       | 113.16         | 697.56                          | 604.79               | 92.77   | 7.519                        |                               |           |
| 13,900.00                                                               | 12,595.00                   | 13,668.82                   | 12,370.00                   | 49.78               | 48.48            | 89.61                        | 1,262.41       | 112.48         | 697.56                          | 603.42               | 94.14   | 7.410                        |                               |           |
| 14,000.00                                                               | 12,595.00                   | 13,768.82                   | 12,370.00                   | 50.54               | 49.25            | 89.61                        | 1,362.40       | 111.80         | 697.56                          | 601.96               | 95.60   | 7.296                        |                               |           |
| 14,100.00                                                               | 12,595.00                   | 13,868.82                   | 12,370.00                   | 51.35               | 50.07            | 89.61                        | 1,462.40       | 111.12         | 697.56                          | 600.42               | 97.15   | 7.180                        |                               |           |
| 14,200.00                                                               | 12,595.00                   | 13,968.82                   | 12,370.00                   | 52.19               | 50.94            | 89.61                        | 1,562.40       | 110.44         | 697.57                          | 598.80               | 98.77   | 7.063                        |                               |           |
| 14,300.00                                                               | 12,595.00                   | 14,068.82                   | 12,370.00                   | 53.07               | 51.84            | 89.61                        | 1,662.40       | 109.76         | 697.57                          | 597.10               | 100.47  | 6.943                        |                               |           |
| 14,400.00                                                               | 12,595.00                   | 14,168.82                   | 12,370.00                   | 53.99               | 52.77            | 89.61                        | 1,762.39       | 109.08         | 697.57                          | 595.34               | 102.23  | 6.823                        |                               |           |
| 14,500.00                                                               | 12,595.00                   | 14,268.82                   | 12,370.00                   | 54.95               | 53.75            | 89.61                        | 1,862.39       | 108.40         | 697.57                          | 593.51               | 104.07  | 6.703                        |                               |           |
| 14,600.00                                                               | 12,595.00                   | 14,368.82                   | 12,370.00                   | 55.93               | 54.75            | 89.61                        | 1,962.39       | 107.72         | 697.58                          | 591.61               | 105.97  | 6.583                        |                               |           |
| 14,700.00                                                               | 12,595.00                   | 14,468.82                   | 12,370.00                   | 56.95               | 55.79            | 89.61                        | 2,062.39       | 107.04         | 697.58                          | 589.65               | 107.93  | 6.464                        |                               |           |
| 14,800.00                                                               | 12,595.00                   | 14,568.82                   | 12,370.00                   | 57.99               | 56.86            | 89.61                        | 2,162.39       | 106.36         | 697.58                          | 587.64               | 109.94  | 6.345                        |                               |           |
| 14,900.00                                                               | 12,595.00                   | 14,668.82                   | 12,370.00                   | 59.07               | 57.95            | 89.61                        | 2,262.38       | 105.68         | 697.58                          | 585.57               | 112.01  | 6.228                        |                               |           |
| 15,000.00                                                               | 12,595.00                   | 14,768.82                   | 12,370.00                   | 60.17               | 59.07            | 89.61                        | 2,362.38       | 105.00         | 697.59                          | 583.45               | 114.13  | 6.112                        |                               |           |
| 15,100.00                                                               | 12,595.00                   | 14,868.82                   | 12,370.00                   | 61.29               | 60.22            | 89.61                        | 2,462.38       | 104.32         | 697.59                          | 581.29               | 116.30  | 5.998                        |                               |           |
| 15,200.00                                                               | 12,595.00                   | 14,968.82                   | 12,370.00                   | 62.44               | 61.38            | 89.61                        | 2,562.38       | 103.64         | 697.59                          | 579.07               | 118.52  | 5.886                        |                               |           |
| 15,300.00                                                               | 12,595.00                   | 15,068.82                   | 12,370.00                   | 63.62               | 62.58            | 89.61                        | 2,662.37       | 102.96         | 697.59                          | 576.82               | 120.78  | 5.776                        |                               |           |
| 15,400.00                                                               | 12,595.00                   | 15,168.82                   | 12,370.00                   | 64.81               | 63.79            | 89.61                        | 2,762.37       | 102.28         | 697.60                          | 574.52               | 123.08  | 5.668                        |                               |           |
| 15,500.00                                                               | 12,595.00                   | 15,268.82                   | 12,370.00                   | 66.02               | 65.02            | 89.61                        | 2,862.37       | 101.60         | 697.60                          | 572.19               | 125.41  | 5.562                        |                               |           |
| 15,600.00                                                               | 12,595.00                   | 15,368.82                   | 12,370.00                   | 67.25               | 66.27            | 89.61                        | 2,962.37       | 100.91         | 697.60                          | 569.81               | 127.79  | 5.459                        |                               |           |
| 15,700.00                                                               | 12,595.00                   | 15,468.82                   | 12,370.00                   | 68.50               | 67.54            | 89.61                        | 3,062.36       | 100.23         | 697.60                          | 567.41               | 130.20  | 5.358                        |                               |           |
| 15,800.00                                                               | 12,595.00                   | 15,568.82                   | 12,370.00                   | 69.77               | 68.82            | 89.61                        | 3,162.36       | 99.55          | 697.61                          | 564.97               | 132.64  | 5.259                        |                               |           |
| 15,900.00                                                               | 12,595.00                   | 15,668.82                   | 12,370.00                   | 71.05               | 70.12            | 89.61                        | 3,262.36       | 98.87          | 697.61                          | 562.50               | 135.11  | 5.163                        |                               |           |
| 16,000.00                                                               | 12,595.00                   | 15,768.82                   | 12,370.00                   | 72.35               | 71.44            | 89.61                        | 3,362.36       | 98.19          | 697.61                          | 560.00               | 137.61  | 5.069                        |                               |           |
| 16,100.00                                                               | 12,595.00                   | 15,868.82                   | 12,370.00                   | 73.67               | 72.77            | 89.61                        | 3,462.36       | 97.51          | 697.61                          | 557.47               | 140.14  | 4.978                        |                               |           |
| 16,200.00                                                               | 12,595.00                   | 15,968.82                   | 12,370.00                   | 74.99               | 74.11            | 89.61                        | 3,562.35       | 96.83          | 697.62                          | 554.92               | 142.70  | 4.889                        |                               |           |
| 16,300.00                                                               | 12,595.00                   | 16,068.82                   | 12,370.00                   | 76.33               | 75.47            | 89.61                        | 3,662.35       | 96.15          | 697.62                          | 552.34               | 145.28  | 4.802                        |                               |           |
| 16,400.00                                                               | 12,595.00                   | 16,168.82                   | 12,370.00                   | 77.68               | 76.83            | 89.61                        | 3,762.35       | 95.47          | 697.62                          | 549.74               | 147.88  | 4.718                        |                               |           |
| 16,500.00                                                               | 12,595.00                   | 16,268.82                   | 12,370.00                   | 79.05               | 78.21            | 89.61                        | 3,862.35       | 94.79          | 697.62                          | 547.12               | 150.50  | 4.635                        |                               |           |
| 16,600.00                                                               | 12,595.00                   | 16,368.82                   | 12,370.00                   | 80.42               | 79.60            | 89.61                        | 3,962.34       | 94.11          | 697.63                          | 544.48               | 153.15  | 4.555                        |                               |           |
| 16,700.00                                                               | 12,595.00                   | 16,468.82                   | 12,370.00                   | 81.81               | 81.00            | 89.61                        | 4,062.34       | 93.43          | 697.63                          | 541.81               | 155.82  | 4.477                        |                               |           |
| 16,800.00                                                               | 12,595.00                   | 16,568.82                   | 12,370.00                   | 83.20               | 82.41            | 89.61                        | 4,162.34       | 92.75          | 697.63                          | 539.13               | 158.50  | 4.401                        |                               |           |
| 16,900.00                                                               | 12,595.00                   | 16,668.82                   | 12,370.00                   | 84.61               | 83.83            | 89.61                        | 4,262.34       | 92.07          | 697.63                          | 536.43               | 161.21  | 4.328                        |                               |           |
| 17,000.00                                                               | 12,595.00                   | 16,768.82                   | 12,370.00                   | 86.02               | 85.25            | 89.61                        | 4,362.33       | 91.39          | 697.64                          | 533.71               | 163.93  | 4.256                        |                               |           |
| 17,100.00                                                               | 12,595.00                   | 16,868.82                   | 12,370.00                   | 87.45               | 86.69            | 89.61                        | 4,462.33       | 90.71          | 697.64                          | 530.98               | 166.66  | 4.186                        |                               |           |
| 17,200.00                                                               | 12,595.00                   | 16,968.82                   | 12,370.00                   | 88.88               | 88.13            | 89.61                        | 4,562.33       | 90.03          | 697.64                          | 528.23               | 169.42  | 4.118                        |                               |           |
| 17,300.00                                                               | 12,595.00                   | 17,068.82                   | 12,370.00                   | 90.31               | 89.58            | 89.61                        | 4,662.33       | 89.34          | 697.64                          | 525.46               | 172.18  | 4.052                        |                               |           |
| 17,349.17                                                               | 12,595.00                   | 17,117.98                   | 12,370.00                   | 90.97               | 90.30            | 89.61                        | 4,711.49       | 89.01          | 697.65                          | 524.18               | 173.46  | 4.022 SF                     |                               |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #206H - Wellbore #1 - Design #2 |                             |                             |                             |                                        |                  |                              |                                           |                 |                              |                               |                                 |                      | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------------------|------------------|------------------------------|-------------------------------------------|-----------------|------------------------------|-------------------------------|---------------------------------|----------------------|--------------------|-----------|
| Survey Program: 0-MWVD                                                  |                             |                             |                             |                                        |                  |                              |                                           |                 |                              |                               |                                 |                      | Offset Well Error: | 0.00 usft |
| Measured<br>Depth<br>(usft)                                             | Vertical<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Semi Major Axis<br>Reference<br>(usft) | Offset<br>(usft) | Azimuth<br>from North<br>(°) | Offset Wellbore Centre<br>+N/-S<br>(usft) | +E/-W<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) | Minimum<br>Separation<br>(usft) | Separation<br>Factor | Warning            |           |
| 0.00                                                                    | 0.00                        | 1.00                        | -1.00                       | 0.00                                   | 0.00             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     |                               |                                 |                      |                    |           |
| 100.00                                                                  | 100.00                      | 101.00                      | 99.00                       | 0.13                                   | 0.13             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,349.80                      | 0.26                            | 5,194.702            |                    |           |
| 200.00                                                                  | 200.00                      | 201.00                      | 199.00                      | 0.49                                   | 0.49             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,349.09                      | 0.98                            | 1,382.078            |                    |           |
| 300.00                                                                  | 300.00                      | 301.00                      | 299.00                      | 0.85                                   | 0.85             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,348.37                      | 1.69                            | 797.072              |                    |           |
| 400.00                                                                  | 400.00                      | 401.00                      | 399.00                      | 1.20                                   | 1.21             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,347.65                      | 2.41                            | 560.024              |                    |           |
| 500.00                                                                  | 500.00                      | 501.00                      | 499.00                      | 1.56                                   | 1.57             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,346.93                      | 3.13                            | 431.652              |                    |           |
| 600.00                                                                  | 600.00                      | 601.00                      | 599.00                      | 1.92                                   | 1.92             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,346.22                      | 3.84                            | 351.157              |                    |           |
| 700.00                                                                  | 700.00                      | 701.00                      | 699.00                      | 2.28                                   | 2.28             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,345.50                      | 4.56                            | 295.966              |                    |           |
| 800.00                                                                  | 800.00                      | 801.00                      | 799.00                      | 2.64                                   | 2.64             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,344.78                      | 5.28                            | 255.767              |                    |           |
| 900.00                                                                  | 900.00                      | 901.00                      | 899.00                      | 3.00                                   | 3.00             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,344.07                      | 6.00                            | 225.182              |                    |           |
| 1,000.00                                                                | 1,000.00                    | 999.00                      | 999.00                      | 3.35                                   | 3.35             | 89.45                        | 13.00                                     | 1,350.00        | 1,350.06                     | 1,343.36                      | 6.71                            | 201.345 CC, ES       |                    |           |
| 1,100.00                                                                | 1,099.99                    | 1,092.28                    | 1,092.27                    | 3.70                                   | 3.67             | 89.46                        | 12.30                                     | 1,350.24        | 1,351.03                     | 1,343.67                      | 7.37                            | 183.364              |                    |           |
| 1,200.00                                                                | 1,199.96                    | 1,185.43                    | 1,185.40                    | 4.03                                   | 3.98             | 89.49                        | 10.16                                     | 1,350.95        | 1,353.96                     | 1,345.95                      | 8.01                            | 169.051              |                    |           |
| 1,300.00                                                                | 1,299.86                    | 1,278.47                    | 1,278.36                    | 4.37                                   | 4.29             | 89.54                        | 6.59                                      | 1,352.15        | 1,358.83                     | 1,350.18                      | 8.66                            | 156.959              |                    |           |
| 1,400.00                                                                | 1,399.68                    | 1,371.34                    | 1,371.08                    | 4.72                                   | 4.60             | 89.60                        | 1.59                                      | 1,353.82        | 1,365.66                     | 1,356.35                      | 9.31                            | 146.642              |                    |           |
| 1,500.00                                                                | 1,499.37                    | 1,468.81                    | 1,468.32                    | 5.07                                   | 4.93             | 89.69                        | -4.78                                     | 1,355.96        | 1,374.31                     | 1,364.32                      | 9.99                            | 137.533              |                    |           |
| 1,576.67                                                                | 1,575.69                    | 1,545.09                    | 1,544.42                    | 5.34                                   | 5.20             | 89.73                        | -9.83                                     | 1,357.66        | 1,381.94                     | 1,371.42                      | 10.52                           | 131.305              |                    |           |
| 1,600.00                                                                | 1,598.91                    | 1,568.30                    | 1,567.56                    | 5.43                                   | 5.28             | 89.74                        | -11.36                                    | 1,358.17        | 1,384.39                     | 1,373.71                      | 10.69                           | 129.534              |                    |           |
| 1,700.00                                                                | 1,698.40                    | 1,667.74                    | 1,666.76                    | 5.79                                   | 5.63             | 89.78                        | -17.94                                    | 1,360.38        | 1,394.90                     | 1,383.51                      | 11.39                           | 122.494              |                    |           |
| 1,800.00                                                                | 1,797.90                    | 1,767.18                    | 1,765.96                    | 6.16                                   | 5.98             | 89.82                        | -24.51                                    | 1,362.58        | 1,405.40                     | 1,393.30                      | 12.09                           | 116.215              |                    |           |
| 1,900.00                                                                | 1,897.39                    | 1,866.62                    | 1,865.16                    | 6.52                                   | 6.34             | 89.85                        | -31.09                                    | 1,364.79        | 1,415.90                     | 1,403.10                      | 12.80                           | 110.586              |                    |           |
| 2,000.00                                                                | 1,996.88                    | 1,966.07                    | 1,964.36                    | 6.90                                   | 6.70             | 89.89                        | -37.66                                    | 1,366.99        | 1,426.40                     | 1,412.88                      | 13.52                           | 105.518              |                    |           |
| 2,100.00                                                                | 2,096.38                    | 2,065.51                    | 2,063.56                    | 7.27                                   | 7.06             | 89.93                        | -44.24                                    | 1,369.20        | 1,436.91                     | 1,422.67                      | 14.24                           | 100.934              |                    |           |
| 2,200.00                                                                | 2,195.87                    | 2,164.95                    | 2,162.76                    | 7.65                                   | 7.42             | 89.97                        | -50.81                                    | 1,371.40        | 1,447.41                     | 1,432.45                      | 14.96                           | 96.771               |                    |           |
| 2,300.00                                                                | 2,295.37                    | 2,264.39                    | 2,261.96                    | 8.03                                   | 7.78             | 90.00                        | -57.39                                    | 1,373.61        | 1,457.92                     | 1,442.24                      | 15.68                           | 92.975               |                    |           |
| 2,400.00                                                                | 2,394.86                    | 2,363.84                    | 2,361.16                    | 8.41                                   | 8.14             | 90.04                        | -63.96                                    | 1,375.81        | 1,468.42                     | 1,452.02                      | 16.41                           | 89.503               |                    |           |
| 2,500.00                                                                | 2,494.35                    | 2,463.28                    | 2,460.36                    | 8.79                                   | 8.51             | 90.07                        | -70.54                                    | 1,378.02        | 1,478.93                     | 1,461.79                      | 17.13                           | 86.315               |                    |           |
| 2,600.00                                                                | 2,593.85                    | 2,562.72                    | 2,559.57                    | 9.17                                   | 8.87             | 90.11                        | -77.11                                    | 1,380.22        | 1,489.43                     | 1,471.57                      | 17.86                           | 83.379               |                    |           |
| 2,700.00                                                                | 2,693.34                    | 2,662.16                    | 2,658.77                    | 9.55                                   | 9.24             | 90.14                        | -83.69                                    | 1,382.43        | 1,499.94                     | 1,481.35                      | 18.59                           | 80.666               |                    |           |
| 2,800.00                                                                | 2,792.84                    | 2,761.61                    | 2,757.97                    | 9.94                                   | 9.60             | 90.17                        | -90.26                                    | 1,384.63        | 1,510.45                     | 1,491.12                      | 19.33                           | 78.154               |                    |           |
| 2,900.00                                                                | 2,892.33                    | 2,861.05                    | 2,857.17                    | 10.32                                  | 9.97             | 90.21                        | -96.84                                    | 1,386.84        | 1,520.96                     | 1,500.90                      | 20.06                           | 75.820               |                    |           |
| 3,000.00                                                                | 2,991.82                    | 2,960.49                    | 2,956.37                    | 10.71                                  | 10.34            | 90.24                        | -103.41                                   | 1,389.04        | 1,531.47                     | 1,510.67                      | 20.79                           | 73.647               |                    |           |
| 3,100.00                                                                | 3,091.32                    | 3,059.93                    | 3,055.57                    | 11.09                                  | 10.71            | 90.27                        | -109.99                                   | 1,391.25        | 1,541.98                     | 1,520.45                      | 21.53                           | 71.619               |                    |           |
| 3,200.00                                                                | 3,190.81                    | 3,159.38                    | 3,154.77                    | 11.48                                  | 11.08            | 90.30                        | -116.56                                   | 1,393.45        | 1,552.49                     | 1,530.22                      | 22.27                           | 69.723               |                    |           |
| 3,300.00                                                                | 3,290.31                    | 3,258.82                    | 3,253.97                    | 11.87                                  | 11.45            | 90.33                        | -123.14                                   | 1,395.66        | 1,563.00                     | 1,539.99                      | 23.00                           | 67.945               |                    |           |
| 3,400.00                                                                | 3,389.80                    | 3,358.26                    | 3,353.17                    | 12.26                                  | 11.81            | 90.36                        | -129.71                                   | 1,397.86        | 1,573.51                     | 1,549.77                      | 23.74                           | 66.276               |                    |           |
| 3,500.00                                                                | 3,489.29                    | 3,457.70                    | 3,452.37                    | 12.64                                  | 12.18            | 90.39                        | -136.29                                   | 1,400.07        | 1,584.02                     | 1,559.54                      | 24.48                           | 64.706               |                    |           |
| 3,600.00                                                                | 3,588.79                    | 3,557.15                    | 3,551.57                    | 13.03                                  | 12.56            | 90.42                        | -142.87                                   | 1,402.27        | 1,594.53                     | 1,569.31                      | 25.22                           | 63.227               |                    |           |
| 3,700.00                                                                | 3,688.28                    | 3,656.59                    | 3,650.77                    | 13.42                                  | 12.93            | 90.45                        | -149.44                                   | 1,404.48        | 1,605.04                     | 1,579.08                      | 25.96                           | 61.830               |                    |           |
| 3,800.00                                                                | 3,787.78                    | 3,756.03                    | 3,749.97                    | 13.81                                  | 13.30            | 90.48                        | -156.02                                   | 1,406.68        | 1,615.55                     | 1,588.85                      | 26.70                           | 60.510               |                    |           |
| 3,900.00                                                                | 3,887.27                    | 3,855.47                    | 3,849.17                    | 14.20                                  | 13.67            | 90.51                        | -162.59                                   | 1,408.89        | 1,626.07                     | 1,598.63                      | 27.44                           | 59.259               |                    |           |
| 4,000.00                                                                | 3,986.76                    | 3,954.92                    | 3,948.37                    | 14.59                                  | 14.04            | 90.54                        | -169.17                                   | 1,411.09        | 1,636.58                     | 1,608.40                      | 28.18                           | 58.074               |                    |           |
| 4,100.00                                                                | 4,086.26                    | 4,054.36                    | 4,047.57                    | 14.98                                  | 14.41            | 90.57                        | -175.74                                   | 1,413.30        | 1,647.09                     | 1,618.17                      | 28.92                           | 56.949               |                    |           |
| 4,200.00                                                                | 4,185.75                    | 4,153.80                    | 4,146.77                    | 15.37                                  | 14.78            | 90.60                        | -182.32                                   | 1,415.50        | 1,657.61                     | 1,627.94                      | 29.66                           | 55.879               |                    |           |
| 4,300.00                                                                | 4,285.25                    | 4,253.24                    | 4,245.97                    | 15.76                                  | 15.15            | 90.62                        | -188.89                                   | 1,417.71        | 1,668.12                     | 1,637.72                      | 30.41                           | 54.861               |                    |           |
| 4,400.00                                                                | 4,384.74                    | 4,352.69                    | 4,345.17                    | 16.15                                  | 15.52            | 90.65                        | -195.47                                   | 1,419.91        | 1,678.64                     | 1,647.49                      | 31.15                           | 53.890               |                    |           |
| 4,500.00                                                                | 4,484.23                    | 4,452.13                    | 4,444.37                    | 16.54                                  | 15.90            | 90.68                        | -202.04                                   | 1,422.12        | 1,689.15                     | 1,657.26                      | 31.89                           | 52.965               |                    |           |
| 4,600.00                                                                | 4,583.73                    | 4,551.57                    | 4,543.57                    | 16.93                                  | 16.27            | 90.70                        | -208.62                                   | 1,424.32        | 1,699.67                     | 1,667.03                      | 32.64                           | 52.081               |                    |           |
| 4,700.00                                                                | 4,683.22                    | 4,651.01                    | 4,642.77                    | 17.32                                  | 16.64            | 90.73                        | -215.19                                   | 1,426.53        | 1,710.18                     | 1,676.81                      | 33.38                           | 51.236               |                    |           |
| 4,800.00                                                                | 4,782.71                    | 4,750.46                    | 4,741.97                    | 17.72                                  | 17.01            | 90.76                        | -221.77                                   | 1,428.73        | 1,720.70                     | 1,686.58                      | 34.12                           | 50.428               |                    |           |
| 4,900.00                                                                | 4,882.21                    | 4,849.90                    | 4,841.17                    | 18.11                                  | 17.39            | 90.78                        | -228.34                                   | 1,430.94        | 1,731.22                     | 1,696.35                      | 34.87                           | 49.653               |                    |           |
| 5,000.00                                                                | 4,981.70                    | 4,949.34                    | 4,940.37                    | 18.50                                  | 17.76            | 90.81                        | -234.92                                   | 1,433.14        | 1,741.73                     | 1,706.12                      | 35.61                           | 48.911               |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #206H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                    |                        |                 |                   |                   |  | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|--------------------|------------------------|-----------------|-------------------|-------------------|--|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |                    |                        |                 |                   |                   |  | Offset Well Error: | 0.00 usft |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     | Minimum Separation |                        | Warning         |                   |                   |  |                    |           |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft)       | Between Centres (usft) | Ellipses (usft) | Separation (usft) | Separation Factor |  |                    |           |
| 5,100.00                                                                | 5,081.20              | 5,048.78              | 5,039.57              | 18.89            | 18.13         | 90.83                  | -241.49                             | 1,435.35           | 1,752.25               | 1,715.90        | 36.35             | 48.199            |  |                    |           |
| 5,200.00                                                                | 5,180.69              | 5,148.23              | 5,138.78              | 19.28            | 18.50         | 90.86                  | -248.07                             | 1,437.56           | 1,762.77               | 1,725.67        | 37.10             | 47.515            |  |                    |           |
| 5,300.00                                                                | 5,280.18              | 5,252.57              | 5,242.88              | 19.67            | 18.89         | 90.88                  | -254.78                             | 1,439.81           | 1,773.23               | 1,735.36        | 37.86             | 46.831            |  |                    |           |
| 5,400.00                                                                | 5,379.68              | 5,363.54              | 5,353.70              | 20.07            | 19.30         | 90.87                  | -260.23                             | 1,441.63           | 1,783.15               | 1,744.50        | 38.65             | 46.132            |  |                    |           |
| 5,500.00                                                                | 5,479.17              | 5,474.57              | 5,464.67              | 20.46            | 19.70         | 90.80                  | -263.64                             | 1,442.78           | 1,792.43               | 1,753.00        | 39.43             | 45.455            |  |                    |           |
| 5,600.00                                                                | 5,578.67              | 5,585.58              | 5,575.67              | 20.85            | 20.08         | 90.66                  | -265.02                             | 1,443.24           | 1,801.09               | 1,760.89        | 40.19             | 44.813            |  |                    |           |
| 5,700.00                                                                | 5,678.16              | 5,687.07              | 5,677.16              | 21.24            | 20.41         | 90.47                  | -265.05                             | 1,443.25           | 1,809.33               | 1,768.44        | 40.90             | 44.243            |  |                    |           |
| 5,800.00                                                                | 5,777.65              | 5,786.57              | 5,776.65              | 21.63            | 20.74         | 90.29                  | -265.05                             | 1,443.25           | 1,817.59               | 1,776.00        | 41.59             | 43.703            |  |                    |           |
| 5,900.00                                                                | 5,877.15              | 5,886.06              | 5,876.15              | 22.03            | 21.06         | 90.11                  | -265.05                             | 1,443.25           | 1,825.87               | 1,783.58        | 42.28             | 43.181            |  |                    |           |
| 5,941.51                                                                | 5,918.45              | 5,927.36              | 5,917.45              | 22.19            | 21.19         | 90.04                  | -265.05                             | 1,443.25           | 1,829.31               | 1,786.74        | 42.57             | 42.968            |  |                    |           |
| 6,000.00                                                                | 5,976.67              | 5,985.58              | 5,975.67              | 22.42            | 21.38         | 89.94                  | -265.05                             | 1,443.25           | 1,833.92               | 1,790.94        | 42.98             | 42.669            |  |                    |           |
| 6,100.00                                                                | 6,076.34              | 6,085.25              | 6,075.34              | 22.80            | 21.71         | 89.80                  | -265.05                             | 1,443.25           | 1,840.67               | 1,796.99        | 43.67             | 42.146            |  |                    |           |
| 6,200.00                                                                | 6,176.13              | 6,185.04              | 6,175.13              | 23.17            | 22.04         | 89.69                  | -265.05                             | 1,443.25           | 1,845.98               | 1,801.62        | 44.36             | 41.610            |  |                    |           |
| 6,300.00                                                                | 6,276.02              | 6,284.93              | 6,275.02              | 23.53            | 22.37         | 89.61                  | -265.05                             | 1,443.25           | 1,849.86               | 1,804.81        | 45.05             | 41.061            |  |                    |           |
| 6,400.00                                                                | 6,375.97              | 6,384.89              | 6,374.97              | 23.89            | 22.70         | 89.55                  | -265.05                             | 1,443.25           | 1,852.30               | 1,806.56        | 45.74             | 40.499            |  |                    |           |
| 6,500.00                                                                | 6,475.96              | 6,484.88              | 6,474.96              | 24.23            | 23.03         | 89.53                  | -265.05                             | 1,443.25           | 1,853.29               | 1,806.87        | 46.42             | 39.926            |  |                    |           |
| 6,518.18                                                                | 6,494.14              | 6,503.06              | 6,493.14              | 24.29            | 23.09         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,806.77        | 46.54             | 39.822            |  |                    |           |
| 6,600.00                                                                | 6,575.96              | 6,584.88              | 6,574.96              | 24.55            | 23.36         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,806.23        | 47.08             | 39.366            |  |                    |           |
| 6,700.00                                                                | 6,675.96              | 6,684.88              | 6,674.96              | 24.87            | 23.69         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,805.57        | 47.74             | 38.822            |  |                    |           |
| 6,800.00                                                                | 6,775.96              | 6,784.88              | 6,774.96              | 25.19            | 24.03         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,804.91        | 48.40             | 38.291            |  |                    |           |
| 6,900.00                                                                | 6,875.96              | 6,884.88              | 6,874.96              | 25.51            | 24.36         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,804.25        | 49.06             | 37.774            |  |                    |           |
| 7,000.00                                                                | 6,975.96              | 6,984.88              | 6,974.96              | 25.83            | 24.69         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,803.58        | 49.73             | 37.269            |  |                    |           |
| 7,100.00                                                                | 7,075.96              | 7,084.88              | 7,074.96              | 26.16            | 25.03         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,802.92        | 50.39             | 36.776            |  |                    |           |
| 7,200.00                                                                | 7,175.96              | 7,184.88              | 7,174.96              | 26.48            | 25.37         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,802.25        | 51.06             | 36.296            |  |                    |           |
| 7,300.00                                                                | 7,275.96              | 7,284.88              | 7,274.96              | 26.80            | 25.70         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,801.58        | 51.73             | 35.826            |  |                    |           |
| 7,400.00                                                                | 7,375.96              | 7,384.88              | 7,374.96              | 27.13            | 26.04         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,800.91        | 52.40             | 35.368            |  |                    |           |
| 7,500.00                                                                | 7,475.96              | 7,484.88              | 7,474.96              | 27.46            | 26.38         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,800.24        | 53.07             | 34.921            |  |                    |           |
| 7,600.00                                                                | 7,575.96              | 7,584.88              | 7,574.96              | 27.78            | 26.72         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,799.57        | 53.74             | 34.484            |  |                    |           |
| 7,700.00                                                                | 7,675.96              | 7,684.88              | 7,674.96              | 28.11            | 27.05         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,798.89        | 54.42             | 34.057            |  |                    |           |
| 7,800.00                                                                | 7,775.96              | 7,784.88              | 7,774.96              | 28.44            | 27.39         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,798.22        | 55.09             | 33.640            |  |                    |           |
| 7,900.00                                                                | 7,875.96              | 7,884.88              | 7,874.96              | 28.77            | 27.73         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,797.54        | 55.77             | 33.233            |  |                    |           |
| 8,000.00                                                                | 7,975.96              | 7,984.88              | 7,974.96              | 29.10            | 28.07         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,796.87        | 56.44             | 32.834            |  |                    |           |
| 8,100.00                                                                | 8,075.96              | 8,084.88              | 8,074.96              | 29.43            | 28.41         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,796.19        | 57.12             | 32.445            |  |                    |           |
| 8,200.00                                                                | 8,175.96              | 8,184.88              | 8,174.96              | 29.76            | 28.76         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,795.51        | 57.80             | 32.064            |  |                    |           |
| 8,300.00                                                                | 8,275.96              | 8,284.88              | 8,274.96              | 30.09            | 29.10         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,794.83        | 58.48             | 31.691            |  |                    |           |
| 8,400.00                                                                | 8,375.96              | 8,384.88              | 8,374.96              | 30.43            | 29.44         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,794.15        | 59.16             | 31.327            |  |                    |           |
| 8,500.00                                                                | 8,475.96              | 8,484.88              | 8,474.96              | 30.76            | 29.78         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,793.47        | 59.84             | 30.970            |  |                    |           |
| 8,600.00                                                                | 8,575.96              | 8,584.88              | 8,574.96              | 31.09            | 30.12         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,792.79        | 60.52             | 30.621            |  |                    |           |
| 8,700.00                                                                | 8,675.96              | 8,684.88              | 8,674.96              | 31.43            | 30.47         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,792.10        | 61.21             | 30.279            |  |                    |           |
| 8,800.00                                                                | 8,775.96              | 8,784.88              | 8,774.96              | 31.76            | 30.81         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,791.42        | 61.89             | 29.945            |  |                    |           |
| 8,900.00                                                                | 8,875.96              | 8,884.88              | 8,874.96              | 32.10            | 31.15         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,790.74        | 62.58             | 29.617            |  |                    |           |
| 9,000.00                                                                | 8,975.96              | 8,984.88              | 8,974.96              | 32.43            | 31.50         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,790.05        | 63.26             | 29.296            |  |                    |           |
| 9,100.00                                                                | 9,075.96              | 9,084.88              | 9,074.96              | 32.77            | 31.84         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,789.36        | 63.95             | 28.982            |  |                    |           |
| 9,200.00                                                                | 9,175.96              | 9,184.88              | 9,174.96              | 33.11            | 32.19         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,788.68        | 64.63             | 28.674            |  |                    |           |
| 9,300.00                                                                | 9,275.96              | 9,284.88              | 9,274.96              | 33.44            | 32.53         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,787.99        | 65.32             | 28.373            |  |                    |           |
| 9,400.00                                                                | 9,375.96              | 9,384.88              | 9,374.96              | 33.78            | 32.88         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,787.30        | 66.01             | 28.077            |  |                    |           |
| 9,500.00                                                                | 9,475.96              | 9,484.88              | 9,474.96              | 34.12            | 33.22         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,786.61        | 66.70             | 27.787            |  |                    |           |
| 9,600.00                                                                | 9,575.96              | 9,584.88              | 9,574.96              | 34.46            | 33.57         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,785.93        | 67.39             | 27.503            |  |                    |           |
| 9,700.00                                                                | 9,675.96              | 9,684.88              | 9,674.96              | 34.80            | 33.92         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,785.24        | 68.08             | 27.225            |  |                    |           |
| 9,800.00                                                                | 9,775.96              | 9,784.88              | 9,774.96              | 35.14            | 34.26         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,784.55        | 68.77             | 26.951            |  |                    |           |
| 9,900.00                                                                | 9,875.96              | 9,884.88              | 9,874.96              | 35.47            | 34.61         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,783.86        | 69.46             | 26.683            |  |                    |           |
| 10,000.00                                                               | 9,975.96              | 9,984.88              | 9,974.96              | 35.81            | 34.96         | 89.53                  | -265.05                             | 1,443.25           | 1,853.31               | 1,783.16        | 70.15             | 26.420            |  |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design      Brad Dyer 35-22S-32E AR - #206H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |                     |                        |                         |                           |                   | Offset Site Error:      0.00 usft |  |
|------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|---------------------|------------------------|-------------------------|---------------------------|-------------------|-----------------------------------|--|
| Survey Program:    0-MWD                                                     |                       |                       |                       |                  |               |                        |                                     |                     |                        |                         |                           |                   | Offset Well Error:      0.00 usft |  |
| Reference                                                                    |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                     |                     |                        |                         |                           |                   | Warning                           |  |
| Measured Depth (usft)                                                        | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                                   |  |
| 10,100.00                                                                    | 10,075.96             | 10,084.88             | 10,074.96             | 36.16            | 35.30         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,782.47                | 70.84                     | 26.162            |                                   |  |
| 10,200.00                                                                    | 10,175.96             | 10,184.88             | 10,174.96             | 36.50            | 35.65         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,781.78                | 71.53                     | 25.909            |                                   |  |
| 10,300.00                                                                    | 10,275.96             | 10,284.88             | 10,274.96             | 36.84            | 36.00         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,781.09                | 72.22                     | 25.661            |                                   |  |
| 10,400.00                                                                    | 10,375.96             | 10,384.88             | 10,374.96             | 37.18            | 36.35         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,780.39                | 72.92                     | 25.417            |                                   |  |
| 10,500.00                                                                    | 10,475.96             | 10,484.88             | 10,474.96             | 37.52            | 36.69         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,779.70                | 73.61                     | 25.177            |                                   |  |
| 10,600.00                                                                    | 10,575.96             | 10,584.88             | 10,574.96             | 37.86            | 37.04         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,779.01                | 74.30                     | 24.942            |                                   |  |
| 10,700.00                                                                    | 10,675.96             | 10,684.88             | 10,674.96             | 38.20            | 37.39         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,778.31                | 75.00                     | 24.711            |                                   |  |
| 10,800.00                                                                    | 10,775.96             | 10,784.88             | 10,774.96             | 38.55            | 37.74         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,777.62                | 75.69                     | 24.484            |                                   |  |
| 10,900.00                                                                    | 10,875.96             | 10,884.88             | 10,874.96             | 38.89            | 38.09         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,776.92                | 76.39                     | 24.261            |                                   |  |
| 11,000.00                                                                    | 10,975.96             | 10,984.88             | 10,974.96             | 39.23            | 38.44         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,776.23                | 77.09                     | 24.042            |                                   |  |
| 11,100.00                                                                    | 11,075.96             | 11,084.88             | 11,074.96             | 39.58            | 38.79         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,775.53                | 77.78                     | 23.827            |                                   |  |
| 11,200.00                                                                    | 11,175.96             | 11,184.88             | 11,174.96             | 39.92            | 39.14         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,774.83                | 78.48                     | 23.616            |                                   |  |
| 11,300.00                                                                    | 11,275.96             | 11,284.88             | 11,274.96             | 40.26            | 39.48         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,774.14                | 79.17                     | 23.408            |                                   |  |
| 11,400.00                                                                    | 11,375.96             | 11,384.88             | 11,374.96             | 40.61            | 39.83         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,773.44                | 79.87                     | 23.204            |                                   |  |
| 11,500.00                                                                    | 11,475.96             | 11,484.88             | 11,474.96             | 40.95            | 40.18         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,772.74                | 80.57                     | 23.003            |                                   |  |
| 11,600.00                                                                    | 11,575.97             | 11,584.88             | 11,574.97             | 41.30            | 40.53         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,772.04                | 81.27                     | 22.805            |                                   |  |
| 11,700.00                                                                    | 11,675.97             | 11,684.88             | 11,674.97             | 41.64            | 40.88         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,771.35                | 81.97                     | 22.611            |                                   |  |
| 11,800.00                                                                    | 11,775.97             | 11,784.88             | 11,774.97             | 41.99            | 41.23         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,770.65                | 82.66                     | 22.420            |                                   |  |
| 11,800.79                                                                    | 11,776.76             | 11,785.67             | 11,775.76             | 41.99            | 41.24         | 89.53                  | -265.05                             | 1,443.25            | 1,853.31               | 1,770.64                | 82.67                     | 22.418            |                                   |  |
| 11,900.00                                                                    | 11,875.97             | 11,884.40             | 11,874.37             | 42.33            | 41.58         | 89.44                  | -261.89                             | 1,443.23            | 1,853.32               | 1,769.96                | 83.35                     | 22.234            |                                   |  |
| 12,000.00                                                                    | 11,975.97             | 11,980.21             | 11,968.38             | 42.68            | 41.88         | 88.88                  | -243.93                             | 1,443.11            | 1,853.47               | 1,769.47                | 84.00                     | 22.065            |                                   |  |
| 12,023.05                                                                    | 11,999.01             | 12,001.27             | 11,988.55             | 42.76            | 41.95         | 88.69                  | -237.89                             | 1,443.07            | 1,853.57               | 1,769.43                | 84.14                     | 22.029            |                                   |  |
| 12,050.00                                                                    | 12,025.96             | 12,025.48             | 12,011.45             | 42.85            | 42.02         | 88.47                  | -230.04                             | 1,443.01            | 1,853.81               | 1,769.51                | 84.30                     | 21.990            |                                   |  |
| 12,100.00                                                                    | 12,075.73             | 12,069.64             | 12,052.29             | 43.02            | 42.14         | 88.09                  | -213.26                             | 1,442.90            | 1,854.82               | 1,770.24                | 84.59                     | 21.928            |                                   |  |
| 12,150.00                                                                    | 12,124.93             | 12,112.92             | 12,090.93             | 43.18            | 42.26         | 87.76                  | -193.81                             | 1,442.77            | 1,856.53               | 1,771.68                | 84.85                     | 21.880            |                                   |  |
| 12,200.00                                                                    | 12,173.17             | 12,155.38             | 12,127.32             | 43.33            | 42.37         | 87.49                  | -171.95                             | 1,442.62            | 1,858.92               | 1,773.82                | 85.10                     | 21.844            |                                   |  |
| 12,250.00                                                                    | 12,220.08             | 12,197.12             | 12,161.42             | 43.48            | 42.47         | 87.28                  | -147.89                             | 1,442.45            | 1,861.96               | 1,776.63                | 85.33                     | 21.821            |                                   |  |
| 12,300.00                                                                    | 12,265.31             | 12,238.19             | 12,193.17             | 43.61            | 42.56         | 87.13                  | -121.85                             | 1,442.28            | 1,865.62               | 1,780.07                | 85.54                     | 21.809            |                                   |  |
| 12,350.00                                                                    | 12,308.51             | 12,278.68             | 12,222.57             | 43.72            | 42.65         | 87.04                  | -94.03                              | 1,442.09            | 1,869.84               | 1,784.10                | 85.74                     | 21.807            |                                   |  |
| 12,400.00                                                                    | 12,349.35             | 12,318.64             | 12,249.58             | 43.83            | 42.74         | 87.02                  | -64.60                              | 1,441.89            | 1,874.59               | 1,788.66                | 85.93                     | 21.815            |                                   |  |
| 12,450.00                                                                    | 12,387.53             | 12,358.12             | 12,274.20             | 43.92            | 42.83         | 87.06                  | -33.73                              | 1,441.68            | 1,879.82               | 1,793.71                | 86.11                     | 21.830            |                                   |  |
| 12,500.00                                                                    | 12,422.76             | 12,397.20             | 12,296.41             | 44.00            | 42.91         | 87.16                  | -1.60                               | 1,441.46            | 1,885.47               | 1,799.19                | 86.28                     | 21.853            |                                   |  |
| 12,550.00                                                                    | 12,454.76             | 12,435.91             | 12,316.21             | 44.06            | 42.99         | 87.31                  | 31.66                               | 1,441.23            | 1,891.48               | 1,805.04                | 86.44                     | 21.881            |                                   |  |
| 12,600.00                                                                    | 12,483.29             | 12,474.31             | 12,333.58             | 44.11            | 43.07         | 87.51                  | 65.90                               | 1,441.00            | 1,897.82               | 1,811.21                | 86.61                     | 21.913            |                                   |  |
| 12,650.00                                                                    | 12,508.13             | 12,512.44             | 12,348.53             | 44.15            | 43.15         | 87.76                  | 100.97                              | 1,440.76            | 1,904.40               | 1,817.63                | 86.77                     | 21.948            |                                   |  |
| 12,700.00                                                                    | 12,529.10             | 12,550.00             | 12,360.93             | 44.19            | 43.24         | 88.05                  | 136.41                              | 1,440.52            | 1,911.19               | 1,824.25                | 86.93                     | 21.984            |                                   |  |
| 12,723.05                                                                    | 12,537.41             | 12,567.77             | 12,365.99             | 44.21            | 43.27         | 88.18                  | 153.45                              | 1,440.40            | 1,914.37               | 1,827.35                | 87.01                     | 22.001            |                                   |  |
| 12,750.00                                                                    | 12,546.27             | 12,588.09             | 12,371.12             | 44.24            | 43.32         | 88.35                  | 173.11                              | 1,440.27            | 1,918.13               | 1,831.02                | 87.11                     | 22.021            |                                   |  |
| 12,800.00                                                                    | 12,560.79             | 12,625.71             | 12,378.76             | 44.33            | 43.40         | 88.66                  | 209.94                              | 1,440.02            | 1,925.24               | 1,837.95                | 87.28                     | 22.058            |                                   |  |
| 12,850.00                                                                    | 12,572.79             | 12,667.01             | 12,384.99             | 44.46            | 43.50         | 88.88                  | 250.76                              | 1,439.74            | 1,932.45               | 1,844.98                | 87.48                     | 22.091            |                                   |  |
| 12,900.00                                                                    | 12,582.23             | 12,708.18             | 12,389.43             | 44.61            | 43.60         | 89.11                  | 291.68                              | 1,439.46            | 1,939.71               | 1,852.02                | 87.69                     | 22.121            |                                   |  |
| 12,950.00                                                                    | 12,589.08             | 12,749.23             | 12,392.10             | 44.77            | 43.70         | 89.35                  | 332.64                              | 1,439.18            | 1,946.98               | 1,859.07                | 87.91                     | 22.147            |                                   |  |
| 13,000.00                                                                    | 12,593.34             | 12,791.59             | 12,393.00             | 44.94            | 43.81         | 89.61                  | 373.45                              | 1,438.90            | 1,954.25               | 1,866.10                | 88.15                     | 22.169            |                                   |  |
| 13,050.00                                                                    | 12,594.98             | 12,839.52             | 12,393.00             | 45.11            | 43.95         | 89.61                  | 422.92                              | 1,438.56            | 1,961.38               | 1,872.95                | 88.44                     | 22.178            |                                   |  |
| 13,056.38                                                                    | 12,595.00             | 12,845.84             | 12,393.00             | 45.14            | 43.97         | 89.61                  | 429.24                              | 1,438.52            | 1,962.27               | 1,873.80                | 88.48                     | 22.178            |                                   |  |
| 13,100.00                                                                    | 12,595.00             | 12,889.08             | 12,393.00             | 45.30            | 44.11         | 89.61                  | 472.47                              | 1,438.22            | 1,968.03               | 1,879.28                | 88.75                     | 22.175            |                                   |  |
| 13,200.00                                                                    | 12,595.00             | 12,988.49             | 12,393.00             | 45.70            | 44.46         | 89.61                  | 571.88                              | 1,437.54            | 1,978.74               | 1,889.28                | 89.47                     | 22.117            |                                   |  |
| 13,300.00                                                                    | 12,595.00             | 13,088.22             | 12,393.00             | 46.15            | 44.88         | 89.61                  | 671.61                              | 1,436.85            | 1,986.00               | 1,895.70                | 90.30                     | 21.994            |                                   |  |
| 13,400.00                                                                    | 12,595.00             | 13,188.14             | 12,393.00             | 46.65            | 45.36         | 89.61                  | 771.53                              | 1,436.16            | 1,989.79               | 1,898.56                | 91.24                     | 21.809            |                                   |  |
| 13,459.31                                                                    | 12,595.00             | 13,247.44             | 12,393.00             | 46.96            | 45.67         | 89.61                  | 830.83                              | 1,435.76            | 1,990.40               | 1,898.56                | 91.85                     | 21.671            |                                   |  |
| 13,500.00                                                                    | 12,595.00             | 13,288.13             | 12,393.00             | 47.18            | 45.89         | 89.61                  | 871.52                              | 1,435.48            | 1,990.40               | 1,898.12                | 92.28                     | 21.569            |                                   |  |
| 13,600.00                                                                    | 12,595.00             | 13,388.13             | 12,393.00             | 47.76            | 46.47         | 89.61                  | 971.52                              | 1,434.79            | 1,990.40               | 1,896.97                | 93.43                     | 21.305            |                                   |  |

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



# MS Directional Anticollision Report



Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Reference Site: Brad Dyer 35-22S-32E AR  
Site Error: 0.00 usft  
Reference Well: #221H  
Well Error: 0.00 usft  
Reference Wellbore: Wellbore #1  
Reference Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Output errors are at: 2.00 sigma  
Database: EDM Conroe  
Offset TVD Reference: Offset Datum

| Offset Design         |                       |                       |                       |                  |               |                        |                                     |                                     |                        | Brad Dyer 35-22S-32E AR - #206H - Wellbore #1 - Design #2 |                           | Offset Site Error: |         | 0.00 usft |  |
|-----------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|-------------------------------------|------------------------|-----------------------------------------------------------|---------------------------|--------------------|---------|-----------|--|
| Survey Program: 0-MWD |                       |                       |                       |                  |               |                        |                                     |                                     |                        |                                                           |                           | Offset Well Error: |         | 0.00 usft |  |
| Reference             |                       | Offset                |                       | Semi Major Axis  |               |                        | Distance                            |                                     |                        |                                                           |                           |                    |         |           |  |
| Measured Depth (usft) | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft)                                   | Minimum Separation (usft) | Separation Factor  | Warning |           |  |
| 13,700.00             | 12,595.00             | 13,488.13             | 12,393.00             | 48.39            | 47.10         | 89.61                  | 1,071.52                            | 1,434.10                            | 1,990.39               | 1,895.72                                                  | 94.67                     | 21.024             |         |           |  |
| 13,800.00             | 12,595.00             | 13,588.13             | 12,393.00             | 49.06            | 47.79         | 89.61                  | 1,171.52                            | 1,433.42                            | 1,990.39               | 1,894.37                                                  | 96.02                     | 20.729             |         |           |  |
| 13,900.00             | 12,595.00             | 13,688.13             | 12,393.00             | 49.78            | 48.52         | 89.61                  | 1,271.51                            | 1,432.73                            | 1,990.39               | 1,892.93                                                  | 97.46                     | 20.423             |         |           |  |
| 14,000.00             | 12,595.00             | 13,788.13             | 12,393.00             | 50.54            | 49.29         | 89.61                  | 1,371.51                            | 1,432.04                            | 1,990.38               | 1,891.39                                                  | 98.99                     | 20.107             |         |           |  |
| 14,100.00             | 12,595.00             | 13,888.13             | 12,393.00             | 51.35            | 50.11         | 89.61                  | 1,471.51                            | 1,431.36                            | 1,990.38               | 1,889.78                                                  | 100.60                    | 19.784             |         |           |  |
| 14,200.00             | 12,595.00             | 13,988.13             | 12,393.00             | 52.19            | 50.97         | 89.61                  | 1,571.51                            | 1,430.67                            | 1,990.38               | 1,888.08                                                  | 102.30                    | 19.456             |         |           |  |
| 14,300.00             | 12,595.00             | 14,088.13             | 12,393.00             | 53.07            | 51.87         | 89.61                  | 1,671.50                            | 1,429.98                            | 1,990.37               | 1,886.30                                                  | 104.07                    | 19.125             |         |           |  |
| 14,400.00             | 12,595.00             | 14,188.13             | 12,393.00             | 53.99            | 52.80         | 89.61                  | 1,771.50                            | 1,429.30                            | 1,990.37               | 1,884.45                                                  | 105.92                    | 18.791             |         |           |  |
| 14,500.00             | 12,595.00             | 14,288.13             | 12,393.00             | 54.95            | 53.77         | 89.61                  | 1,871.50                            | 1,428.61                            | 1,990.37               | 1,882.53                                                  | 107.84                    | 18.457             |         |           |  |
| 14,600.00             | 12,595.00             | 14,388.13             | 12,393.00             | 55.93            | 54.78         | 89.61                  | 1,971.50                            | 1,427.92                            | 1,990.36               | 1,880.54                                                  | 109.82                    | 18.124             |         |           |  |
| 14,700.00             | 12,595.00             | 14,488.13             | 12,393.00             | 56.95            | 55.81         | 89.61                  | 2,071.50                            | 1,427.24                            | 1,990.36               | 1,878.49                                                  | 111.87                    | 17.792             |         |           |  |
| 14,800.00             | 12,595.00             | 14,588.13             | 12,393.00             | 57.99            | 56.87         | 89.61                  | 2,171.49                            | 1,426.55                            | 1,990.36               | 1,876.39                                                  | 113.97                    | 17.464             |         |           |  |
| 14,900.00             | 12,595.00             | 14,688.13             | 12,393.00             | 59.07            | 57.97         | 89.61                  | 2,271.49                            | 1,425.86                            | 1,990.35               | 1,874.22                                                  | 116.13                    | 17.139             |         |           |  |
| 15,000.00             | 12,595.00             | 14,788.13             | 12,393.00             | 60.17            | 59.08         | 89.61                  | 2,371.49                            | 1,425.18                            | 1,990.35               | 1,872.00                                                  | 118.34                    | 16.818             |         |           |  |
| 15,100.00             | 12,595.00             | 14,888.13             | 12,393.00             | 61.29            | 60.23         | 89.61                  | 2,471.49                            | 1,424.49                            | 1,990.35               | 1,869.74                                                  | 120.61                    | 16.503             |         |           |  |
| 15,200.00             | 12,595.00             | 14,988.13             | 12,393.00             | 62.44            | 61.39         | 89.61                  | 2,571.48                            | 1,423.80                            | 1,990.34               | 1,867.42                                                  | 122.92                    | 16.192             |         |           |  |
| 15,300.00             | 12,595.00             | 15,088.13             | 12,393.00             | 63.62            | 62.58         | 89.61                  | 2,671.48                            | 1,423.12                            | 1,990.34               | 1,865.06                                                  | 125.27                    | 15.888             |         |           |  |
| 15,400.00             | 12,595.00             | 15,188.13             | 12,393.00             | 64.81            | 63.79         | 89.61                  | 2,771.48                            | 1,422.43                            | 1,990.33               | 1,862.66                                                  | 127.67                    | 15.590             |         |           |  |
| 15,500.00             | 12,595.00             | 15,288.13             | 12,393.00             | 66.02            | 65.02         | 89.61                  | 2,871.48                            | 1,421.74                            | 1,990.33               | 1,860.22                                                  | 130.11                    | 15.297             |         |           |  |
| 15,600.00             | 12,595.00             | 15,388.13             | 12,393.00             | 67.25            | 66.27         | 89.61                  | 2,971.47                            | 1,421.06                            | 1,990.33               | 1,857.74                                                  | 132.58                    | 15.012             |         |           |  |
| 15,700.00             | 12,595.00             | 15,488.13             | 12,393.00             | 68.50            | 67.54         | 89.61                  | 3,071.47                            | 1,420.37                            | 1,990.32               | 1,855.23                                                  | 135.09                    | 14.733             |         |           |  |
| 15,800.00             | 12,595.00             | 15,588.13             | 12,393.00             | 69.77            | 68.82         | 89.61                  | 3,171.47                            | 1,419.68                            | 1,990.32               | 1,852.68                                                  | 137.64                    | 14.460             |         |           |  |
| 15,900.00             | 12,595.00             | 15,688.13             | 12,393.00             | 71.05            | 70.12         | 89.61                  | 3,271.47                            | 1,419.00                            | 1,990.32               | 1,850.10                                                  | 140.21                    | 14.195             |         |           |  |
| 16,000.00             | 12,595.00             | 15,788.13             | 12,393.00             | 72.35            | 71.44         | 89.61                  | 3,371.46                            | 1,418.31                            | 1,990.31               | 1,847.49                                                  | 142.82                    | 13.936             |         |           |  |
| 16,100.00             | 12,595.00             | 15,888.13             | 12,393.00             | 73.67            | 72.76         | 89.61                  | 3,471.46                            | 1,417.62                            | 1,990.31               | 1,844.86                                                  | 145.45                    | 13.683             |         |           |  |
| 16,200.00             | 12,595.00             | 15,988.13             | 12,393.00             | 74.99            | 74.10         | 89.61                  | 3,571.46                            | 1,416.94                            | 1,990.31               | 1,842.19                                                  | 148.12                    | 13.437             |         |           |  |
| 16,300.00             | 12,595.00             | 16,088.13             | 12,393.00             | 76.33            | 75.46         | 89.61                  | 3,671.46                            | 1,416.25                            | 1,990.30               | 1,839.50                                                  | 150.80                    | 13.198             |         |           |  |
| 16,400.00             | 12,595.00             | 16,188.13             | 12,393.00             | 77.68            | 76.82         | 89.61                  | 3,771.46                            | 1,415.56                            | 1,990.30               | 1,836.79                                                  | 153.51                    | 12.965             |         |           |  |
| 16,500.00             | 12,595.00             | 16,288.13             | 12,393.00             | 79.05            | 78.20         | 89.61                  | 3,871.45                            | 1,414.88                            | 1,990.30               | 1,834.05                                                  | 156.25                    | 12.738             |         |           |  |
| 16,600.00             | 12,595.00             | 16,388.13             | 12,393.00             | 80.42            | 79.59         | 89.61                  | 3,971.45                            | 1,414.19                            | 1,990.29               | 1,831.29                                                  | 159.00                    | 12.517             |         |           |  |
| 16,700.00             | 12,595.00             | 16,488.13             | 12,393.00             | 81.81            | 80.99         | 89.61                  | 4,071.45                            | 1,413.50                            | 1,990.29               | 1,828.51                                                  | 161.78                    | 12.302             |         |           |  |
| 16,800.00             | 12,595.00             | 16,588.13             | 12,393.00             | 83.20            | 82.40         | 89.61                  | 4,171.45                            | 1,412.82                            | 1,990.29               | 1,825.71                                                  | 164.58                    | 12.093             |         |           |  |
| 16,900.00             | 12,595.00             | 16,688.13             | 12,393.00             | 84.61            | 83.81         | 89.61                  | 4,271.44                            | 1,412.13                            | 1,990.28               | 1,822.89                                                  | 167.39                    | 11.890             |         |           |  |
| 17,000.00             | 12,595.00             | 16,788.13             | 12,393.00             | 86.02            | 85.24         | 89.61                  | 4,371.44                            | 1,411.44                            | 1,990.28               | 1,820.06                                                  | 170.22                    | 11.692             |         |           |  |
| 17,100.00             | 12,595.00             | 16,888.13             | 12,393.00             | 87.45            | 86.67         | 89.61                  | 4,471.44                            | 1,410.76                            | 1,990.28               | 1,817.20                                                  | 173.07                    | 11.500             |         |           |  |
| 17,200.00             | 12,595.00             | 16,988.13             | 12,393.00             | 88.88            | 88.12         | 89.61                  | 4,571.44                            | 1,410.07                            | 1,990.27               | 1,814.33                                                  | 175.94                    | 11.312             |         |           |  |
| 17,300.00             | 12,595.00             | 17,088.13             | 12,393.00             | 90.31            | 89.57         | 89.61                  | 4,671.43                            | 1,409.38                            | 1,990.27               | 1,811.45                                                  | 178.82                    | 11.130             |         |           |  |
| 17,349.17             | 12,595.00             | 17,137.30             | 12,393.00             | 90.97            | 90.28         | 89.61                  | 4,720.60                            | 1,409.04                            | 1,990.27               | 1,810.11                                                  | 180.15                    | 11.048 SF          |         |           |  |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #226H - Wellbore #1 - Design #2 |                             |                             |                             |                     |                  |                              |                        |                |                              |                               |                                 |                      | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------------|------------------------------|------------------------|----------------|------------------------------|-------------------------------|---------------------------------|----------------------|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                             |                             |                             |                     |                  |                              |                        |                |                              |                               |                                 |                      | Offset Well Error: | 0.00 usft |
| Reference                                                               |                             | Offset                      |                             | Semi Major Axis     |                  | Azimuth<br>from North<br>(°) | Offset Wellbore Centre |                | Distance                     |                               | Minimum<br>Separation<br>(usft) | Separation<br>Factor | Warning            |           |
| Measured<br>Depth<br>(usft)                                             | Vertical<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Reference<br>(usft) | Offset<br>(usft) |                              | +N-S<br>(usft)         | +E-W<br>(usft) | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                                 |                      |                    |           |
| 0.00                                                                    | 0.00                        | 1.00                        | -1.00                       | 0.00                | 0.00             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     |                               |                                 |                      |                    |           |
| 100.00                                                                  | 100.00                      | 101.00                      | 99.00                       | 0.13                | 0.13             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,319.80                      | 0.26                            | 5,079.275            |                    |           |
| 200.00                                                                  | 200.00                      | 201.00                      | 199.00                      | 0.49                | 0.49             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,319.09                      | 0.98                            | 1,351.368            |                    |           |
| 300.00                                                                  | 300.00                      | 301.00                      | 299.00                      | 0.85                | 0.85             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,318.37                      | 1.69                            | 779.361              |                    |           |
| 400.00                                                                  | 400.00                      | 401.00                      | 399.00                      | 1.20                | 1.21             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,317.65                      | 2.41                            | 547.580              |                    |           |
| 500.00                                                                  | 500.00                      | 501.00                      | 499.00                      | 1.56                | 1.57             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,316.94                      | 3.13                            | 422.061              |                    |           |
| 600.00                                                                  | 600.00                      | 599.00                      | 599.00                      | 1.92                | 1.92             | 89.44                        | 13.00                  | 1,320.00       | 1,320.06                     | 1,316.23                      | 3.84                            | 343.996              |                    |           |
| 700.00                                                                  | 700.00                      | 699.63                      | 699.62                      | 2.28                | 2.26             | 89.47                        | 12.13                  | 1,319.98       | 1,320.04                     | 1,315.50                      | 4.54                            | 290.802              |                    |           |
| 800.00                                                                  | 800.00                      | 800.20                      | 800.16                      | 2.64                | 2.59             | 89.59                        | 9.50                   | 1,319.94       | 1,319.97                     | 1,314.74                      | 5.23                            | 252.351              |                    |           |
| 900.00                                                                  | 900.00                      | 900.65                      | 900.51                      | 3.00                | 2.93             | 89.78                        | 5.12                   | 1,319.86       | 1,319.87                     | 1,313.94                      | 5.93                            | 222.586              |                    |           |
| 1,000.00                                                                | 1,000.00                    | 1,000.91                    | 1,000.58                    | 3.35                | 3.28             | 90.04                        | -1.02                  | 1,319.75       | 1,319.75                     | 1,313.12                      | 6.64                            | 198.896              |                    |           |
| 1,008.29                                                                | 1,008.29                    | 1,009.21                    | 1,008.86                    | 3.38                | 3.31             | 90.07                        | -1.60                  | 1,319.74       | 1,319.75                     | 1,313.05                      | 6.69                            | 197.192 CC           |                    |           |
| 1,100.00                                                                | 1,099.99                    | 1,100.69                    | 1,100.12                    | 3.70                | 3.63             | 90.32                        | -7.97                  | 1,319.62       | 1,320.37                     | 1,313.03                      | 7.33                            | 180.081 ES           |                    |           |
| 1,200.00                                                                | 1,199.96                    | 1,200.52                    | 1,199.71                    | 4.03                | 3.99             | 90.56                        | -14.92                 | 1,319.50       | 1,322.45                     | 1,314.42                      | 8.02                            | 164.828              |                    |           |
| 1,300.00                                                                | 1,299.86                    | 1,300.36                    | 1,299.30                    | 4.37                | 4.35             | 90.75                        | -21.88                 | 1,319.38       | 1,325.97                     | 1,317.25                      | 8.72                            | 152.027              |                    |           |
| 1,400.00                                                                | 1,399.68                    | 1,400.17                    | 1,398.87                    | 4.72                | 4.71             | 90.90                        | -28.83                 | 1,319.25       | 1,330.94                     | 1,321.51                      | 9.43                            | 141.184              |                    |           |
| 1,500.00                                                                | 1,499.37                    | 1,500.06                    | 1,498.40                    | 5.07                | 5.08             | 91.01                        | -35.78                 | 1,319.13       | 1,337.34                     | 1,327.20                      | 10.14                           | 131.914              |                    |           |
| 1,576.67                                                                | 1,575.69                    | 1,576.37                    | 1,574.64                    | 5.34                | 5.36             | 91.06                        | -41.11                 | 1,319.03       | 1,343.20                     | 1,332.51                      | 10.69                           | 125.699              |                    |           |
| 1,600.00                                                                | 1,598.91                    | 1,600.38                    | 1,597.84                    | 5.43                | 5.45             | 91.07                        | -42.73                 | 1,319.00       | 1,345.11                     | 1,334.26                      | 10.86                           | 123.905              |                    |           |
| 1,700.00                                                                | 1,698.40                    | 1,700.72                    | 1,697.26                    | 5.79                | 5.81             | 91.11                        | -49.67                 | 1,318.88       | 1,353.31                     | 1,341.73                      | 11.58                           | 116.891              |                    |           |
| 1,800.00                                                                | 1,797.90                    | 1,801.06                    | 1,796.67                    | 6.16                | 6.19             | 91.16                        | -56.61                 | 1,318.75       | 1,361.50                     | 1,349.20                      | 12.30                           | 110.666              |                    |           |
| 1,900.00                                                                | 1,897.39                    | 1,901.41                    | 1,896.09                    | 6.52                | 6.56             | 91.21                        | -63.55                 | 1,318.63       | 1,369.70                     | 1,356.67                      | 13.03                           | 105.107              |                    |           |
| 2,000.00                                                                | 1,996.88                    | 2,001.75                    | 1,995.50                    | 6.90                | 6.93             | 91.25                        | -70.50                 | 1,318.51       | 1,377.90                     | 1,364.13                      | 13.76                           | 100.117              |                    |           |
| 2,100.00                                                                | 2,096.38                    | 2,102.09                    | 2,094.92                    | 7.27                | 7.30             | 91.30                        | -77.44                 | 1,318.38       | 1,386.10                     | 1,371.60                      | 14.50                           | 95.615               |                    |           |
| 2,200.00                                                                | 2,195.87                    | 2,202.43                    | 2,194.33                    | 7.65                | 7.68             | 91.34                        | -84.38                 | 1,318.26       | 1,394.29                     | 1,379.06                      | 15.23                           | 91.534               |                    |           |
| 2,300.00                                                                | 2,295.37                    | 2,302.78                    | 2,293.75                    | 8.03                | 8.05             | 91.39                        | -91.32                 | 1,318.13       | 1,402.49                     | 1,386.52                      | 15.97                           | 87.820               |                    |           |
| 2,400.00                                                                | 2,394.86                    | 2,403.12                    | 2,393.16                    | 8.41                | 8.42             | 91.43                        | -98.26                 | 1,318.01       | 1,410.70                     | 1,393.99                      | 16.71                           | 84.427               |                    |           |
| 2,500.00                                                                | 2,494.35                    | 2,503.46                    | 2,492.58                    | 8.79                | 8.80             | 91.47                        | -105.21                | 1,317.88       | 1,418.90                     | 1,401.45                      | 17.45                           | 81.315               |                    |           |
| 2,600.00                                                                | 2,593.85                    | 2,603.80                    | 2,591.99                    | 9.17                | 9.17             | 91.52                        | -112.15                | 1,317.76       | 1,427.10                     | 1,408.91                      | 18.19                           | 78.451               |                    |           |
| 2,700.00                                                                | 2,693.34                    | 2,704.15                    | 2,691.41                    | 9.55                | 9.55             | 91.56                        | -119.09                | 1,317.64       | 1,435.30                     | 1,416.37                      | 18.93                           | 75.807               |                    |           |
| 2,800.00                                                                | 2,792.84                    | 2,804.49                    | 2,790.82                    | 9.94                | 9.92             | 91.60                        | -126.03                | 1,317.51       | 1,443.51                     | 1,423.83                      | 19.68                           | 73.359               |                    |           |
| 2,900.00                                                                | 2,892.33                    | 2,904.83                    | 2,890.24                    | 10.32               | 10.30            | 91.64                        | -132.98                | 1,317.39       | 1,451.71                     | 1,431.29                      | 20.42                           | 71.087               |                    |           |
| 3,000.00                                                                | 2,991.82                    | 3,005.17                    | 2,989.65                    | 10.71               | 10.68            | 91.68                        | -139.92                | 1,317.26       | 1,459.92                     | 1,438.75                      | 21.17                           | 68.972               |                    |           |
| 3,100.00                                                                | 3,091.32                    | 3,105.52                    | 3,089.07                    | 11.09               | 11.05            | 91.72                        | -146.86                | 1,317.14       | 1,468.12                     | 1,446.21                      | 21.91                           | 66.999               |                    |           |
| 3,200.00                                                                | 3,190.81                    | 3,205.86                    | 3,188.48                    | 11.48               | 11.43            | 91.76                        | -153.80                | 1,317.01       | 1,476.33                     | 1,453.67                      | 22.66                           | 65.154               |                    |           |
| 3,300.00                                                                | 3,290.31                    | 3,306.20                    | 3,287.90                    | 11.87               | 11.80            | 91.80                        | -160.75                | 1,316.89       | 1,484.54                     | 1,461.13                      | 23.41                           | 63.426               |                    |           |
| 3,400.00                                                                | 3,389.80                    | 3,406.54                    | 3,387.31                    | 12.26               | 12.18            | 91.84                        | -167.69                | 1,316.77       | 1,492.75                     | 1,468.59                      | 24.15                           | 61.803               |                    |           |
| 3,500.00                                                                | 3,489.29                    | 3,506.89                    | 3,486.73                    | 12.64               | 12.56            | 91.88                        | -174.63                | 1,316.64       | 1,500.96                     | 1,476.05                      | 24.90                           | 60.276               |                    |           |
| 3,600.00                                                                | 3,588.79                    | 3,607.23                    | 3,586.14                    | 13.03               | 12.93            | 91.92                        | -181.57                | 1,316.52       | 1,509.17                     | 1,483.52                      | 25.65                           | 58.837               |                    |           |
| 3,700.00                                                                | 3,688.28                    | 3,707.57                    | 3,685.56                    | 13.42               | 13.31            | 91.96                        | -188.52                | 1,316.39       | 1,517.38                     | 1,490.98                      | 26.40                           | 57.479               |                    |           |
| 3,800.00                                                                | 3,787.78                    | 3,807.92                    | 3,784.97                    | 13.81               | 13.69            | 91.99                        | -195.46                | 1,316.27       | 1,525.59                     | 1,498.44                      | 27.15                           | 56.196               |                    |           |
| 3,900.00                                                                | 3,887.27                    | 3,908.26                    | 3,884.39                    | 14.20               | 14.06            | 92.03                        | -202.40                | 1,316.14       | 1,533.80                     | 1,505.90                      | 27.90                           | 54.980               |                    |           |
| 4,000.00                                                                | 3,986.76                    | 4,008.60                    | 3,983.81                    | 14.59               | 14.44            | 92.07                        | -209.34                | 1,316.02       | 1,542.01                     | 1,513.36                      | 28.65                           | 53.828               |                    |           |
| 4,100.00                                                                | 4,086.26                    | 4,108.94                    | 4,083.22                    | 14.98               | 14.82            | 92.10                        | -216.28                | 1,315.90       | 1,550.22                     | 1,520.83                      | 29.40                           | 52.734               |                    |           |
| 4,200.00                                                                | 4,185.75                    | 4,209.29                    | 4,182.64                    | 15.37               | 15.20            | 92.14                        | -223.23                | 1,315.77       | 1,558.44                     | 1,528.29                      | 30.15                           | 51.694               |                    |           |
| 4,300.00                                                                | 4,285.25                    | 4,309.63                    | 4,282.05                    | 15.76               | 15.57            | 92.17                        | -230.17                | 1,315.65       | 1,566.65                     | 1,535.75                      | 30.90                           | 50.704               |                    |           |
| 4,400.00                                                                | 4,384.74                    | 4,409.97                    | 4,381.47                    | 16.15               | 15.95            | 92.21                        | -237.11                | 1,315.52       | 1,574.87                     | 1,543.22                      | 31.65                           | 49.760               |                    |           |
| 4,500.00                                                                | 4,484.23                    | 4,489.69                    | 4,480.88                    | 16.54               | 16.25            | 92.24                        | -244.05                | 1,315.40       | 1,583.08                     | 1,550.76                      | 32.32                           | 48.978               |                    |           |
| 4,600.00                                                                | 4,583.73                    | 4,589.34                    | 4,580.30                    | 16.93               | 16.63            | 92.28                        | -251.00                | 1,315.27       | 1,591.30                     | 1,558.23                      | 33.07                           | 48.117               |                    |           |
| 4,700.00                                                                | 4,683.22                    | 4,689.50                    | 4,680.24                    | 17.32               | 17.00            | 92.29                        | -257.42                | 1,315.16       | 1,599.50                     | 1,565.68                      | 33.82                           | 47.295               |                    |           |
| 4,800.00                                                                | 4,782.71                    | 4,789.77                    | 4,780.40                    | 17.72               | 17.37            | 92.25                        | -262.14                | 1,315.08       | 1,607.67                     | 1,573.11                      | 34.56                           | 46.518               |                    |           |
| 4,900.00                                                                | 4,882.21                    | 4,889.97                    | 4,880.55                    | 18.11               | 17.73            | 92.14                        | -265.10                | 1,315.02       | 1,615.80                     | 1,580.51                      | 35.29                           | 45.783               |                    |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #226H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                    |                                    |                        |                         |                           |                   | Offset Site Error: 0.00 usft |  |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|------------------------------------|------------------------------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|--|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                    |                                    |                        |                         |                           |                   | Offset Well Error: 0.00 usft |  |
| Reference                                                               |                       | Offset                |                       | Semi Major Axis  |               | Distance               |                                    |                                    |                        |                         |                           |                   | Warning                      |  |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N-S (usft) | Offset Wellbore Centre +E-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |  |
| 5,000.00                                                                | 4,981.70              | 4,990.03              | 4,980.61              | 18.50            | 18.06         | 91.97                  | -266.32                            | 1,315.00                           | 1,623.91               | 1,587.91                | 36.00                     | 45.105            |                              |  |
| 5,100.00                                                                | 5,081.20              | 5,089.62              | 5,080.20              | 18.89            | 18.38         | 91.77                  | -266.35                            | 1,315.00                           | 1,632.02               | 1,595.33                | 36.69                     | 44.478            |                              |  |
| 5,200.00                                                                | 5,180.69              | 5,189.11              | 5,179.69              | 19.28            | 18.70         | 91.56                  | -266.35                            | 1,315.00                           | 1,640.15               | 1,602.77                | 37.38                     | 43.877            |                              |  |
| 5,300.00                                                                | 5,280.18              | 5,288.61              | 5,279.18              | 19.67            | 19.02         | 91.35                  | -266.35                            | 1,315.00                           | 1,648.30               | 1,610.23                | 38.07                     | 43.298            |                              |  |
| 5,400.00                                                                | 5,379.68              | 5,388.10              | 5,378.68              | 20.07            | 19.34         | 91.15                  | -266.35                            | 1,315.00                           | 1,656.47               | 1,617.71                | 38.76                     | 42.738            |                              |  |
| 5,500.00                                                                | 5,479.17              | 5,487.59              | 5,478.17              | 20.46            | 19.66         | 90.95                  | -266.35                            | 1,315.00                           | 1,664.66               | 1,625.21                | 39.45                     | 42.197            |                              |  |
| 5,600.00                                                                | 5,578.67              | 5,587.09              | 5,577.67              | 20.85            | 19.98         | 90.75                  | -266.35                            | 1,315.00                           | 1,672.87               | 1,632.73                | 40.14                     | 41.673            |                              |  |
| 5,700.00                                                                | 5,678.16              | 5,686.58              | 5,677.16              | 21.24            | 20.31         | 90.55                  | -266.35                            | 1,315.00                           | 1,681.10               | 1,640.27                | 40.84                     | 41.167            |                              |  |
| 5,800.00                                                                | 5,777.65              | 5,786.08              | 5,776.65              | 21.63            | 20.63         | 90.36                  | -266.35                            | 1,315.00                           | 1,689.35               | 1,647.82                | 41.53                     | 40.678            |                              |  |
| 5,900.00                                                                | 5,877.15              | 5,885.57              | 5,876.15              | 22.03            | 20.96         | 90.17                  | -266.35                            | 1,315.00                           | 1,697.62               | 1,655.40                | 42.23                     | 40.204            |                              |  |
| 5,941.51                                                                | 5,918.45              | 5,926.87              | 5,917.45              | 22.19            | 21.09         | 90.09                  | -266.35                            | 1,315.00                           | 1,701.06               | 1,658.55                | 42.51                     | 40.011            |                              |  |
| 6,000.00                                                                | 5,976.67              | 5,985.09              | 5,975.67              | 22.42            | 21.28         | 89.98                  | -266.35                            | 1,315.00                           | 1,705.67               | 1,662.75                | 42.92                     | 39.740            |                              |  |
| 6,100.00                                                                | 6,076.34              | 6,084.76              | 6,075.34              | 22.80            | 21.61         | 89.83                  | -266.35                            | 1,315.00                           | 1,712.41               | 1,668.80                | 43.61                     | 39.262            |                              |  |
| 6,200.00                                                                | 6,176.13              | 6,184.55              | 6,175.13              | 23.17            | 21.94         | 89.71                  | -266.35                            | 1,315.00                           | 1,717.73               | 1,673.42                | 44.31                     | 38.770            |                              |  |
| 6,300.00                                                                | 6,276.02              | 6,284.44              | 6,275.02              | 23.53            | 22.27         | 89.62                  | -266.35                            | 1,315.00                           | 1,721.61               | 1,676.61                | 44.99                     | 38.263            |                              |  |
| 6,400.00                                                                | 6,375.97              | 6,384.39              | 6,374.97              | 23.89            | 22.60         | 89.56                  | -266.35                            | 1,315.00                           | 1,724.04               | 1,678.36                | 45.68                     | 37.742            |                              |  |
| 6,500.00                                                                | 6,475.96              | 6,484.39              | 6,474.96              | 24.23            | 22.93         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.03               | 1,678.67                | 46.36                     | 37.207            |                              |  |
| 6,518.18                                                                | 6,494.14              | 6,502.56              | 6,493.14              | 24.29            | 22.99         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,678.57                | 46.48                     | 37.110            |                              |  |
| 6,600.00                                                                | 6,575.96              | 6,584.39              | 6,574.96              | 24.55            | 23.27         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,678.03                | 47.02                     | 36.684            |                              |  |
| 6,700.00                                                                | 6,675.96              | 6,684.39              | 6,674.96              | 24.87            | 23.60         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,677.37                | 47.69                     | 36.176            |                              |  |
| 6,800.00                                                                | 6,775.96              | 6,784.39              | 6,774.96              | 25.19            | 23.94         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,676.71                | 48.35                     | 35.680            |                              |  |
| 6,900.00                                                                | 6,875.96              | 6,884.39              | 6,874.96              | 25.51            | 24.27         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,676.04                | 49.01                     | 35.196            |                              |  |
| 7,000.00                                                                | 6,975.96              | 6,984.39              | 6,974.96              | 25.83            | 24.61         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,675.38                | 49.68                     | 34.725            |                              |  |
| 7,100.00                                                                | 7,075.96              | 7,084.39              | 7,074.96              | 26.16            | 24.94         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,674.71                | 50.35                     | 34.264            |                              |  |
| 7,200.00                                                                | 7,175.96              | 7,184.39              | 7,174.96              | 26.48            | 25.28         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,674.04                | 51.01                     | 33.816            |                              |  |
| 7,300.00                                                                | 7,275.96              | 7,284.39              | 7,274.96              | 26.80            | 25.62         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,673.37                | 51.68                     | 33.377            |                              |  |
| 7,400.00                                                                | 7,375.96              | 7,384.39              | 7,374.96              | 27.13            | 25.96         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,672.70                | 52.35                     | 32.950            |                              |  |
| 7,500.00                                                                | 7,475.96              | 7,484.39              | 7,474.96              | 27.46            | 26.30         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,672.03                | 53.03                     | 32.532            |                              |  |
| 7,600.00                                                                | 7,575.96              | 7,584.39              | 7,574.96              | 27.78            | 26.64         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,671.36                | 53.70                     | 32.124            |                              |  |
| 7,700.00                                                                | 7,675.96              | 7,684.39              | 7,674.96              | 28.11            | 26.98         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,670.68                | 54.37                     | 31.726            |                              |  |
| 7,800.00                                                                | 7,775.96              | 7,784.39              | 7,774.96              | 28.44            | 27.32         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,670.01                | 55.05                     | 31.336            |                              |  |
| 7,900.00                                                                | 7,875.96              | 7,884.39              | 7,874.96              | 28.77            | 27.66         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,669.33                | 55.73                     | 30.956            |                              |  |
| 8,000.00                                                                | 7,975.96              | 7,984.39              | 7,974.96              | 29.10            | 28.00         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,668.65                | 56.40                     | 30.584            |                              |  |
| 8,100.00                                                                | 8,075.96              | 8,084.39              | 8,074.96              | 29.43            | 28.34         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,667.97                | 57.08                     | 30.220            |                              |  |
| 8,200.00                                                                | 8,175.96              | 8,184.39              | 8,174.96              | 29.76            | 28.68         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,667.29                | 57.76                     | 29.865            |                              |  |
| 8,300.00                                                                | 8,275.96              | 8,284.39              | 8,274.96              | 30.09            | 29.02         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,666.61                | 58.44                     | 29.517            |                              |  |
| 8,400.00                                                                | 8,375.96              | 8,384.39              | 8,374.96              | 30.43            | 29.37         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,665.93                | 59.12                     | 29.177            |                              |  |
| 8,500.00                                                                | 8,475.96              | 8,484.39              | 8,474.96              | 30.76            | 29.71         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,665.25                | 59.81                     | 28.844            |                              |  |
| 8,600.00                                                                | 8,575.96              | 8,584.39              | 8,574.96              | 31.09            | 30.05         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,664.57                | 60.49                     | 28.519            |                              |  |
| 8,700.00                                                                | 8,675.96              | 8,684.39              | 8,674.96              | 31.43            | 30.40         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,663.88                | 61.17                     | 28.200            |                              |  |
| 8,800.00                                                                | 8,775.96              | 8,784.39              | 8,774.96              | 31.76            | 30.74         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,663.20                | 61.86                     | 27.888            |                              |  |
| 8,900.00                                                                | 8,875.96              | 8,884.39              | 8,874.96              | 32.10            | 31.09         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,662.51                | 62.54                     | 27.583            |                              |  |
| 9,000.00                                                                | 8,975.96              | 8,984.39              | 8,974.96              | 32.43            | 31.43         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,661.83                | 63.23                     | 27.283            |                              |  |
| 9,100.00                                                                | 9,075.96              | 9,084.39              | 9,074.96              | 32.77            | 31.78         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,661.14                | 63.91                     | 26.990            |                              |  |
| 9,200.00                                                                | 9,175.96              | 9,184.39              | 9,174.96              | 33.11            | 32.12         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,660.45                | 64.60                     | 26.703            |                              |  |
| 9,300.00                                                                | 9,275.96              | 9,284.39              | 9,274.96              | 33.44            | 32.47         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,659.77                | 65.29                     | 26.422            |                              |  |
| 9,400.00                                                                | 9,375.96              | 9,384.39              | 9,374.96              | 33.78            | 32.81         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,659.08                | 65.98                     | 26.146            |                              |  |
| 9,500.00                                                                | 9,475.96              | 9,484.39              | 9,474.96              | 34.12            | 33.16         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,658.39                | 66.67                     | 25.876            |                              |  |
| 9,600.00                                                                | 9,575.96              | 9,584.39              | 9,574.96              | 34.46            | 33.51         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,657.70                | 67.36                     | 25.611            |                              |  |
| 9,700.00                                                                | 9,675.96              | 9,684.39              | 9,674.96              | 34.80            | 33.85         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,657.01                | 68.05                     | 25.351            |                              |  |
| 9,800.00                                                                | 9,775.96              | 9,784.39              | 9,774.96              | 35.14            | 34.20         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,656.32                | 68.74                     | 25.097            |                              |  |
| 9,900.00                                                                | 9,875.96              | 9,884.39              | 9,874.96              | 35.47            | 34.55         | 89.54                  | -266.35                            | 1,315.00                           | 1,725.06               | 1,655.63                | 69.43                     | 24.847            |                              |  |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #226H - Wellbore #1 - Design #2 |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Site Error: 0.00 usft |  |
|-------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|------------------|---------------|------------------------|-------------------------------------|--------------|------------------------|-------------------------|---------------------------|-------------------|------------------------------|--|
| Survey Program: 0-MWD                                                   |                       |                       |                       |                  |               |                        |                                     |              |                        |                         |                           |                   | Offset Well Error: 0.00 usft |  |
| Reference                                                               |                       | Offset                |                       | Semi-Major Axis  |               |                        | Distance                            |              |                        |                         |                           |                   | Warning                      |  |
| Measured Depth (usft)                                                   | Vertical Depth (usft) | Measured Depth (usft) | Vertical Depth (usft) | Reference (usft) | Offset (usft) | Azimuth from North (°) | Offset Wellbore Centre +N/-S (usft) | +E/-W (usft) | Between Centres (usft) | Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor |                              |  |
| 10,000.00                                                               | 9,975.96              | 9,984.39              | 9,974.96              | 35.81            | 34.90         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,654.94                | 70.12                     | 24.602            |                              |  |
| 10,100.00                                                               | 10,075.96             | 10,084.39             | 10,074.96             | 36.16            | 35.24         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,654.24                | 70.81                     | 24.361            |                              |  |
| 10,200.00                                                               | 10,175.96             | 10,184.39             | 10,174.96             | 36.50            | 35.59         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,653.55                | 71.50                     | 24.125            |                              |  |
| 10,300.00                                                               | 10,275.96             | 10,284.39             | 10,274.96             | 36.84            | 35.94         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,652.86                | 72.20                     | 23.894            |                              |  |
| 10,400.00                                                               | 10,375.96             | 10,384.39             | 10,374.96             | 37.18            | 36.29         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,652.16                | 72.89                     | 23.666            |                              |  |
| 10,500.00                                                               | 10,475.96             | 10,484.39             | 10,474.96             | 37.52            | 36.64         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,651.47                | 73.59                     | 23.443            |                              |  |
| 10,600.00                                                               | 10,575.96             | 10,584.39             | 10,574.96             | 37.86            | 36.99         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,650.78                | 74.28                     | 23.224            |                              |  |
| 10,700.00                                                               | 10,675.96             | 10,684.39             | 10,674.96             | 38.20            | 37.33         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,650.08                | 74.97                     | 23.008            |                              |  |
| 10,800.00                                                               | 10,775.96             | 10,784.39             | 10,774.96             | 38.55            | 37.68         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,649.38                | 75.67                     | 22.797            |                              |  |
| 10,900.00                                                               | 10,875.96             | 10,884.39             | 10,874.96             | 38.89            | 38.03         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,648.69                | 76.37                     | 22.589            |                              |  |
| 11,000.00                                                               | 10,975.96             | 10,984.39             | 10,974.96             | 39.23            | 38.38         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,647.99                | 77.06                     | 22.385            |                              |  |
| 11,100.00                                                               | 11,075.96             | 11,084.39             | 11,074.96             | 39.58            | 38.73         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,647.30                | 77.76                     | 22.185            |                              |  |
| 11,200.00                                                               | 11,175.96             | 11,184.39             | 11,174.96             | 39.92            | 39.08         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,646.60                | 78.46                     | 21.988            |                              |  |
| 11,300.00                                                               | 11,275.96             | 11,284.39             | 11,274.96             | 40.26            | 39.43         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,645.90                | 79.15                     | 21.794            |                              |  |
| 11,400.00                                                               | 11,375.96             | 11,384.39             | 11,374.96             | 40.61            | 39.78         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,645.20                | 79.85                     | 21.604            |                              |  |
| 11,500.00                                                               | 11,475.96             | 11,484.39             | 11,474.96             | 40.95            | 40.13         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,644.51                | 80.55                     | 21.416            |                              |  |
| 11,600.00                                                               | 11,575.97             | 11,584.39             | 11,574.97             | 41.30            | 40.48         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,643.81                | 81.25                     | 21.232            |                              |  |
| 11,700.00                                                               | 11,675.97             | 11,684.39             | 11,674.97             | 41.64            | 40.83         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,643.11                | 81.95                     | 21.051            |                              |  |
| 11,800.00                                                               | 11,775.97             | 11,784.39             | 11,774.97             | 41.99            | 41.18         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,642.41                | 82.64                     | 20.873            |                              |  |
| 11,900.00                                                               | 11,875.97             | 11,884.39             | 11,874.97             | 42.33            | 41.53         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,641.71                | 83.34                     | 20.698            |                              |  |
| 12,000.00                                                               | 11,975.97             | 11,984.39             | 11,974.97             | 42.68            | 41.89         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,641.01                | 84.04                     | 20.526            |                              |  |
| 12,023.05                                                               | 11,999.01             | 12,007.43             | 11,998.01             | 42.76            | 41.97         | 89.54                  | -266.35                             | 1,315.00     | 1,725.06               | 1,640.85                | 84.20                     | 20.487            |                              |  |
| 12,050.00                                                               | 12,025.96             | 12,025.10             | 12,015.68             | 42.85            | 42.03         | 89.55                  | -265.94                             | 1,315.06     | 1,725.23               | 1,640.87                | 84.35                     | 20.453            |                              |  |
| 12,100.00                                                               | 12,075.73             | 12,060.11             | 12,050.60             | 43.02            | 42.15         | 89.62                  | -263.57                             | 1,315.38     | 1,726.34               | 1,641.72                | 84.63                     | 20.400            |                              |  |
| 12,150.00                                                               | 12,124.93             | 12,095.12             | 12,085.31             | 43.18            | 42.26         | 89.76                  | -259.10                             | 1,315.98     | 1,728.49               | 1,643.60                | 84.89                     | 20.362            |                              |  |
| 12,200.00                                                               | 12,173.17             | 12,130.16             | 12,119.71             | 43.33            | 42.37         | 89.97                  | -252.52                             | 1,316.87     | 1,731.65               | 1,646.52                | 85.13                     | 20.340            |                              |  |
| 12,250.00                                                               | 12,220.08             | 12,165.23             | 12,153.66             | 43.48            | 42.48         | 90.25                  | -243.86                             | 1,318.05     | 1,735.82               | 1,650.45                | 85.37                     | 20.333            |                              |  |
| 12,300.00                                                               | 12,265.31             | 12,200.00             | 12,186.75             | 43.61            | 42.59         | 90.60                  | -233.26                             | 1,319.49     | 1,740.95               | 1,655.36                | 85.59                     | 20.341            |                              |  |
| 12,350.00                                                               | 12,308.51             | 12,235.52             | 12,219.80             | 43.72            | 42.69         | 90.99                  | -220.40                             | 1,321.23     | 1,747.03               | 1,661.23                | 85.80                     | 20.361            |                              |  |
| 12,400.00                                                               | 12,349.35             | 12,270.78             | 12,251.76             | 43.83            | 42.79         | 91.43                  | -205.66                             | 1,323.23     | 1,754.01               | 1,668.01                | 86.01                     | 20.394            |                              |  |
| 12,450.00                                                               | 12,387.53             | 12,306.15             | 12,282.84             | 43.92            | 42.88         | 91.92                  | -188.93                             | 1,325.49     | 1,761.85               | 1,675.65                | 86.20                     | 20.439            |                              |  |
| 12,500.00                                                               | 12,422.76             | 12,341.65             | 12,312.93             | 44.00            | 42.97         | 92.45                  | -170.27                             | 1,328.03     | 1,770.51               | 1,684.12                | 86.39                     | 20.494            |                              |  |
| 12,550.00                                                               | 12,454.76             | 12,377.33             | 12,341.93             | 44.06            | 43.06         | 93.00                  | -149.69                             | 1,330.81     | 1,779.93               | 1,693.34                | 86.58                     | 20.558            |                              |  |
| 12,600.00                                                               | 12,483.29             | 12,413.21             | 12,369.74             | 44.11            | 43.15         | 93.56                  | -127.22                             | 1,333.86     | 1,790.05               | 1,703.28                | 86.77                     | 20.630            |                              |  |
| 12,650.00                                                               | 12,508.13             | 12,450.00             | 12,396.72             | 44.15            | 43.23         | 94.12                  | -102.45                             | 1,337.22     | 1,800.82               | 1,713.86                | 86.96                     | 20.708            |                              |  |
| 12,700.00                                                               | 12,529.10             | 12,485.81             | 12,421.39             | 44.19            | 43.31         | 94.70                  | -76.74                              | 1,340.70     | 1,812.17               | 1,725.02                | 87.15                     | 20.794            |                              |  |
| 12,723.05                                                               | 12,537.41             | 12,502.74             | 12,432.47             | 44.21            | 43.35         | 94.96                  | -64.06                              | 1,342.42     | 1,817.58               | 1,730.35                | 87.24                     | 20.835            |                              |  |
| 12,750.00                                                               | 12,546.27             | 12,522.72             | 12,445.07             | 44.24            | 43.40         | 95.25                  | -48.69                              | 1,344.51     | 1,824.04               | 1,736.70                | 87.34                     | 20.884            |                              |  |
| 12,800.00                                                               | 12,560.79             | 12,560.50             | 12,467.37             | 44.33            | 43.48         | 95.75                  | -18.48                              | 1,348.60     | 1,836.33               | 1,748.79                | 87.54                     | 20.977            |                              |  |
| 12,850.00                                                               | 12,572.79             | 12,599.24             | 12,488.10             | 44.46            | 43.56         | 96.20                  | 13.94                               | 1,353.00     | 1,848.98               | 1,761.23                | 87.75                     | 21.072            |                              |  |
| 12,900.00                                                               | 12,582.23             | 12,638.97             | 12,507.01             | 44.61            | 43.65         | 96.58                  | 48.55                               | 1,357.69     | 1,861.95               | 1,773.99                | 87.96                     | 21.169            |                              |  |
| 12,950.00                                                               | 12,589.08             | 12,679.71             | 12,523.84             | 44.77            | 43.73         | 96.91                  | 85.31                               | 1,362.67     | 1,875.18               | 1,787.01                | 88.18                     | 21.266            |                              |  |
| 13,000.00                                                               | 12,593.34             | 12,722.14             | 12,538.64             | 44.94            | 43.83         | 97.16                  | 124.71                              | 1,368.01     | 1,888.62               | 1,800.21                | 88.41                     | 21.363            |                              |  |
| 13,050.00                                                               | 12,594.98             | 12,766.08             | 12,551.90             | 45.11            | 43.92         | 97.35                  | 166.22                              | 1,373.64     | 1,902.19               | 1,813.54                | 88.65                     | 21.458            |                              |  |
| 13,056.38                                                               | 12,595.00             | 12,771.72             | 12,553.46             | 45.14            | 43.94         | 97.37                  | 171.59                              | 1,374.37     | 1,903.93               | 1,815.25                | 88.68                     | 21.470            |                              |  |
| 13,100.00                                                               | 12,595.00             | 12,810.82             | 12,563.40             | 45.30            | 44.03         | 97.50                  | 209.06                              | 1,379.45     | 1,915.55               | 1,826.65                | 88.90                     | 21.547            |                              |  |
| 13,200.00                                                               | 12,595.00             | 12,903.86             | 12,580.77             | 45.70            | 44.26         | 97.67                  | 299.60                              | 1,391.72     | 1,940.03               | 1,850.56                | 89.46                     | 21.685            |                              |  |
| 13,300.00                                                               | 12,595.00             | 13,000.31             | 12,589.31             | 46.15            | 44.53         | 97.71                  | 394.76                              | 1,404.62     | 1,961.29               | 1,871.18                | 90.11                     | 21.765            |                              |  |
| 13,400.00                                                               | 12,595.00             | 13,400.00             | 12,590.00             | 46.65            | 45.92         | 95.46                  | 569.99                              | 1,424.61     | 1,976.97               | 1,884.96                | 92.01                     | 21.487            |                              |  |
| 13,459.31                                                               | 12,595.00             | 13,427.70             | 12,590.00             | 46.96            | 46.22         | 89.90                  | 820.64                              | 1,435.48     | 1,979.91               | 1,887.15                | 92.76                     | 21.345            |                              |  |
| 13,500.00                                                               | 12,595.00             | 13,478.42             | 12,590.00             | 47.18            | 46.49         | 89.61                  | 871.36                              | 1,435.17     | 1,979.92               | 1,886.67                | 93.25                     | 21.233            |                              |  |
| 13,600.00                                                               | 12,595.00             | 13,578.42             | 12,590.00             | 47.76            | 47.06         | 89.61                  | 971.36                              | 1,434.49     | 1,979.93               | 1,885.54                | 94.39                     | 20.977            |                              |  |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at:** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

| Offset Design Brad Dyer 35-22S-32E AR - #226H - Wellbore #1 - Design #2 |                             |                             |                             |                     |                  |                              |                              |                               |                                 |                      |         | Offset Site Error: | 0.00 usft |
|-------------------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------|------------------|------------------------------|------------------------------|-------------------------------|---------------------------------|----------------------|---------|--------------------|-----------|
| Survey Program: 0-MWD                                                   |                             |                             |                             |                     |                  |                              |                              |                               |                                 |                      |         | Offset Well Error: | 0.00 usft |
| Reference                                                               |                             | Offset                      |                             | Semi Major Axis     |                  | Azimuth<br>from North<br>(°) | Distance                     |                               | Minimum<br>Separation<br>(usft) | Separation<br>Factor | Warning |                    |           |
| Measured<br>Depth<br>(usft)                                             | Vertical<br>Depth<br>(usft) | Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Reference<br>(usft) | Offset<br>(usft) |                              | Between<br>Centres<br>(usft) | Between<br>Ellipses<br>(usft) |                                 |                      |         |                    |           |
| 13,700.00                                                               | 12,595.00                   | 13,678.42                   | 12,590.00                   | 48.39               | 47.67            | 89.61                        | 1,071.36                     | 1,433.81                      | 1,979.93                        | 1,884.30             | 95.63   | 20.705             |           |
| 13,800.00                                                               | 12,595.00                   | 13,778.42                   | 12,590.00                   | 49.06               | 48.33            | 89.61                        | 1,171.36                     | 1,433.13                      | 1,979.93                        | 1,882.97             | 96.96   | 20.420             |           |
| 13,900.00                                                               | 12,595.00                   | 13,878.42                   | 12,590.00                   | 49.78               | 49.04            | 89.61                        | 1,271.35                     | 1,432.45                      | 1,979.94                        | 1,881.55             | 98.39   | 20.123             |           |
| 14,000.00                                                               | 12,595.00                   | 13,978.42                   | 12,590.00                   | 50.54               | 49.80            | 89.61                        | 1,371.35                     | 1,431.78                      | 1,979.94                        | 1,880.03             | 99.91   | 19.817             |           |
| 14,100.00                                                               | 12,595.00                   | 14,078.42                   | 12,590.00                   | 51.35               | 50.60            | 89.61                        | 1,471.35                     | 1,431.10                      | 1,979.95                        | 1,878.43             | 101.52  | 19.503             |           |
| 14,200.00                                                               | 12,595.00                   | 14,178.42                   | 12,590.00                   | 52.19               | 51.44            | 89.61                        | 1,571.35                     | 1,430.42                      | 1,979.95                        | 1,876.75             | 103.21  | 19.184             |           |
| 14,300.00                                                               | 12,595.00                   | 14,278.42                   | 12,590.00                   | 53.07               | 52.32            | 89.61                        | 1,671.34                     | 1,429.74                      | 1,979.96                        | 1,874.98             | 104.97  | 18.862             |           |
| 14,400.00                                                               | 12,595.00                   | 14,378.42                   | 12,590.00                   | 53.99               | 53.24            | 89.61                        | 1,771.34                     | 1,429.06                      | 1,979.96                        | 1,873.15             | 106.81  | 18.537             |           |
| 14,500.00                                                               | 12,595.00                   | 14,478.42                   | 12,590.00                   | 54.95               | 54.19            | 89.61                        | 1,871.34                     | 1,428.38                      | 1,979.97                        | 1,871.24             | 108.72  | 18.211             |           |
| 14,600.00                                                               | 12,595.00                   | 14,578.42                   | 12,590.00                   | 55.93               | 55.17            | 89.61                        | 1,971.34                     | 1,427.70                      | 1,979.97                        | 1,869.27             | 110.70  | 17.886             |           |
| 14,700.00                                                               | 12,595.00                   | 14,678.42                   | 12,590.00                   | 56.95               | 56.19            | 89.61                        | 2,071.34                     | 1,427.03                      | 1,979.97                        | 1,867.24             | 112.74  | 17.563             |           |
| 14,800.00                                                               | 12,595.00                   | 14,778.42                   | 12,590.00                   | 57.99               | 57.24            | 89.61                        | 2,171.33                     | 1,426.35                      | 1,979.98                        | 1,865.14             | 114.84  | 17.242             |           |
| 14,900.00                                                               | 12,595.00                   | 14,878.42                   | 12,590.00                   | 59.07               | 58.32            | 89.61                        | 2,271.33                     | 1,425.67                      | 1,979.98                        | 1,862.99             | 116.99  | 16.924             |           |
| 15,000.00                                                               | 12,595.00                   | 14,978.42                   | 12,590.00                   | 60.17               | 59.42            | 89.61                        | 2,371.33                     | 1,424.99                      | 1,979.99                        | 1,860.79             | 119.20  | 16.610             |           |
| 15,100.00                                                               | 12,595.00                   | 15,078.42                   | 12,590.00                   | 61.29               | 60.55            | 89.61                        | 2,471.33                     | 1,424.31                      | 1,979.99                        | 1,858.53             | 121.46  | 16.302             |           |
| 15,200.00                                                               | 12,595.00                   | 15,178.42                   | 12,590.00                   | 62.44               | 61.70            | 89.61                        | 2,571.32                     | 1,423.63                      | 1,980.00                        | 1,856.23             | 123.77  | 15.998             |           |
| 15,300.00                                                               | 12,595.00                   | 15,278.42                   | 12,590.00                   | 63.62               | 62.87            | 89.61                        | 2,671.32                     | 1,422.95                      | 1,980.00                        | 1,853.88             | 126.12  | 15.699             |           |
| 15,400.00                                                               | 12,595.00                   | 15,378.42                   | 12,590.00                   | 64.81               | 64.07            | 89.61                        | 2,771.32                     | 1,422.27                      | 1,980.01                        | 1,851.49             | 128.52  | 15.407             |           |
| 15,500.00                                                               | 12,595.00                   | 15,478.42                   | 12,590.00                   | 66.02               | 65.29            | 89.61                        | 2,871.32                     | 1,421.60                      | 1,980.01                        | 1,849.06             | 130.95  | 15.120             |           |
| 15,600.00                                                               | 12,595.00                   | 15,578.42                   | 12,590.00                   | 67.25               | 66.52            | 89.61                        | 2,971.31                     | 1,420.92                      | 1,980.02                        | 1,846.59             | 133.42  | 14.840             |           |
| 15,700.00                                                               | 12,595.00                   | 15,678.42                   | 12,590.00                   | 68.50               | 67.78            | 89.61                        | 3,071.31                     | 1,420.24                      | 1,980.02                        | 1,844.09             | 135.93  | 14.566             |           |
| 15,800.00                                                               | 12,595.00                   | 15,778.42                   | 12,590.00                   | 69.77               | 69.05            | 89.61                        | 3,171.31                     | 1,419.56                      | 1,980.02                        | 1,841.55             | 138.48  | 14.298             |           |
| 15,900.00                                                               | 12,595.00                   | 15,878.42                   | 12,590.00                   | 71.05               | 70.33            | 89.61                        | 3,271.31                     | 1,418.88                      | 1,980.03                        | 1,838.97             | 141.05  | 14.037             |           |
| 16,000.00                                                               | 12,595.00                   | 15,978.42                   | 12,590.00                   | 72.35               | 71.64            | 89.61                        | 3,371.31                     | 1,418.20                      | 1,980.03                        | 1,836.37             | 143.66  | 13.783             |           |
| 16,100.00                                                               | 12,595.00                   | 16,078.42                   | 12,590.00                   | 73.67               | 72.95            | 89.61                        | 3,471.30                     | 1,417.52                      | 1,980.04                        | 1,833.74             | 146.30  | 13.534             |           |
| 16,200.00                                                               | 12,595.00                   | 16,178.42                   | 12,590.00                   | 74.99               | 74.28            | 89.61                        | 3,571.30                     | 1,416.84                      | 1,980.04                        | 1,831.08             | 148.96  | 13.293             |           |
| 16,300.00                                                               | 12,595.00                   | 16,278.42                   | 12,590.00                   | 76.33               | 75.63            | 89.61                        | 3,671.30                     | 1,416.17                      | 1,980.05                        | 1,828.40             | 151.65  | 13.057             |           |
| 16,400.00                                                               | 12,595.00                   | 16,378.42                   | 12,590.00                   | 77.68               | 76.98            | 89.61                        | 3,771.30                     | 1,415.49                      | 1,980.05                        | 1,825.69             | 154.36  | 12.828             |           |
| 16,500.00                                                               | 12,595.00                   | 16,478.42                   | 12,590.00                   | 79.05               | 78.35            | 89.61                        | 3,871.29                     | 1,414.81                      | 1,980.06                        | 1,822.96             | 157.10  | 12.604             |           |
| 16,600.00                                                               | 12,595.00                   | 16,578.42                   | 12,590.00                   | 80.42               | 79.73            | 89.61                        | 3,971.29                     | 1,414.13                      | 1,980.06                        | 1,820.21             | 159.85  | 12.387             |           |
| 16,700.00                                                               | 12,595.00                   | 16,678.42                   | 12,590.00                   | 81.81               | 81.12            | 89.61                        | 4,071.29                     | 1,413.45                      | 1,980.06                        | 1,817.43             | 162.63  | 12.175             |           |
| 16,800.00                                                               | 12,595.00                   | 16,778.42                   | 12,590.00                   | 83.20               | 82.52            | 89.61                        | 4,171.29                     | 1,412.77                      | 1,980.07                        | 1,814.64             | 165.43  | 11.969             |           |
| 16,900.00                                                               | 12,595.00                   | 16,878.42                   | 12,590.00                   | 84.61               | 83.93            | 89.61                        | 4,271.28                     | 1,412.09                      | 1,980.07                        | 1,811.82             | 168.25  | 11.769             |           |
| 17,000.00                                                               | 12,595.00                   | 16,978.42                   | 12,590.00                   | 86.02               | 85.35            | 89.61                        | 4,371.28                     | 1,411.41                      | 1,980.08                        | 1,808.99             | 171.09  | 11.574             |           |
| 17,100.00                                                               | 12,595.00                   | 17,078.42                   | 12,590.00                   | 87.45               | 86.77            | 89.61                        | 4,471.28                     | 1,410.74                      | 1,980.08                        | 1,806.14             | 173.94  | 11.384             |           |
| 17,200.00                                                               | 12,595.00                   | 17,178.42                   | 12,590.00                   | 88.88               | 88.21            | 89.61                        | 4,571.28                     | 1,410.06                      | 1,980.09                        | 1,803.28             | 176.81  | 11.199             |           |
| 17,300.00                                                               | 12,595.00                   | 17,278.42                   | 12,590.00                   | 90.31               | 89.65            | 89.61                        | 4,671.28                     | 1,409.38                      | 1,980.09                        | 1,800.40             | 179.69  | 11.019             |           |
| 17,349.17                                                               | 12,595.00                   | 17,327.59                   | 12,590.00                   | 90.97               | 90.31            | 89.61                        | 4,720.44                     | 1,409.04                      | 1,980.09                        | 1,799.11             | 180.98  | 10.941 SF          |           |

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



# MS Directional Anticollision Report



**Company:** Matador Resources  
**Project:** Lea County, New Mexico (NAD 27)  
**Reference Site:** Brad Dyer 35-22S-32E AR  
**Site Error:** 0.00 usft  
**Reference Well:** #221H  
**Well Error:** 0.00 usft  
**Reference Wellbore** Wellbore #1  
**Reference Design:** Design #2

**Local Co-ordinate Reference:** Well #221H  
**TVD Reference:** WELL @ 3761.50usft (Patterson 282)  
**MD Reference:** WELL @ 3761.50usft (Patterson 282)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** EDM Conroe  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to WELL @ 3761.50usft (Patterson 282) Coordinates are relative to: #221H

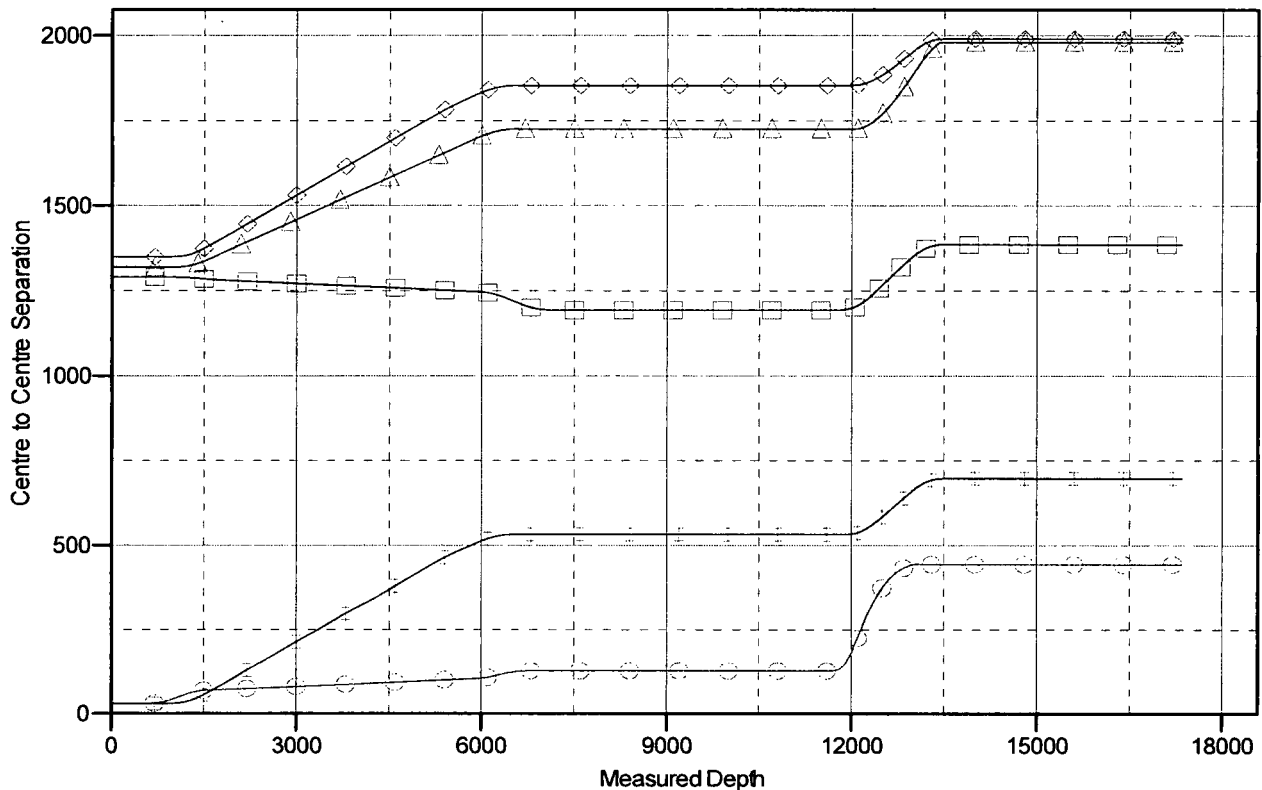
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.37°

## Ladder Plot



### LEGEND

◆ #201H-Wellbore #1 Design #1 VO    ▲ #205H-Wellbore #1 Design #2 VO    ● #208H-Wellbore #1 Design #2 VO



# MS Directional Anticollision Report



Company: Matador Resources  
Project: Lea County, New Mexico (NAD 27)  
Reference Site: Brad Dyer 35-22S-32E AR  
Site Error: 0.00 usft  
Reference Well: #221H  
Well Error: 0.00 usft  
Reference Wellbore: Wellbore #1  
Reference Design: Design #2

Local Co-ordinate Reference: Well #221H  
TVD Reference: WELL @ 3761.50usft (Patterson 282)  
MD Reference: WELL @ 3761.50usft (Patterson 282)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Output errors are at: 2.00 sigma  
Database: EDM Conroe  
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 3761.50usft (Patterson 282) Coordinates are relative to: #221H

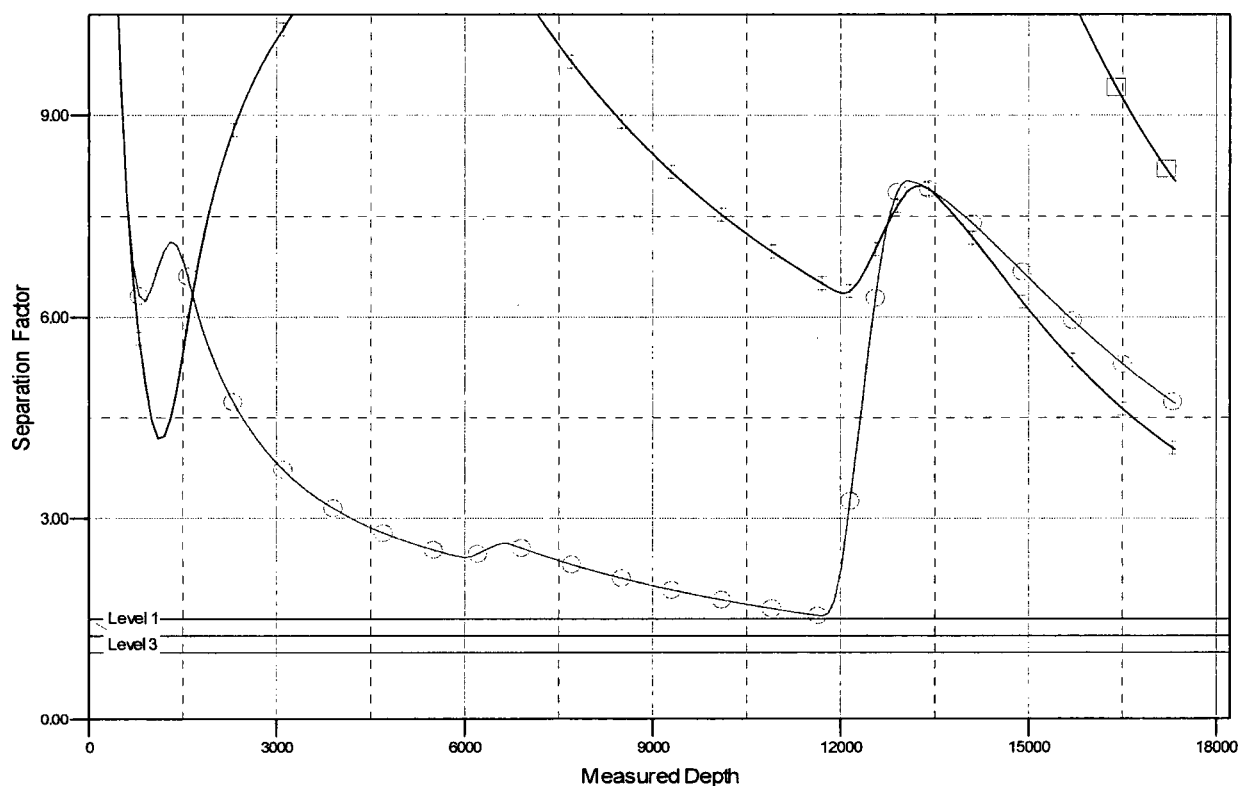
Offset Depths are relative to Offset Datum

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: 0.37°

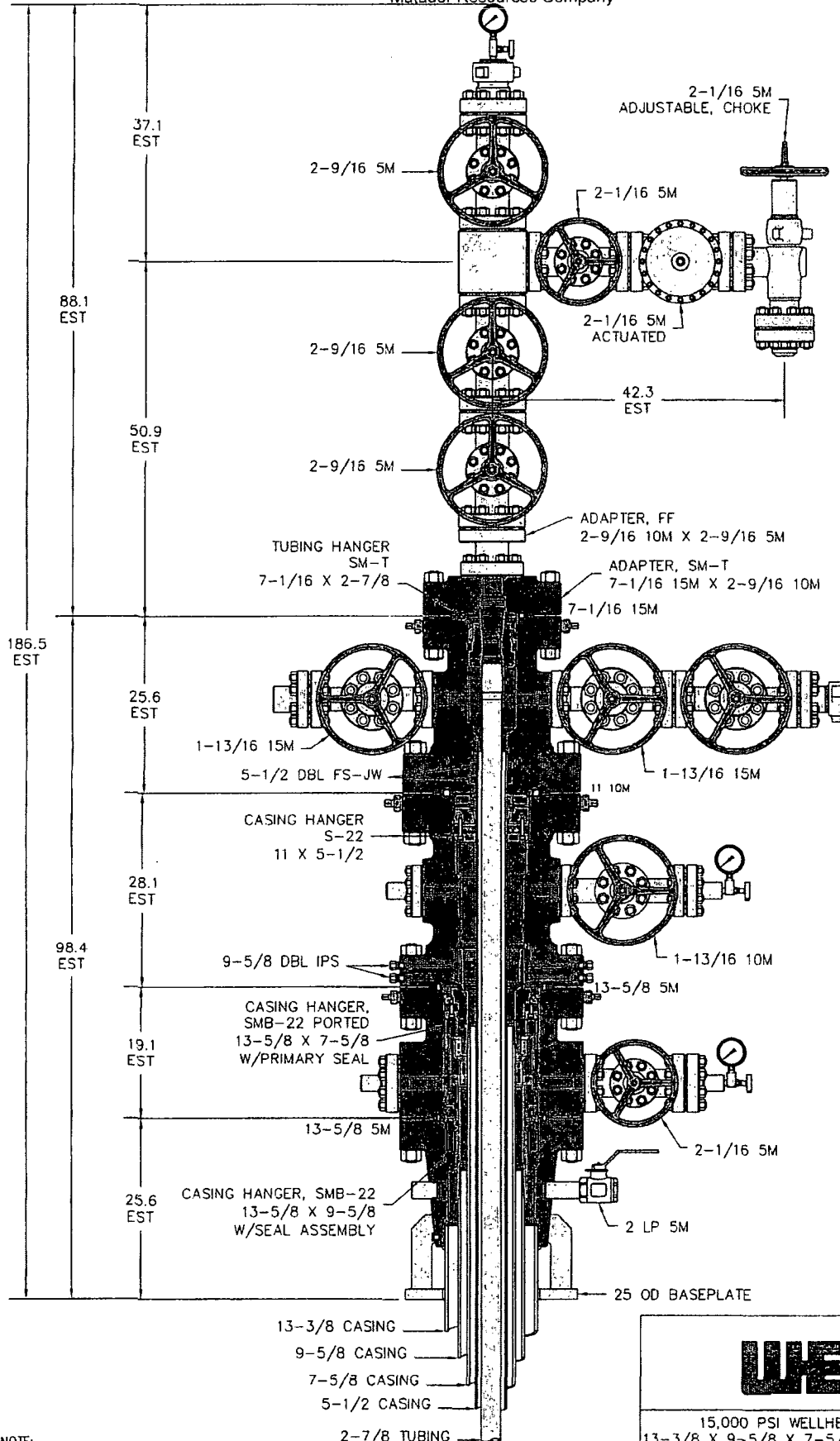
## Separation Factor Plot



### LEGEND

● #2011-Wellbore #1, Design #1 VO    ● #2059-Wellbore #1, Design #2 VO    ● #2098-Wellbore #1, Design #2 VO  
● #2209-Wellbore #1, Design #2 VO

Matador Resources Company



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

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**WEIR**

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

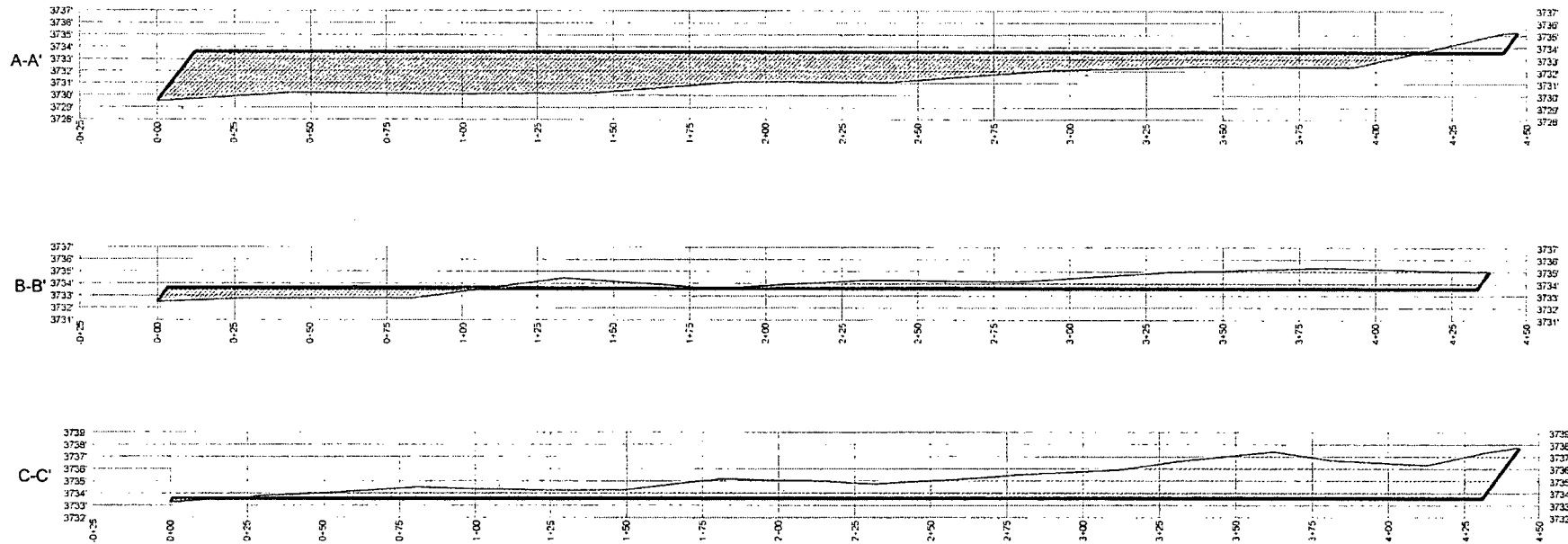
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|--------------|-----|--------------|---------|-------|---------|------|--|
| DRAWN BY:    | RPL | SCALE:       | 1-1     | DATE: | 06OCT17 | REV: |  |
| CHECKED BY:  |     | DRAWING NO.: | P-22401 |       |         |      |  |
| APPROVED BY: |     |              |         |       |         |      |  |



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SECTION 35, TOWNSHIP 22-S, RANGE 32-E, N.M.P.M.  
LEA COUNTY, NEW MEXICO



Horizontal Scale = 1:40  
Vertical Scale = 1:10

BRAD DYER FEDERAL  
SLOT 1  
SURFACE PAD SITE

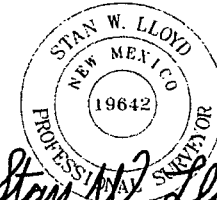
REVISION:

JST 01/30/18

NOTES

1. ORIGINAL DOCUMENT SIZE 8.5" X 14"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN AND DURING 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 16



Stan W. Lloyd, P.S. No. 19642

JANUARY 30, 2018

Field note description of even date accompanies this plat.

DATE: 11/27/17

FILE: 00 BRAD DYER SLOT 1 SURFACE PAD SITE.DWG

DRAWN BY: GJU

SHEET: 2 OF 2

\\SURVEY\DATA\RAW\NEW MEXICO\SECTION 35\T22S\T32E\N.M.P.M.\16\16.MXD

Surface Use Plan

**1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 – 5)**

From the junction of US 285 and US 62/180 in Carlsbad...  
Go NE 32.8 miles on US 62/180 to the equivalent of Mile Post 67.8  
Then turn right and go East 6.5 miles on paved NM 176  
Then turn right and go South 0.6 mile on a caliche road to a junction  
Then bear right and go SW 1.6 mile on a caliche road  
Then bear left and go SE 2.2 miles on a caliche road  
Then bear right and go South 7.5 miles on a caliche road  
Then turn right and go West 1.5 miles on a caliche road  
Then turn left and go South 1.75 miles on a caliche road  
Then turn right and go W 2600.78' cross-country to the proposed pad

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

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

The 2600.78' of new resource road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. A 3" O. D. poly surface flowline on the west side of the existing road will be padded. Maximum disturbed width = 30'. Maximum grade = 2%. Maximum cut or fill = 1'. No culvert, cattle guard, or vehicle turn out is needed. Upgrading will consist of filling potholes with caliche.

**3. EXISTING WELLS (See MAP 6)**

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

**4. PROPOSED PRODUCTION FACILITIES (See MAPS 7 - 9)**

Production equipment will be located on the south and west sides of the pad. A 3-phase overhead raptor-safe power line will be built south 1,799.14' from an existing power pole at OXY's Red Tank 35 Federal 3 SWD. No pipeline plans have been finalized at this time.

**5. WATER SUPPLY (See MAP 10)**

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

**6. CONSTRUCTION MATERIALS & METHODS (See MAPS 11 - 14)**

NM One Call (811) will be notified before construction starts. Top ≈6" of soil and brush will be stockpiled north of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from an existing caliche pit on private (Berry) land in E2NE4 35-20s-34e.

**7. WASTE DISPOSAL**

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

**8. ANCILLARY FACILITIES**

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

**9. WELL SITE LAYOUT (See MAP 11)**

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

**Matador Production Company**  
**Brad Dyer Federal 221H**  
**SHL 330' FSL & 869' FWL**  
**Sec. 35, T. 22 S., R. 32 E., Lea County, NM**

**SURFACE PLAN PAGE 3**

**10. RECLAMATION** (See MAPS 15 & 16)

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad  $\approx 25\%$  (0.99 acre) by removing caliche and reclaiming a 100' x 430' swath on the south side of the pad. This will leave 2.96 acres for production equipment (e. g., tank battery, heater-treaters, separators, flare/CBU, pump jacks), and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with BLM requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the last well is plugged, then the rest of the pad and 2600.78' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

Land use:

|                                                     |
|-----------------------------------------------------|
| 1799.14' x 15' power line = 0.62 acre               |
| 2600.78' x 30' road = 1.79 acres                    |
| + 400' x 430' pad = 3.95 acres                      |
| 6.36 acres short term                               |
| - 1799.14' x 15' power line = 0.62 acre             |
| - 0.99 acre interim reclamation                     |
| 4.75 acres long term (1.79 ac. road + 2.96 ac. pad) |

**11. SURFACE OWNER**

All construction will be on BLM. BLM office is the Carlsbad Field Office, 620 E. Greene, Carlsbad NM 88220. Phone is 575 234-5972.

**12. OTHER INFORMATION**

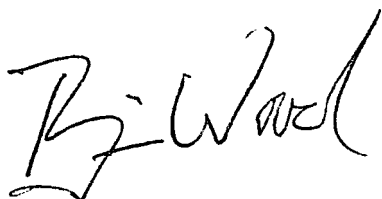
On site inspection was held with Vance Wolf (BLM) on November 13, 2017. Lone Mountain will file an archaeology report.

**Matador Production Company  
Brad Dyer Federal 221H  
SHL 330' FSL & 869' FWL  
Sec. 35, T. 22 S., R. 32 E., Lea County, NM**

**SURFACE PLAN PAGE 4**

**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 3rd day of April, 2018.



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



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

**PWD Data Report**

08/24/2018

## Section 1 - General

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

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

### **Section 3 - Unlined Pits**

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### **Section 4 - Injection**

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

**Injection well type:**

**Injection well number:**

**Injection well name:**

**Assigned injection well API number?**

**Injection well API number:**

**Injection well new surface disturbance (acres):**

**Minerals protection information:**

**Mineral protection attachment:**

**Underground Injection Control (UIC) Permit?**

**UIC Permit attachment:**

### **Section 5 - Surface Discharge**

**Would you like to utilize Surface Discharge PWD options? NO**

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

**PWD surface owner:**

**PWD disturbance (acres):**

**Surface discharge PWD discharge volume (bbl/day):**

**Surface Discharge NPDES Permit?**

**Surface Discharge NPDES Permit attachment:**

**Surface Discharge site facilities information:**

**Surface discharge site facilities map:**

### **Section 6 - Other**

**Would you like to utilize Other PWD options? NO**

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

**PWD surface owner:**

**PWD disturbance (acres):**

**Other PWD discharge volume (bbl/day):**

**Other PWD type description:**

**Other PWD type attachment:**

**Have other regulatory requirements been met?**

**Other regulatory requirements attachment:**



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

## **Bond Info Data Report**

**08/24/2018**

### **Bond Information**

**Federal/Indian APD: FED**

**BLM Bond number: NMB001079**

**BIA Bond number:**

**Do you have a reclamation bond? NO**

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

**Is the reclamation bond BLM or Forest Service?**

**BLM reclamation bond number:**

**Forest Service reclamation bond number:**

**Forest Service reclamation bond attachment:**

**Reclamation bond number:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**