

HOBBS OCD

FEB 06 2018

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

RECEIVED

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM-63763
WELL NAME & NO.:	MJ Fed Com 223H
SURFACE HOLE FOOTAGE:	0169' FNL & 2241' FEL
BOTTOM HOLE FOOTAGE:	0240' FSL & 1980' FEL
LOCATION:	Section 23, T. 19 S., R 33 E., NMPM
COUNTY:	County, New Mexico

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

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

☐ **Lea County**

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

A. Hydrogen Sulfide

1. A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the Yates 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.

A. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

Wait on cement (WOC) for Potash Areas:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

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.

Secretary's Potash

Possibility of water and brine flows in the Artesia and Salado Groups.

Possibility of lost circulation in the Rustler, Capitan Reef, Red Beds, Delaware, and Artesia Group.

Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The 13-3/8 inch surface casing shall be set at approximately 1560 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.

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 1st intermediate casing is:

Option #1 (Single Stage):

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

Option #2 (DV tool):

Operator has proposed DV tool at depth of 4500', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool: _____
- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool:

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

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

- ☐ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Potash.**

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 (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.

Centralizers required through the curve 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.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Operator shall perform the 9-5/8" and 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.

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

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.
5. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 2nd intermediate casing shoe shall be psi.
6. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 7-5/8 X 7 1st 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.

7. The appropriate BLM office shall be notified a minimum of hours in advance for a representative to witness the tests.
- a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - c. 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.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. 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.**
 - f. 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.
 - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. DRILL STEM TEST

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

E. 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 013018

**PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL**

**HOBBS OCD
FEB 06 2018
RECEIVED**

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
LEASE NO.:	NMNM63763
WELL NAME & NO.:	223H -MJ FEDERAL
SURFACE HOLE FOOTAGE:	169'/N & 2241'/W
BOTTOM HOLE FOOTAGE:	240'/S & 1980'/W
LOCATION:	Section 23 T.19 S., R.33E., NMP
COUNTY:	LEA County, New Mexico

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

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I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

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

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

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

Tank Battery:

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

Watershed/Water Quality:

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

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

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

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

G. ON LEASE ACCESS ROADS**Road Width**

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

Surfacing

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

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

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

Crowning

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

Ditching

Ditching shall be required on both sides of the road.

Turnouts

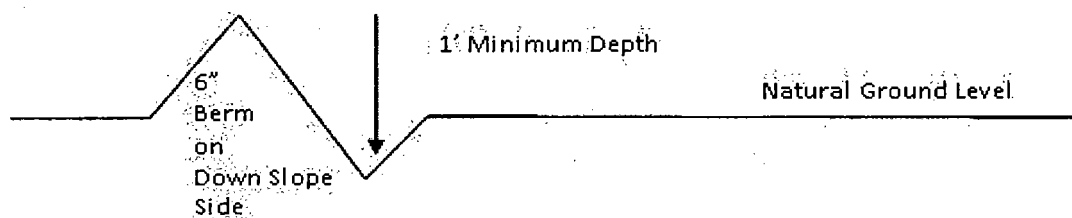
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

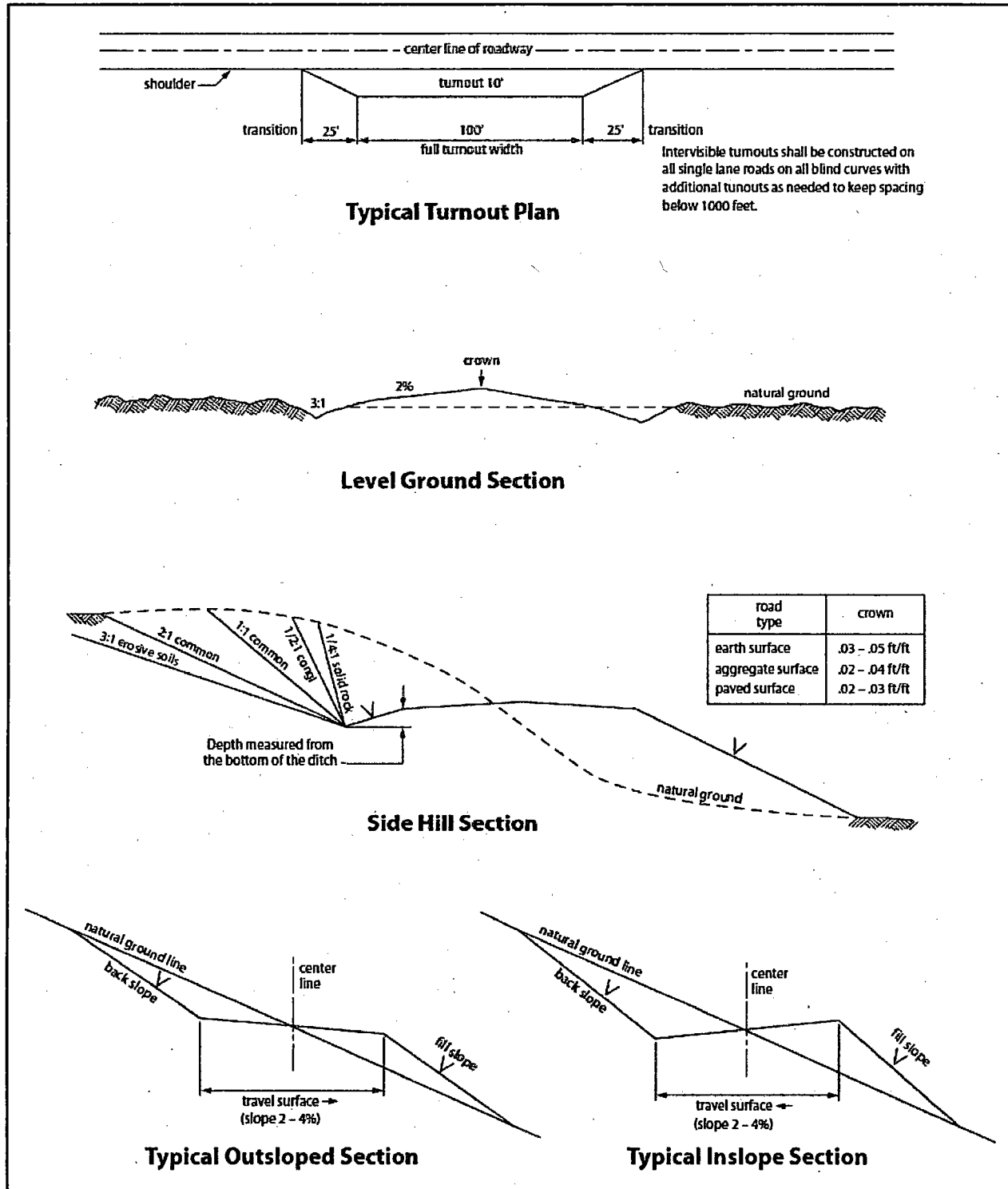


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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.

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

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

Open-Vent Exhaust Stack Exclosures

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

Containment Structures

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

Painting Requirement

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

<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



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

Operator Certification Data Report

02/01/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Brian Wood

Signed on: 08/12/2017

Title: President

Street Address: 37 Verano Loop

City: Santa Fe

State: NM

Zip: 87508

Phone: (505)466-8120

Email address: afmss@permitswest.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

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Hydrogen Sulfide Drilling Operations Plan

1 H2S safety instructions to the following:

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

2 H2S Detection and Alarm Systems:

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

3 Windssocks and / Wind Streamers:

- Windssocks at mud pit area should be high enough to be visible.
- Windssock on the rig floor and / top of doghouse should be high enough to be visible.

4 Condition Flags and Signs:

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

5 Well Control Equipment:

- See attachments

6 Communication:

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



7 Drilling Stem Testing:

- No DSTs or cores are planned at this time.

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

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

11 Emergency Contacts

- See following page

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H2S Contingency Plan Emergency Contacts
 MJ Federal wells
 Matador Production Company
 Sec. 23, T19S, R33E Lea County, NM

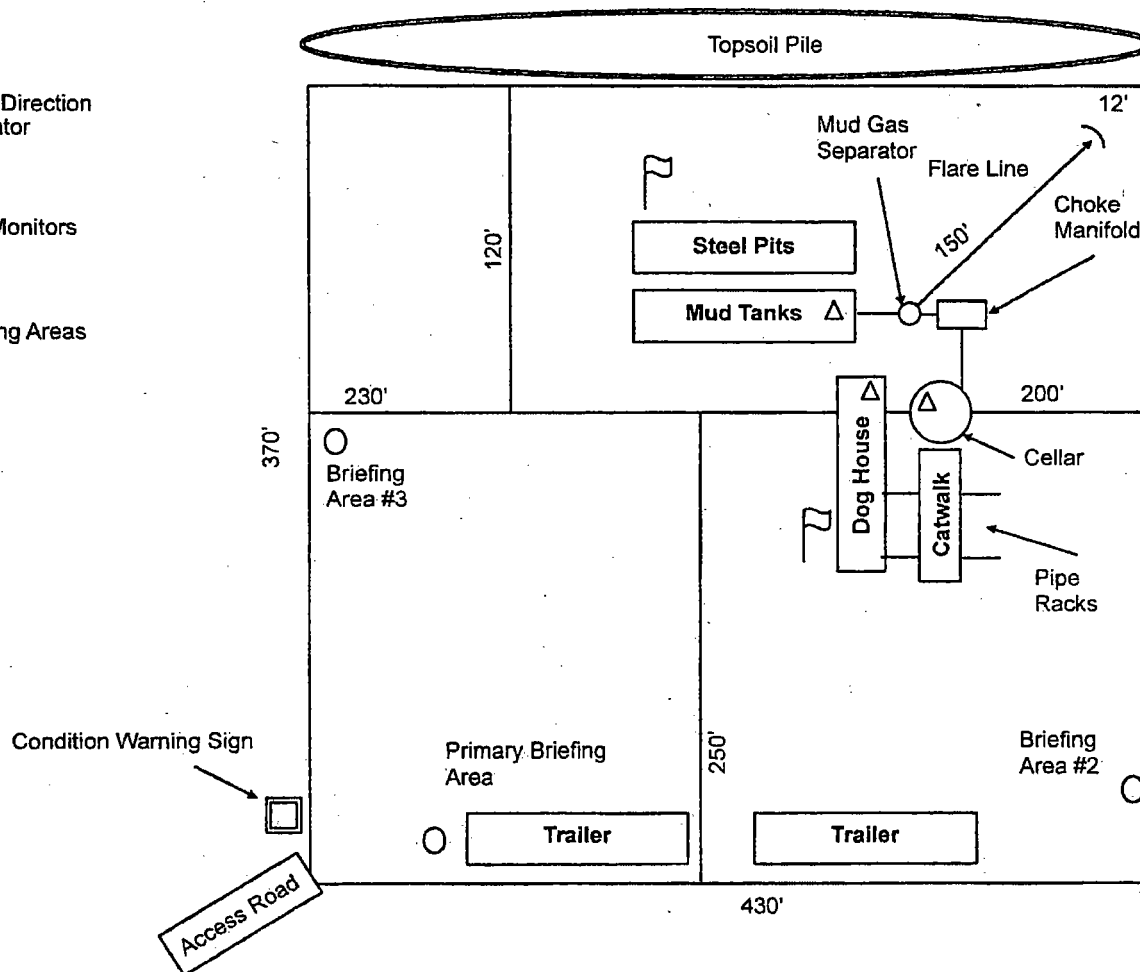
<u>Company Office</u>			
Matador Production Company	(972)-371-5200		
<u>Key Personnel</u>			
Name	Title	Office	Mobile
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Patrick Walsh	Drilling Engineer	972-371-5291	626-318-5808
Greg Deevers	Construction Superintendent		405-431-9527
Jimmy Benefield	Construction Superintendent		318-548-6659
<u>Lea County</u>			
Ambulance			911
Nor Lea General Hospital (Hobbs)		575-397-0560	
State Police (Hobbs)		575-392-5580	
City Police (Hobbs)		575-397-9625	
Sheriff's Office (Lovington)		575-396-3611	
Fire Marshall (Lovington)		575-391-2983	
Volunteer Fire Dept. (Monument)		575-393-4339	
Emergency Management (Lovington)		575-391-2983	
New Mexico Oil Conservation Division (Hobbs)		575-393-6161	575-390-3186
BLM (Hobbs)		575-393-3612	
Hobbs Animal Clinic		575-392-5563	
Dal Paso Animal Hospital (Hobbs)		575-397-2286	
Mountain States Equine (Hobbs)		575-392-7488	
<u>Carlsbad</u>			
BLM		575-234-5972	
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
<u>National</u>			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
<u>Medical</u>			
Flight for Life- 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare- R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Amb- 2301 Yale Blvd SE, D3; Albuquerque, NM		505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop SE; Albuquerque, NM		505-842-4949	
<u>Other</u>			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	
NM Dept. of Transportation (Roswell)		575-637-7200	

H2S Rig Diagram

Wind Direction Indicator

H2S Monitors

Briefing Areas



N
↑
Prevailing Wind
Out of South

MJ Federal 223H
SHL 169' FNL & 2241' FEL
23-19S-33E Lea County, NM



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Matador Resources
Lea County, NM
MJ Federal Sits 3 & 4
223H

Prelim Plan A
GL:3662+KB:28.5
US State Plane 1827 (East of 100°)
NAD 1827 (NADCON CONUS)
Clerks 1868
New Mexico Zone 3001
Mean Sea Level



RKB Elevation: Rig @ 3890.50 uft (GL:3662+KB:28.5)

+N-S	+E-W	Northings	Easting	Latitude	Longitude	Site
0.00	0.00	801758.00	715864.00	32° 38' 8.6491 N	103° 37' 55.1358 W	

SECTION DETAILS - Lateral

Sec	MD	Inc	TVD	+N-S	+E-W	Diag	V-Dev
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	500.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1000.00	8.00	98.71	98.37	-3.30	21.55	3.41
4	3529.29	5.00	98.71	3519.03	-38.70	230.45	37.87
5	4029.29	0.00	0.00	4018.39	-40.00	281.00	41.28
6	10767.98	0.00	0.00	10757.10	-40.00	281.00	41.28
7	11868.00	90.00	178.72	11330.06	-812.98	263.84	614.24
8	15930.10	90.00	178.72	11330.00	-4875.00	285.00	4878.33

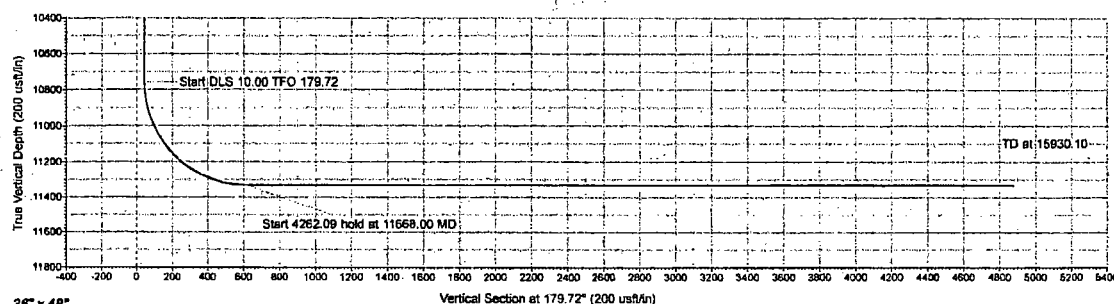
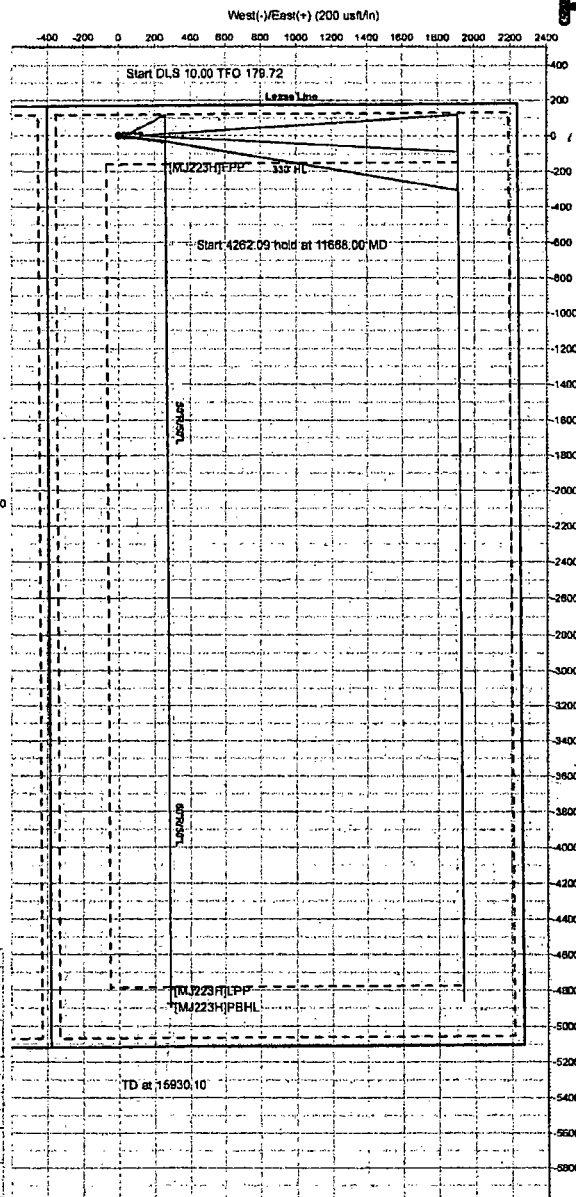
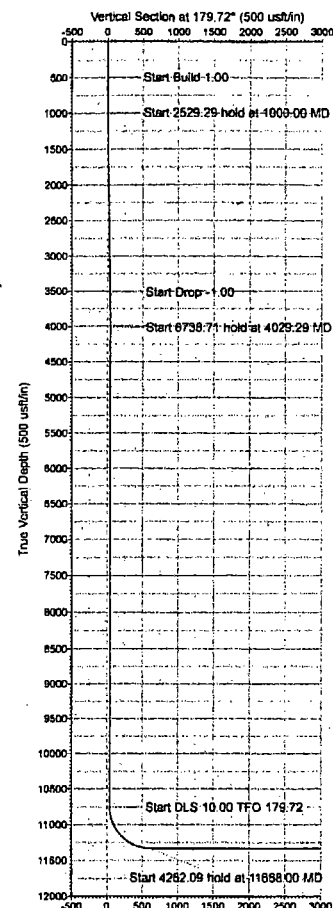


Amplitude to Grid North
True North: -0.32°
Magnetic North: 8.45°
Magnetic Field
Strength: 48.11 Gauss
Dip Angle: 60.70°
Date: 09/20/17
Model: HCDM

Known Corrections
Total Magnetic Corr. (M to G): 8.45°
Declination (M to T): 8.83° East

Legend

- 224H, OH, Prelim Plan A V0 - 222H, OH, Prelim Plan A V0
- 233H, OH, Prelim Plan A V0 - 232H, OH, Prelim Plan A V0
- 234H, OH, Prelim Plan A V0 - Prelim Plan A
- 124H, OH, Prelim Plan A V0



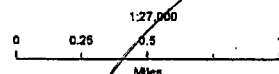
38° x 48°

Matador Production Company

MJ Federal #223H
H₂S Contingency Plan:
2 Mile Radius Map

Section 23, Township 19S, Range 33E
Lea County, New Mexico

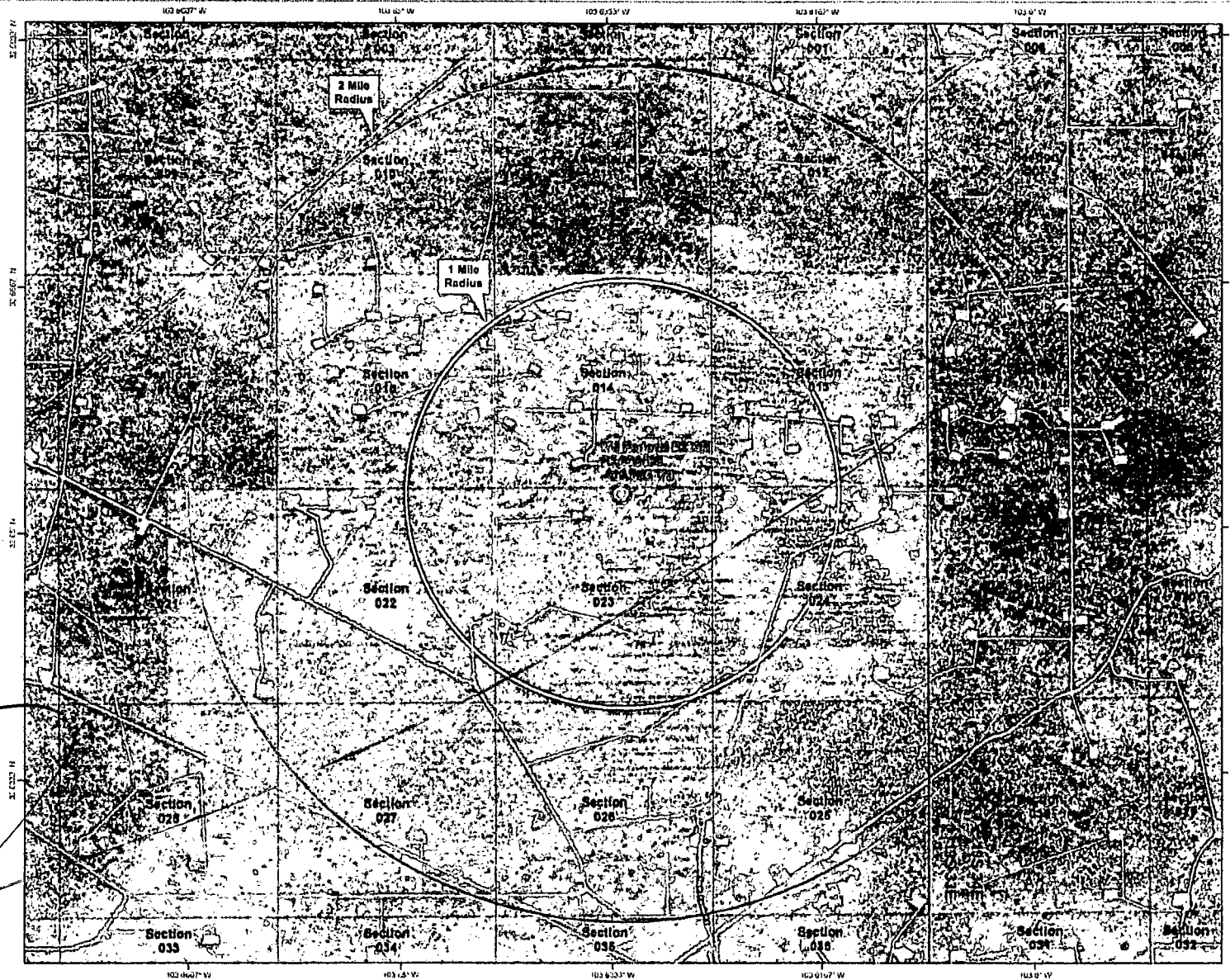
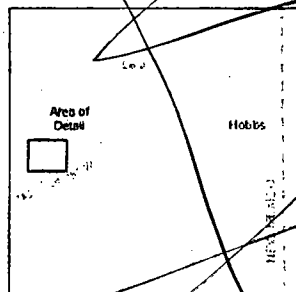
⊙ Surface Hole Location



NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

Prepared by Permits West, Inc., July 18, 2017
for Matador Production Company



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Pro Directional Survey Report

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Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 223H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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

Site: MJ Federal Slots 3 & 4
Site Position: Northing: 601,758.00 usft Latitude: 32° 39' 8.5491 N
From: Map Easting: 715,864.00 usft Longitude: 103° 37' 55.1358 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.38 °

Well: 223H
Well Position: +N-S 0.00 usft Northing: 601,758.00 usft Latitude: 32° 39' 8.5491 N
+E-W 0.00 usft Easting: 715,864.00 usft Longitude: 103° 37' 55.1358 W
Position Uncertainty: 0.00 usft Wellhead Elevation: usft Ground Level: 3,662.00 usft

Wellbore: OH
Magnetics: Model Name Sample Date Declination Dip Angle Field Strength
HDGM 6/9/2017 (°) (°) (nT)
6.83 60.70 48,411.80

Design: Prelim Plan A
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N-S +E-W Direction
(usft) (usft) (usft) (°)
0.00 0.00 0.00 179.72

Survey Tool Program Date: 6/9/2017
From To Survey (Wellbore) Tool Name Description
(usft) (usft)
0.00 15,930.08 Prelim Plan A (OH) MWD - OWSG MWD - OWSG

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.00	98.71	599.99	-0.13	0.86	0.14	1.00	1.00	0.00
700.00	2.00	98.71	699.96	-0.53	3.45	0.55	1.00	1.00	0.00
800.00	3.00	98.71	799.86	-1.19	7.76	1.23	1.00	1.00	0.00
900.00	4.00	98.71	899.68	-2.11	13.80	2.18	1.00	1.00	0.00

Pro Directional Survey Report

Company: Matador Resources Project: Lea County, NM Site: MJ Federal Slots 3 & 4 Well: 223H Wellbore: OH Design: Prelim Plan A	Local Co-ordinate Reference: Well 223H TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') North Reference: Grid Survey Calculation Method: Minimum Curvature Database: WellPlanner1	
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	5.00	98.71	999.37	-3.30	21.55	3.41	1.00	1.00	0.00
1,100.00	5.00	98.71	1,098.99	-4.62	30.17	4.77	0.00	0.00	0.00
1,200.00	5.00	98.71	1,198.60	-5.94	38.78	6.13	0.00	0.00	0.00
1,300.00	5.00	98.71	1,298.22	-7.26	47.40	7.50	0.00	0.00	0.00
1,400.00	5.00	98.71	1,397.84	-8.58	56.01	8.86	0.00	0.00	0.00
1,500.00	5.00	98.71	1,497.46	-9.90	64.63	10.22	0.00	0.00	0.00
1,600.00	5.00	98.71	1,597.08	-11.22	73.24	11.58	0.00	0.00	0.00
1,700.00	5.00	98.71	1,696.70	-12.54	81.86	12.94	0.00	0.00	0.00
1,800.00	5.00	98.71	1,796.32	-13.87	90.47	14.31	0.00	0.00	0.00
1,900.00	5.00	98.71	1,895.94	-15.19	99.09	15.67	0.00	0.00	0.00
2,000.00	5.00	98.71	1,995.56	-16.51	107.70	17.03	0.00	0.00	0.00
2,100.00	5.00	98.71	2,095.18	-17.83	116.32	18.39	0.00	0.00	0.00
2,200.00	5.00	98.71	2,194.80	-19.15	124.93	19.76	0.00	0.00	0.00
2,300.00	5.00	98.71	2,294.42	-20.47	133.55	21.12	0.00	0.00	0.00
2,400.00	5.00	98.71	2,394.04	-21.79	142.16	22.48	0.00	0.00	0.00
2,500.00	5.00	98.71	2,493.66	-23.11	150.78	23.84	0.00	0.00	0.00
2,600.00	5.00	98.71	2,593.28	-24.43	159.39	25.21	0.00	0.00	0.00
2,700.00	5.00	98.71	2,692.90	-25.75	168.01	26.57	0.00	0.00	0.00
2,800.00	5.00	98.71	2,792.52	-27.07	176.62	27.93	0.00	0.00	0.00
2,900.00	5.00	98.71	2,892.14	-28.39	185.24	29.29	0.00	0.00	0.00
3,000.00	5.00	98.71	2,991.76	-29.71	193.85	30.66	0.00	0.00	0.00
3,100.00	5.00	98.71	3,091.37	-31.03	202.47	32.02	0.00	0.00	0.00
3,200.00	5.00	98.71	3,190.99	-32.35	211.08	33.38	0.00	0.00	0.00
3,300.00	5.00	98.71	3,290.61	-33.67	219.70	34.74	0.00	0.00	0.00
3,400.00	5.00	98.71	3,390.23	-34.99	228.31	36.11	0.00	0.00	0.00
3,500.00	5.00	98.71	3,489.85	-36.31	236.93	37.47	0.00	0.00	0.00
3,529.29	5.00	98.71	3,519.03	-36.70	239.45	37.87	0.00	0.00	0.00
3,600.00	4.29	98.71	3,589.51	-37.56	245.11	38.76	1.00	-1.00	0.00
3,700.00	3.29	98.71	3,689.29	-38.57	251.65	39.80	1.00	-1.00	0.00
3,800.00	2.29	98.71	3,789.17	-39.31	256.47	40.56	1.00	-1.00	0.00
3,900.00	1.29	98.71	3,889.12	-39.78	259.56	41.05	1.00	-1.00	0.00
4,000.00	0.29	98.71	3,989.11	-39.99	260.93	41.26	1.00	-1.00	0.00
4,029.29	0.00	0.00	4,018.39	-40.00	261.00	41.28	1.00	-1.00	0.00
4,100.00	0.00	0.00	4,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,200.00	0.00	0.00	4,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,300.00	0.00	0.00	4,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,400.00	0.00	0.00	4,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,500.00	0.00	0.00	4,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,600.00	0.00	0.00	4,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,700.00	0.00	0.00	4,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,800.00	0.00	0.00	4,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
4,900.00	0.00	0.00	4,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,000.00	0.00	0.00	4,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,100.00	0.00	0.00	5,089.11	-40.00	261.00	41.28	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 223H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	0.00	0.00	5,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,300.00	0.00	0.00	5,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,100.00	0.00	0.00	6,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,200.00	0.00	0.00	6,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,300.00	0.00	0.00	6,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,800.00	0.00	0.00	6,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
6,900.00	0.00	0.00	6,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,000.00	0.00	0.00	6,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,100.00	0.00	0.00	7,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,200.00	0.00	0.00	7,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,300.00	0.00	0.00	7,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,400.00	0.00	0.00	7,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,500.00	0.00	0.00	7,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,600.00	0.00	0.00	7,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,700.00	0.00	0.00	7,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,800.00	0.00	0.00	7,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
7,900.00	0.00	0.00	7,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,000.00	0.00	0.00	7,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,100.00	0.00	0.00	8,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,200.00	0.00	0.00	8,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,300.00	0.00	0.00	8,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,400.00	0.00	0.00	8,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,500.00	0.00	0.00	8,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,600.00	0.00	0.00	8,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,700.00	0.00	0.00	8,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,800.00	0.00	0.00	8,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
8,900.00	0.00	0.00	8,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,000.00	0.00	0.00	8,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,100.00	0.00	0.00	9,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,200.00	0.00	0.00	9,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,300.00	0.00	0.00	9,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,400.00	0.00	0.00	9,389.11	-40.00	261.00	41.28	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 223H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,500.00	0.00	0.00	9,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,600.00	0.00	0.00	9,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,700.00	0.00	0.00	9,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,800.00	0.00	0.00	9,789.11	-40.00	261.00	41.28	0.00	0.00	0.00
9,900.00	0.00	0.00	9,889.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,000.00	0.00	0.00	9,989.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,100.00	0.00	0.00	10,089.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,200.00	0.00	0.00	10,189.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,300.00	0.00	0.00	10,289.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,400.00	0.00	0.00	10,389.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,500.00	0.00	0.00	10,489.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,600.00	0.00	0.00	10,589.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,700.00	0.00	0.00	10,689.11	-40.00	261.00	41.28	0.00	0.00	0.00
10,767.99	0.00	0.00	10,757.10	-40.00	261.00	41.28	0.00	0.00	0.00
10,800.00	3.20	179.72	10,789.09	-40.89	261.00	42.17	10.00	10.00	0.00
10,850.00	8.20	179.72	10,838.83	-45.86	261.03	47.13	10.00	10.00	0.00
10,900.00	13.20	179.72	10,887.94	-55.14	261.08	56.41	10.00	10.00	0.00
10,950.00	18.20	179.72	10,936.06	-68.67	261.14	69.94	10.00	10.00	0.00
11,000.00	23.20	179.72	10,982.82	-86.33	261.23	87.61	10.00	10.00	0.00
11,050.00	28.20	179.72	11,027.86	-108.01	261.34	109.29	10.00	10.00	0.00
11,100.00	33.20	179.72	11,070.84	-133.53	261.46	134.81	10.00	10.00	0.00
11,150.00	38.20	179.72	11,111.43	-162.70	261.61	163.97	10.00	10.00	0.00
11,200.00	43.20	179.72	11,149.32	-195.29	261.77	196.57	10.00	10.00	0.00
11,250.00	48.20	179.72	11,184.23	-231.07	261.95	232.34	10.00	10.00	0.00
11,300.00	53.20	179.72	11,215.89	-269.74	262.14	271.02	10.00	10.00	0.00
11,350.00	58.20	179.72	11,244.06	-311.04	262.35	312.31	10.00	10.00	0.00
11,400.00	63.20	179.72	11,268.52	-354.63	262.56	355.90	10.00	10.00	0.00
11,450.00	68.20	179.72	11,289.09	-400.18	262.79	401.46	10.00	10.00	0.00
11,500.00	73.20	179.72	11,305.61	-447.38	263.02	448.64	10.00	10.00	0.00
11,550.00	78.20	179.72	11,317.95	-495.79	263.26	497.07	10.00	10.00	0.00
11,600.00	83.20	179.72	11,326.03	-545.12	263.51	546.40	10.00	10.00	0.00
11,650.00	88.20	179.72	11,329.78	-594.96	263.75	596.24	10.00	10.00	0.00
11,668.00	90.00	179.72	11,330.06	-612.96	263.84	614.24	10.00	10.00	0.00
11,700.00	90.00	179.72	11,330.06	-644.96	264.00	646.24	0.00	0.00	0.00
11,800.00	90.00	179.72	11,330.06	-744.96	264.50	746.24	0.00	0.00	0.00
11,900.00	90.00	179.72	11,330.05	-844.95	265.00	846.24	0.00	0.00	0.00
12,000.00	90.00	179.72	11,330.05	-944.95	265.49	946.24	0.00	0.00	0.00
12,100.00	90.00	179.72	11,330.05	-1,044.95	265.99	1,046.24	0.00	0.00	0.00
12,200.00	90.00	179.72	11,330.05	-1,144.95	266.48	1,146.24	0.00	0.00	0.00
12,300.00	90.00	179.72	11,330.05	-1,244.95	266.98	1,246.24	0.00	0.00	0.00
12,400.00	90.00	179.72	11,330.05	-1,344.95	267.48	1,346.24	0.00	0.00	0.00
12,500.00	90.00	179.72	11,330.05	-1,444.95	267.97	1,446.24	0.00	0.00	0.00
12,600.00	90.00	179.72	11,330.05	-1,544.95	268.47	1,546.24	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 223H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,700.00	90.00	179.72	11,330.04	-1,644.94	268.97	1,646.24	0.00	0.00	0.00
12,800.00	90.00	179.72	11,330.04	-1,744.94	269.46	1,746.24	0.00	0.00	0.00
12,900.00	90.00	179.72	11,330.04	-1,844.94	269.96	1,846.24	0.00	0.00	0.00
13,000.00	90.00	179.72	11,330.04	-1,944.94	270.46	1,946.24	0.00	0.00	0.00
13,100.00	90.00	179.72	11,330.04	-2,044.94	270.95	2,046.24	0.00	0.00	0.00
13,200.00	90.00	179.72	11,330.04	-2,144.94	271.45	2,146.24	0.00	0.00	0.00
13,300.00	90.00	179.72	11,330.04	-2,244.94	271.94	2,246.24	0.00	0.00	0.00
13,400.00	90.00	179.72	11,330.03	-2,344.94	272.44	2,346.24	0.00	0.00	0.00
13,500.00	90.00	179.72	11,330.03	-2,444.93	272.94	2,446.24	0.00	0.00	0.00
13,600.00	90.00	179.72	11,330.03	-2,544.93	273.43	2,546.24	0.00	0.00	0.00
13,700.00	90.00	179.72	11,330.03	-2,644.93	273.93	2,646.24	0.00	0.00	0.00
13,800.00	90.00	179.72	11,330.03	-2,744.93	274.43	2,746.24	0.00	0.00	0.00
13,900.00	90.00	179.72	11,330.03	-2,844.93	274.92	2,846.24	0.00	0.00	0.00
14,000.00	90.00	179.72	11,330.03	-2,944.93	275.42	2,946.24	0.00	0.00	0.00
14,100.00	90.00	179.72	11,330.03	-3,044.93	275.92	3,046.24	0.00	0.00	0.00
14,200.00	90.00	179.72	11,330.02	-3,144.93	276.41	3,146.24	0.00	0.00	0.00
14,300.00	90.00	179.72	11,330.02	-3,244.92	276.91	3,246.24	0.00	0.00	0.00
14,400.00	90.00	179.72	11,330.02	-3,344.92	277.41	3,346.24	0.00	0.00	0.00
14,500.00	90.00	179.72	11,330.02	-3,444.92	277.90	3,446.24	0.00	0.00	0.00
14,600.00	90.00	179.72	11,330.02	-3,544.92	278.40	3,546.24	0.00	0.00	0.00
14,700.00	90.00	179.72	11,330.02	-3,644.92	278.89	3,646.24	0.00	0.00	0.00
14,800.00	90.00	179.72	11,330.02	-3,744.92	279.39	3,746.24	0.00	0.00	0.00
14,900.00	90.00	179.72	11,330.01	-3,844.92	279.89	3,846.24	0.00	0.00	0.00
15,000.00	90.00	179.72	11,330.01	-3,944.92	280.38	3,946.24	0.00	0.00	0.00
15,100.00	90.00	179.72	11,330.01	-4,044.92	280.88	4,046.24	0.00	0.00	0.00
15,200.00	90.00	179.72	11,330.01	-4,144.91	281.38	4,146.24	0.00	0.00	0.00
15,300.00	90.00	179.72	11,330.01	-4,244.91	281.87	4,246.24	0.00	0.00	0.00
15,400.00	90.00	179.72	11,330.01	-4,344.91	282.37	4,346.24	0.00	0.00	0.00
15,500.00	90.00	179.72	11,330.01	-4,444.91	282.87	4,446.24	0.00	0.00	0.00
15,600.00	90.00	179.72	11,330.00	-4,544.91	283.36	4,546.24	0.00	0.00	0.00
15,700.00	90.00	179.72	11,330.00	-4,644.91	283.86	4,646.24	0.00	0.00	0.00
15,800.00	90.00	179.72	11,330.00	-4,744.91	284.35	4,746.24	0.00	0.00	0.00
15,900.00	90.00	179.72	11,330.00	-4,844.91	284.85	4,846.24	0.00	0.00	0.00
15,930.10	90.00	179.72	11,330.00	-4,875.00	285.00	4,876.33	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources Project: Lea County, NM Site: MJ Federal Slots 3 & 4 Well: 223H Wellbore: OH Design: Prelim Plan A	Local Co-ordinate Reference: Well 223H TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') North Reference: Grid Survey Calculation Method: Minimum Curvature Database: WellPlanner1	
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Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
[MJ223H]FPP	0.00	0.00	0.00	-159.00	261.00	601,599.00	716,125.00	32° 39' 6.9587 N	103° 37' 52.0955 W
- plan misses target center by 305.62usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[MJ223H]LPP	0.00	0.00	0.00	-4,785.00	284.00	596,973.00	716,148.00	32° 38' 21.1831 N	103° 37' 52.1842 W
- plan misses target center by 4793.42usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[MJ223H]PBHL	0.00	0.00	11,330.00	-4,875.00	285.00	596,883.00	716,149.00	32° 38' 20.2925 N	103° 37' 52.1795 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____

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Pro Directional
Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	6/9/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,930.08	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG

Summary						
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						
MJ Federal Slot 2						
222H - OH - Prelim Plan A	500.00	494.00	792.28	789.18	255.362	CC, ES
222H - OH - Prelim Plan A	15,930.10	15,949.39	1,327.27	1,148.40	7.420	SF
232H - OH - Prelim Plan A	500.00	495.00	762.29	759.34	258.677	CC, ES
232H - OH - Prelim Plan A	15,930.10	16,521.92	1,396.49	1,222.68	8.034	SF
MJ Federal Slots 3 & 4						
124H - OH - Prelim Plan A	1,005.03	1,000.86	59.83	54.13	10.501	CC, ES
124H - OH - Prelim Plan A	1,300.00	1,292.56	67.26	59.70	8.900	SF
224H - OH - Prelim Plan A	1,002.29	993.55	89.83	84.16	15.842	CC, ES
224H - OH - Prelim Plan A	15,930.10	16,054.17	1,650.07	1,470.09	9.168	SF
233H - OH - Prelim Plan A	802.43	801.94	29.62	25.10	6.556	CC
233H - OH - Prelim Plan A	900.00	898.96	29.84	24.68	5.784	ES
233H - OH - Prelim Plan A	10,767.99	10,768.77	159.00	83.55	2.107	SF
234H - OH - Prelim Plan A	500.00	502.00	119.00	115.87	38.005	CC
234H - OH - Prelim Plan A	1,000.00	991.76	119.07	113.41	21.045	ES
234H - OH - Prelim Plan A	15,930.10	16,666.40	1,704.64	1,528.53	9.879	SF

Offset Design MJ Federal Slot 2 - 222H - OH - Prelim Plan A													
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10780-MWD - OWSG													
Reference Offset Semi Major Axis Distance													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	5.00	-6.00	0.00	0.01	-91.52	-21.00	-792.00	792.28				
100.00	100.00	108.00	94.00	0.13	0.15	-91.52	-21.00	-792.00	792.28	792.00	0.28	2,851.812	
200.00	200.00	206.00	194.00	0.49	0.51	-91.52	-21.00	-792.00	792.28	791.28	0.99	796.453	
300.00	300.00	306.00	294.00	0.85	0.87	-91.52	-21.00	-792.00	792.28	790.57	1.71	482.860	
400.00	400.00	406.00	394.00	1.20	1.23	-91.52	-21.00	-792.00	792.28	789.85	2.43	326.222	
500.00	500.00	494.00	494.00	1.56	1.54	-91.52	-21.00	-792.00	792.28	789.18	3.10	255.362	CC, ES
600.00	599.99	582.58	582.58	1.91	1.72	169.77	-21.06	-792.59	793.81	790.18	3.63	218.734	
700.00	699.96	670.30	670.28	2.26	1.80	169.78	-21.23	-794.52	798.59	794.53	4.06	196.779	
800.00	799.96	757.76	757.67	2.61	1.90	169.80	-21.54	-797.77	808.60	802.09	4.51	178.926	
900.00	699.68	844.81	844.60	2.96	2.05	169.83	-21.66	-802.33	817.84	812.84	5.00	163.512	
1,000.00	999.37	931.33	930.92	3.32	2.23	169.86	-22.50	-808.16	832.28	826.75	5.53	150.509	
1,100.00	1,098.99	1,019.88	1,019.17	3.69	2.45	169.92	-23.18	-815.43	849.02	842.93	6.09	139.431	

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

Pro Directional Anticollision Report

Company: Matador Resources Project: Lea County, NM Reference Site: MJ Federal Slots 3 & 4 Site Error: 0.00 usft Reference Well: 223H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: Well 223H TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') North Reference: Grid Survey Calculation Method: Minimum Curvature Output errors are at: 2.00 sigma Database: WellPlanner1 Offset TVD Reference: Offset Datum	
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Offset Design MJ Federal Slot 2 - 222H - OH - Prelim Plan A												Offset Site Error:
Survey Program: O-MWD - CWSG, 500-MWD - CWSG, 10780-MWD - CWSG												Offset Well Error:
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)				
1,200.00	1,198.60	1,118.39	1,117.30	4.08	2.73	169.96	-23.98	-823.98	866.23	859.53	6.70	129.268
1,300.00	1,298.22	1,216.89	1,215.43	4.44	3.03	170.03	-24.77	-832.53	883.45	876.11	7.33	120.443
1,400.00	1,397.84	1,315.39	1,313.56	4.81	3.35	170.09	-25.57	-841.08	900.66	892.67	7.99	112.786
1,500.00	1,497.46	1,413.90	1,411.69	5.19	3.67	170.14	-26.37	-849.63	917.87	909.23	8.65	106.143
1,600.00	1,597.08	1,512.40	1,509.82	5.57	4.01	170.20	-27.16	-858.18	935.09	925.77	9.32	100.335
1,700.00	1,596.70	1,610.90	1,607.94	5.94	4.36	170.25	-27.96	-866.72	952.31	942.31	10.00	95.240
1,800.00	1,796.32	1,709.41	1,708.07	6.32	4.71	170.29	-28.75	-875.27	969.52	958.84	10.68	90.744
1,900.00	1,895.94	1,807.91	1,804.20	6.70	5.06	170.34	-29.55	-883.82	986.74	975.37	11.37	86.757
2,000.00	1,895.56	1,906.41	1,902.33	7.08	5.42	170.39	-30.35	-892.37	1,003.96	991.89	12.07	83.197
2,100.00	2,095.18	2,004.92	2,000.46	7.47	5.78	170.43	-31.14	-900.92	1,021.18	1,008.42	12.76	80.004
2,200.00	2,194.80	2,103.42	2,098.59	7.85	6.14	170.47	-31.94	-909.46	1,038.40	1,024.94	13.46	77.126
2,300.00	2,294.42	2,201.92	2,196.72	8.23	6.50	170.51	-32.73	-918.01	1,055.62	1,041.46	14.16	74.525
2,400.00	2,394.04	2,300.43	2,294.84	8.61	6.87	170.55	-33.53	-926.56	1,072.84	1,057.97	14.87	72.159
2,500.00	2,493.66	2,401.07	2,392.97	8.99	7.25	170.59	-34.32	-935.11	1,090.06	1,074.48	15.58	69.965
2,600.00	2,593.28	2,497.43	2,491.10	9.38	7.61	170.63	-35.12	-943.66	1,107.28	1,091.01	16.28	68.021
2,700.00	2,692.90	2,604.06	2,598.23	9.76	8.01	170.66	-35.92	-952.20	1,124.51	1,107.49	17.01	66.091
2,800.00	2,792.52	2,705.56	2,697.36	10.14	8.39	170.70	-36.71	-960.75	1,141.73	1,124.00	17.73	64.382
2,900.00	2,892.14	2,807.06	2,798.49	10.52	8.77	170.73	-37.51	-969.30	1,158.95	1,140.50	18.45	62.804
3,000.00	2,991.76	2,891.45	2,883.62	10.91	9.09	170.76	-38.30	-977.85	1,176.18	1,157.06	19.11	61.538
3,100.00	3,091.37	2,989.95	2,981.74	11.29	9.46	170.79	-39.10	-986.40	1,193.40	1,173.58	19.82	60.200
3,200.00	3,190.99	3,088.46	3,079.87	11.67	9.84	170.82	-39.90	-994.95	1,210.62	1,190.09	20.53	58.954
3,300.00	3,290.61	3,186.96	3,178.00	12.06	10.21	170.85	-40.69	-1,003.49	1,227.85	1,206.60	21.25	57.790
3,400.00	3,390.23	3,285.48	3,276.13	12.44	10.58	170.88	-41.49	-1,012.04	1,245.07	1,223.11	21.96	56.700
3,500.00	3,489.85	3,383.97	3,374.26	12.82	10.96	170.91	-42.28	-1,020.59	1,262.30	1,239.62	22.67	55.677
3,529.29	3,519.03	3,412.81	3,403.00	12.94	11.07	170.92	-42.52	-1,023.09	1,267.34	1,244.48	22.88	55.389
3,600.00	3,589.51	3,482.54	3,472.46	13.21	11.33	170.96	-43.06	-1,029.14	1,279.10	1,255.71	23.38	54.696
3,700.00	3,689.29	3,581.38	3,570.93	13.58	11.71	170.99	-43.88	-1,037.72	1,294.27	1,270.17	24.10	53.710
3,800.00	3,789.17	3,705.89	3,695.15	13.94	12.18	171.01	-44.78	-1,047.44	1,306.89	1,281.96	24.93	52.418
3,900.00	3,889.12	3,835.03	3,823.87	14.30	12.65	171.03	-45.46	-1,054.89	1,315.59	1,289.81	25.77	51.041
4,000.00	3,989.11	3,964.60	3,953.48	14.65	13.10	171.03	-45.87	-1,059.05	1,320.32	1,293.72	26.81	49.627
4,029.29	4,018.39	4,002.61	3,991.47	14.75	13.24	-90.26	-45.93	-1,059.78	1,320.96	1,294.11	26.84	49.210
4,100.00	4,089.11	4,094.41	4,083.27	14.98	13.54	-90.26	-46.00	-1,060.50	1,321.51	1,294.12	27.40	48.234
4,133.15	4,122.26	4,127.40	4,116.26	15.09	13.65	-90.26	-46.00	-1,060.50	1,321.51	1,293.89	27.52	47.847
4,200.00	4,189.11	4,205.75	4,183.11	15.31	13.90	-90.26	-46.00	-1,060.50	1,321.51	1,293.41	28.11	47.020
4,300.00	4,289.11	4,305.75	4,283.11	15.64	14.22	-90.26	-46.00	-1,060.50	1,321.51	1,292.74	28.78	45.621
4,400.00	4,389.11	4,405.75	4,383.11	15.87	14.54	-90.26	-46.00	-1,060.50	1,321.51	1,292.06	29.45	44.670
4,500.00	4,489.11	4,505.75	4,483.11	16.31	14.87	-90.26	-46.00	-1,060.50	1,321.51	1,291.38	30.13	43.862
4,600.00	4,589.11	4,605.75	4,583.11	16.64	15.19	-90.26	-46.00	-1,060.50	1,321.51	1,290.71	30.81	42.896
4,700.00	4,689.11	4,705.75	4,683.11	16.98	15.52	-90.26	-46.00	-1,060.50	1,321.51	1,290.03	31.49	41.970
4,800.00	4,789.11	4,805.75	4,783.11	17.32	15.85	-90.26	-46.00	-1,060.50	1,321.51	1,289.34	32.17	41.081
4,900.00	4,889.11	4,905.75	4,883.11	17.65	16.18	-90.26	-46.00	-1,060.50	1,321.51	1,288.66	32.85	40.226
5,000.00	4,989.11	5,005.75	4,983.11	17.99	16.51	-90.26	-46.00	-1,060.50	1,321.51	1,287.98	33.54	39.405
5,100.00	5,089.11	5,105.76	5,083.11	18.33	16.85	-90.26	-46.00	-1,060.50	1,321.51	1,287.29	34.22	38.615
5,200.00	5,189.11	5,205.76	5,183.11	18.67	17.18	-90.26	-46.00	-1,060.50	1,321.51	1,286.60	34.91	37.855
5,300.00	5,289.11	5,305.76	5,283.11	19.01	17.51	-90.26	-46.00	-1,060.50	1,321.51	1,285.92	35.60	37.123
5,400.00	5,389.11	5,405.76	5,383.11	19.35	17.85	-90.26	-46.00	-1,060.50	1,321.51	1,285.23	36.29	36.418
5,500.00	5,489.11	5,505.76	5,483.11	19.69	18.19	-90.26	-46.00	-1,060.50	1,321.51	1,284.54	36.98	35.738
5,600.00	5,589.11	5,605.76	5,583.11	20.04	18.52	-90.26	-46.00	-1,060.50	1,321.51	1,283.84	37.67	35.082
5,700.00	5,689.11	5,705.76	5,683.11	20.38	18.86	-90.26	-46.00	-1,060.50	1,321.51	1,283.15	38.36	34.448
5,800.00	5,789.11	5,805.76	5,783.11	20.72	19.20	-90.26	-46.00	-1,060.50	1,321.51	1,282.46	39.06	33.837
5,900.00	5,889.11	5,905.76	5,883.11	21.07	19.54	-90.26	-46.00	-1,060.50	1,321.51	1,281.76	39.75	33.246
6,000.00	5,989.11	6,005.76	5,983.11	21.41	19.88	-90.26	-46.00	-1,060.50	1,321.51	1,281.07	40.44	32.675

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slot 2 - 222H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10780-MWD - OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance		Between		Minimum	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor		
8,100.00	6,089.11	6,105.76	6,083.11	21.76	20.22	-90.26	-46.00	-1,060.50	1,321.51	1,280.37	41.14	32.122		
8,200.00	6,189.11	6,205.76	6,183.11	22.10	20.56	-90.26	-46.00	-1,060.50	1,321.51	1,279.68	41.84	31.587		
8,300.00	6,289.11	6,305.76	6,283.11	22.45	20.91	-90.26	-46.00	-1,060.50	1,321.51	1,278.98	42.53	31.069		
8,400.00	6,389.11	6,405.76	6,383.11	22.79	21.25	-90.26	-46.00	-1,060.50	1,321.51	1,278.28	43.23	30.568		
8,500.00	6,489.11	6,505.76	6,483.11	23.14	21.59	-90.26	-46.00	-1,060.50	1,321.51	1,277.58	43.93	30.082		
8,600.00	6,589.11	6,605.76	6,583.11	23.49	21.94	-90.26	-46.00	-1,060.50	1,321.51	1,276.88	44.63	29.611		
8,700.00	6,689.11	6,705.76	6,683.11	23.83	22.28	-90.26	-46.00	-1,060.50	1,321.51	1,276.18	45.33	29.154		
8,800.00	6,789.11	6,805.76	6,783.11	24.18	22.62	-90.26	-46.00	-1,060.50	1,321.51	1,275.48	46.03	28.710		
8,900.00	6,889.11	6,905.76	6,883.11	24.53	22.97	-90.26	-46.00	-1,060.50	1,321.51	1,274.78	46.73	28.280		
7,000.00	6,989.11	7,005.76	6,983.11	24.88	23.31	-90.26	-46.00	-1,060.50	1,321.51	1,274.08	47.43	27.862		
7,100.00	7,089.11	7,105.76	7,083.11	25.22	23.66	-90.26	-46.00	-1,060.50	1,321.51	1,273.38	48.13	27.456		
7,200.00	7,189.11	7,205.76	7,183.11	25.57	24.01	-90.26	-46.00	-1,060.50	1,321.51	1,272.68	48.83	27.061		
7,300.00	7,289.11	7,305.76	7,283.11	25.92	24.35	-90.26	-46.00	-1,060.50	1,321.51	1,271.98	49.54	26.677		
7,400.00	7,389.11	7,405.76	7,383.11	26.27	24.70	-90.26	-46.00	-1,060.50	1,321.51	1,271.27	50.24	26.304		
7,500.00	7,489.11	7,505.76	7,483.11	26.62	25.05	-90.26	-46.00	-1,060.50	1,321.51	1,270.57	50.94	25.941		
7,600.00	7,589.11	7,605.76	7,583.11	26.97	25.39	-90.26	-46.00	-1,060.50	1,321.51	1,269.87	51.65	25.587		
7,700.00	7,689.11	7,705.76	7,683.11	27.32	25.74	-90.26	-46.00	-1,060.50	1,321.51	1,269.16	52.35	25.243		
7,800.00	7,789.11	7,805.76	7,783.11	27.67	26.09	-90.26	-46.00	-1,060.50	1,321.51	1,268.46	53.06	24.908		
7,900.00	7,889.11	7,905.76	7,883.11	28.02	26.44	-90.26	-46.00	-1,060.50	1,321.51	1,267.75	53.76	24.582		
8,000.00	7,989.11	8,005.76	7,983.11	28.37	26.79	-90.26	-46.00	-1,060.50	1,321.51	1,267.05	54.46	24.264		
8,100.00	8,089.11	8,105.76	8,083.11	28.72	27.14	-90.26	-46.00	-1,060.50	1,321.51	1,266.34	55.17	23.953		
8,200.00	8,189.11	8,205.76	8,183.11	29.07	27.49	-90.26	-46.00	-1,060.50	1,321.51	1,265.64	55.88	23.651		
8,300.00	8,289.11	8,305.76	8,283.11	29.42	27.84	-90.26	-46.00	-1,060.50	1,321.51	1,264.93	56.58	23.356		
8,400.00	8,389.11	8,405.76	8,383.11	29.78	28.18	-90.26	-46.00	-1,060.50	1,321.51	1,264.23	57.29	23.068		
8,500.00	8,489.11	8,505.76	8,483.11	30.13	28.53	-90.26	-46.00	-1,060.50	1,321.51	1,263.52	57.99	22.787		
8,600.00	8,589.11	8,605.76	8,583.11	30.48	28.88	-90.26	-46.00	-1,060.50	1,321.51	1,262.81	58.70	22.513		
8,700.00	8,689.11	8,705.76	8,683.11	30.83	29.24	-90.26	-46.00	-1,060.50	1,321.51	1,262.11	59.41	22.245		
8,800.00	8,789.11	8,805.76	8,783.11	31.18	29.59	-90.26	-46.00	-1,060.50	1,321.51	1,261.40	60.12	21.983		
8,900.00	8,889.11	8,905.76	8,883.11	31.54	29.94	-90.26	-46.00	-1,060.50	1,321.51	1,260.69	60.82	21.727		
9,000.00	8,989.11	9,005.76	8,983.11	31.89	30.29	-90.26	-46.00	-1,060.50	1,321.51	1,259.98	61.53	21.477		
9,100.00	9,089.11	9,105.76	9,083.11	32.24	30.64	-90.26	-46.00	-1,060.50	1,321.51	1,259.28	62.24	21.233		
9,200.00	9,189.11	9,205.76	9,183.11	32.59	30.99	-90.26	-46.00	-1,060.50	1,321.51	1,258.57	62.95	20.994		
9,300.00	9,289.11	9,305.76	9,283.11	32.94	31.34	-90.26	-46.00	-1,060.50	1,321.51	1,257.86	63.65	20.761		
9,400.00	9,389.11	9,405.76	9,383.11	33.30	31.69	-90.26	-46.00	-1,060.50	1,321.51	1,257.15	64.36	20.532		
9,500.00	9,489.11	9,505.76	9,483.11	33.65	32.04	-90.26	-46.00	-1,060.50	1,321.51	1,256.44	65.07	20.309		
9,600.00	9,589.11	9,605.76	9,583.11	34.00	32.40	-90.26	-46.00	-1,060.50	1,321.51	1,255.73	65.78	20.090		
9,700.00	9,689.11	9,705.76	9,683.11	34.36	32.75	-90.26	-46.00	-1,060.50	1,321.51	1,255.02	66.49	19.876		
9,800.00	9,789.11	9,805.76	9,783.11	34.71	33.10	-90.26	-46.00	-1,060.50	1,321.51	1,254.32	67.20	19.668		
9,900.00	9,889.11	9,905.76	9,883.11	35.06	33.45	-90.26	-46.00	-1,060.50	1,321.51	1,253.61	67.91	19.460		
10,000.00	9,989.11	10,005.76	9,983.11	35.42	33.80	-90.26	-46.00	-1,060.50	1,321.51	1,252.90	68.62	19.259		
10,100.00	10,089.11	10,105.76	10,083.11	35.77	34.16	-90.26	-46.00	-1,060.50	1,321.51	1,252.19	69.33	19.062		
10,200.00	10,189.11	10,205.76	10,183.11	36.12	34.51	-90.26	-46.00	-1,060.50	1,321.51	1,251.48	70.04	18.869		
10,300.00	10,289.11	10,305.76	10,283.11	36.48	34.86	-90.26	-46.00	-1,060.50	1,321.51	1,250.77	70.75	18.679		
10,400.00	10,389.11	10,405.76	10,383.11	36.83	35.21	-90.26	-46.00	-1,060.50	1,321.51	1,250.06	71.46	18.494		
10,500.00	10,489.11	10,505.76	10,483.11	37.19	35.57	-90.26	-46.00	-1,060.50	1,321.51	1,249.35	72.17	18.312		
10,600.00	10,589.11	10,605.76	10,583.11	37.54	35.92	-90.26	-46.00	-1,060.50	1,321.51	1,248.64	72.88	18.133		
10,700.00	10,689.11	10,705.76	10,683.11	37.89	36.26	-90.26	-46.00	-1,060.50	1,321.51	1,247.94	73.58	17.961		
10,767.99	10,757.10	10,762.24	10,751.10	38.13	36.36	-90.26	-46.00	-1,060.50	1,321.51	1,247.50	73.92	17.878		
10,800.00	10,789.09	10,794.23	10,783.09	38.24	36.41	90.06	-46.03	-1,060.50	1,321.51	1,247.44	74.08	17.840		
10,850.00	10,838.83	10,844.27	10,833.04	38.41	36.41	90.16	-48.74	-1,060.49	1,321.52	1,247.28	74.24	17.800		
10,900.00	10,887.94	10,894.51	10,882.76	38.57	36.42	90.26	-55.83	-1,060.46	1,321.54	1,247.13	74.41	17.760		
10,950.00	10,936.06	10,944.95	10,931.86	38.73	36.43	90.35	-67.30	-1,060.42	1,321.56	1,246.98	74.58	17.720		

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slot 2 - 222H - OH - Prelim Plan A														Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10780-MWD - OWSG														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
11,000.00	10,982.82	10,995.59	10,978.95	38.89	36.44	90.44	-83.11	-1,060.36	1,321.60	1,246.85	74.75	17.680			
11,050.00	11,027.86	11,046.42	11,026.64	39.04	36.46	90.53	-103.19	-1,060.28	1,321.64	1,246.71	74.92	17.640			
11,100.00	11,070.84	11,097.45	11,071.52	39.19	36.48	90.62	-127.43	-1,060.19	1,321.68	1,246.58	75.10	17.598			
11,150.00	11,111.43	11,148.65	11,114.22	39.33	36.51	90.70	-155.67	-1,060.08	1,321.74	1,246.44	75.29	17.555			
11,200.00	11,149.32	11,200.05	11,154.36	39.47	36.55	90.77	-187.73	-1,059.96	1,321.80	1,246.30	75.49	17.509			
11,250.00	11,184.23	11,251.61	11,191.59	39.62	36.59	90.84	-223.39	-1,059.82	1,321.86	1,246.15	75.71	17.460			
11,300.00	11,215.89	11,303.32	11,225.55	39.77	36.65	90.91	-262.35	-1,059.67	1,321.93	1,245.98	75.94	17.407			
11,350.00	11,244.06	11,355.18	11,255.95	39.92	36.73	90.96	-304.34	-1,059.51	1,321.99	1,245.80	76.20	17.350			
11,400.00	11,268.52	11,407.16	11,282.49	40.09	36.82	91.01	-349.02	-1,059.34	1,322.07	1,245.59	76.47	17.288			
11,450.00	11,289.09	11,459.26	11,304.91	40.26	36.93	91.05	-386.02	-1,059.16	1,322.14	1,245.36	76.78	17.220			
11,500.00	11,305.61	11,511.45	11,323.00	40.44	37.07	91.08	-444.96	-1,058.97	1,322.20	1,245.09	77.11	17.147			
11,550.00	11,317.95	11,563.72	11,336.56	40.62	37.23	91.11	-495.41	-1,058.78	1,322.27	1,244.80	77.47	17.068			
11,600.00	11,328.03	11,616.04	11,345.52	40.81	37.41	91.12	-548.95	-1,058.58	1,322.34	1,244.48	77.85	16.985			
11,650.00	11,329.76	11,668.40	11,349.71	41.01	37.62	91.13	-599.12	-1,058.36	1,322.40	1,244.14	78.26	16.897			
11,668.00	11,330.06	11,667.26	11,350.06	41.08	37.69	91.13	-617.97	-1,058.31	1,322.42	1,244.01	78.41	16.865			
11,700.00	11,330.06	11,719.30	11,350.06	41.21	37.84	91.13	-650.02	-1,058.19	1,322.46	1,243.77	78.69	16.806			
11,800.00	11,330.06	11,819.30	11,350.06	41.66	38.32	91.13	-750.02	-1,057.81	1,322.57	1,242.94	79.63	16.609			
11,900.00	11,330.05	11,919.30	11,350.05	42.17	38.67	91.13	-850.01	-1,057.42	1,322.68	1,241.99	80.70	16.390			
12,000.00	11,330.05	12,019.30	11,350.05	42.74	39.49	91.13	-950.01	-1,057.04	1,322.80	1,240.91	81.89	16.153			
12,100.00	11,330.05	12,119.30	11,350.05	43.36	40.16	91.13	-1,050.01	-1,056.66	1,322.91	1,239.71	83.20	15.901			
12,200.00	11,330.05	12,219.30	11,350.05	44.04	40.90	91.13	-1,150.01	-1,056.28	1,323.03	1,238.41	84.62	15.635			
12,300.00	11,330.05	12,319.30	11,350.05	44.77	41.69	91.13	-1,250.01	-1,055.89	1,323.14	1,237.00	86.14	15.360			
12,400.00	11,330.05	12,419.30	11,350.05	45.55	42.53	91.13	-1,350.01	-1,055.51	1,323.25	1,235.48	87.77	15.076			
12,500.00	11,330.05	12,519.30	11,350.05	46.38	43.42	91.13	-1,450.01	-1,055.13	1,323.37	1,233.87	89.49	14.787			
12,600.00	11,330.05	12,619.30	11,350.05	47.25	44.35	91.13	-1,550.01	-1,054.75	1,323.48	1,232.16	91.30	14.495			
12,700.00	11,330.04	12,719.30	11,350.04	48.16	45.33	91.13	-1,650.01	-1,054.36	1,323.59	1,230.39	93.20	14.201			
12,800.00	11,330.04	12,819.30	11,350.04	49.11	46.35	91.13	-1,750.01	-1,053.98	1,323.71	1,228.53	95.18	13.908			
12,900.00	11,330.04	12,919.30	11,350.04	50.11	47.40	91.13	-1,850.01	-1,053.60	1,323.82	1,226.59	97.23	13.610			
13,000.00	11,330.04	13,019.30	11,350.04	51.13	48.49	91.13	-1,950.01	-1,053.21	1,323.94	1,224.59	99.35	13.326			
13,100.00	11,330.04	13,119.30	11,350.04	52.19	49.61	91.13	-2,050.01	-1,052.83	1,324.05	1,222.51	101.53	13.040			
13,200.00	11,330.04	13,219.30	11,350.04	53.28	50.76	91.13	-2,150.00	-1,052.45	1,324.16	1,220.36	103.78	12.759			
13,300.00	11,330.04	13,319.30	11,350.04	54.40	51.94	91.12	-2,250.00	-1,052.07	1,324.28	1,218.19	106.09	12.483			
13,400.00	11,330.03	13,419.30	11,350.03	55.55	53.15	91.12	-2,350.00	-1,051.68	1,324.39	1,215.94	108.45	12.212			
13,500.00	11,330.03	13,519.30	11,350.03	56.72	54.38	91.12	-2,450.00	-1,051.30	1,324.50	1,213.65	110.86	11.948			
13,600.00	11,330.03	13,619.30	11,350.03	57.92	55.63	91.12	-2,550.00	-1,050.92	1,324.62	1,211.30	113.31	11.690			
13,700.00	11,330.03	13,719.30	11,350.03	59.14	56.91	91.12	-2,650.00	-1,050.54	1,324.73	1,208.92	115.81	11.438			
13,800.00	11,330.03	13,819.30	11,350.03	60.38	58.20	91.12	-2,750.00	-1,050.15	1,324.85	1,206.49	118.36	11.194			
13,900.00	11,330.03	13,919.30	11,350.03	61.65	59.51	91.12	-2,850.00	-1,049.77	1,324.96	1,204.02	120.94	10.956			
14,000.00	11,330.03	14,019.30	11,350.03	62.93	60.85	91.12	-2,950.00	-1,049.39	1,325.07	1,201.52	123.56	10.724			
14,100.00	11,330.03	14,119.30	11,350.03	64.23	62.19	91.12	-3,050.00	-1,049.01	1,325.19	1,199.98	126.21	10.500			
14,200.00	11,330.02	14,219.30	11,350.02	65.55	63.56	91.12	-3,150.00	-1,048.62	1,325.30	1,198.41	128.89	10.282			
14,300.00	11,330.02	14,319.30	11,350.02	66.88	64.93	91.12	-3,250.00	-1,048.24	1,325.41	1,196.81	131.61	10.071			
14,400.00	11,330.02	14,419.30	11,350.02	68.23	66.32	91.12	-3,349.99	-1,047.86	1,325.53	1,195.18	134.35	9.866			
14,500.00	11,330.02	14,519.30	11,350.02	69.59	67.73	91.12	-3,449.99	-1,047.48	1,325.64	1,193.54	137.12	9.668			
14,600.00	11,330.02	14,619.30	11,350.02	70.96	69.14	91.12	-3,549.99	-1,047.09	1,325.76	1,191.84	139.91	9.476			
14,700.00	11,330.02	14,719.30	11,350.02	72.35	70.57	91.12	-3,649.99	-1,046.71	1,325.87	1,190.14	142.73	9.289			
14,800.00	11,330.02	14,819.30	11,350.02	73.75	72.01	91.12	-3,749.99	-1,046.33	1,325.98	1,188.41	145.57	9.109			
14,900.00	11,330.01	14,919.30	11,350.01	75.16	73.46	91.12	-3,849.99	-1,045.94	1,326.10	1,186.67	148.43	8.934			
15,000.00	11,330.01	15,019.30	11,350.01	76.58	74.91	91.12	-3,949.99	-1,045.56	1,326.21	1,184.90	151.31	8.765			
15,100.00	11,330.01	15,119.30	11,350.01	78.01	76.38	91.12	-4,049.99	-1,045.18	1,326.32	1,183.12	154.21	8.601			
15,200.00	11,330.01	15,219.30	11,350.01	79.45	77.85	91.12	-4,149.99	-1,044.80	1,326.44	1,181.31	157.12	8.442			
15,300.00	11,330.01	15,319.30	11,350.01	80.90	79.33	91.12	-4,249.99	-1,044.41	1,326.55	1,179.49	160.06	8.288			

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

Pro Directional Anticollision Report

Company: Matador Resources	Local Co-ordinate Reference: Well 223H
Project: Lea County, NM	TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site: MJ Federal Slots 3 & 4	MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 223H	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OH	Database: WellPlanner1
Reference Design: Prelim Plan A	Offset TVD Reference: Offset Datum

Offset Design										MJ Federal Slot 2 - 222H - OH - Prelim Plan A		Offset Site Error: 0.00 usft	
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10780-MWD - OWSG												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,400.00	11,330.01	15,419.30	11,350.01	82.36	80.82	91.12	-4,349.99	-1,044.03	1,326.67	1,163.66	163.01	8.139	
15,500.00	11,330.01	15,519.30	11,350.01	83.82	82.32	91.12	-4,449.99	-1,043.65	1,326.78	1,160.81	155.97	7.994	
15,600.00	11,330.00	15,619.30	11,350.00	85.29	83.82	91.12	-4,549.99	-1,043.27	1,326.89	1,157.95	168.95	7.854	
15,700.00	11,330.00	15,719.30	11,350.00	86.77	85.33	91.12	-4,649.98	-1,042.88	1,327.01	1,155.07	171.94	7.718	
15,800.00	11,330.00	15,819.30	11,350.00	88.26	86.84	91.12	-4,749.98	-1,042.50	1,327.12	1,152.18	174.94	7.586	
15,900.00	11,330.00	15,919.30	11,350.00	89.75	88.36	91.12	-4,849.98	-1,042.12	1,327.23	1,149.28	177.96	7.458	
15,930.10	11,330.00	15,949.39	11,350.00	90.20	88.82	91.12	-4,880.08	-1,042.00	1,327.27	1,148.40	178.87	7.420 SF	

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error:
Survey Program: O-MWD - OWSG, 500-MWD - OWSG, 11200-MWD - OWSG													0.00 usft
Reference		Offset		Serial Major Axis			Distance						Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	5.00	-5.00	0.00	0.01	-91.58	-21.00	-762.00	762.29				
100.00	100.00	105.00	95.00	0.13	0.15	-91.58	-21.00	-762.00	762.29	762.02	0.27	2,779.734	
200.00	200.00	205.00	195.00	0.49	0.50	-91.58	-21.00	-762.00	762.29	761.30	0.99	769.077	
300.00	300.00	305.00	295.00	0.85	0.86	-91.58	-21.00	-762.00	762.29	760.58	1.71	446.275	
400.00	400.00	405.00	395.00	1.20	1.21	-91.58	-21.00	-762.00	762.29	759.87	2.42	315.429	
500.00	500.00	495.00	485.00	1.56	1.38	-91.58	-21.00	-762.00	762.29	759.34	2.85	258.677 CC, ES	
600.00	599.99	584.82	584.82	1.91	1.47	169.74	-20.74	-762.57	763.78	760.40	3.38	225.940	
700.00	699.98	673.97	673.95	2.26	1.60	189.82	-19.91	-764.41	768.39	764.53	3.88	198.098	
800.00	799.86	762.85	762.75	2.61	1.78	169.97	-18.52	-767.49	776.11	771.73	4.39	176.861	
900.00	899.68	851.30	851.08	2.96	2.00	170.17	-16.57	-771.81	786.95	782.00	4.95	158.879	
1,000.00	999.37	939.21	938.78	3.32	2.25	170.42	-14.08	-777.34	800.89	795.35	5.54	144.492	
1,100.00	1,098.99	1,030.02	1,029.27	3.69	2.52	170.74	-10.95	-784.26	817.01	810.85	6.18	132.662	
1,200.00	1,198.60	1,128.53	1,127.41	4.06	2.84	171.09	-7.42	-792.08	833.50	826.68	6.81	122.313	
1,300.00	1,298.22	1,227.04	1,225.54	4.44	3.17	171.42	-3.89	-799.91	850.01	842.52	7.48	113.580	
1,400.00	1,397.84	1,325.55	1,323.67	4.81	3.51	171.74	-0.35	-807.73	866.55	858.38	8.18	106.172	
1,500.00	1,497.46	1,424.06	1,421.81	5.19	3.86	172.05	3.18	-815.56	883.11	874.26	8.85	99.809	
1,600.00	1,597.08	1,522.56	1,519.94	5.57	4.21	172.35	6.71	-823.38	899.70	890.16	9.54	94.314	
1,700.00	1,696.70	1,621.07	1,618.08	5.94	4.57	172.64	10.25	-831.21	916.31	906.07	10.23	89.526	
1,800.00	1,796.32	1,719.58	1,716.21	6.32	4.93	172.91	13.78	-839.03	932.94	922.01	10.93	85.328	
1,900.00	1,895.94	1,818.09	1,814.34	6.70	5.29	173.18	17.31	-846.86	949.59	937.96	11.64	81.615	
2,000.00	1,895.56	1,816.60	1,812.48	7.08	5.66	173.44	20.85	-854.68	966.27	953.93	12.34	78.313	
2,100.00	2,095.18	2,015.11	2,010.61	7.47	6.02	173.69	24.38	-862.51	982.96	969.91	13.04	75.359	
2,200.00	2,194.80	2,113.62	2,108.75	7.85	6.39	173.93	27.91	-870.33	999.67	985.91	13.75	72.701	
2,300.00	2,294.42	2,212.13	2,206.88	8.23	6.76	174.18	31.44	-878.16	1,016.39	1,001.93	14.46	70.298	
2,400.00	2,394.04	2,310.63	2,305.01	8.61	7.13	174.39	34.98	-885.98	1,033.13	1,017.96	15.17	68.117	
2,500.00	2,493.66	2,409.14	2,403.15	8.99	7.50	174.60	38.51	-893.81	1,049.89	1,034.01	15.88	66.127	
2,600.00	2,593.28	2,507.65	2,501.28	9.38	7.87	174.82	42.04	-901.63	1,066.66	1,050.07	16.59	64.306	
2,700.00	2,692.90	2,606.16	2,599.41	9.76	8.24	175.02	45.58	-909.46	1,083.44	1,066.14	17.30	62.632	
2,800.00	2,792.52	2,704.87	2,697.55	10.14	8.62	175.22	49.11	-917.28	1,100.24	1,082.23	18.01	61.090	
2,900.00	2,892.14	2,803.18	2,795.68	10.52	8.99	175.41	52.64	-925.11	1,117.04	1,098.32	18.72	59.664	
3,000.00	2,891.76	2,801.69	2,893.82	10.91	9.36	175.60	56.18	-932.93	1,133.87	1,114.43	19.43	58.342	
3,100.00	3,091.37	3,000.20	2,991.95	11.29	9.74	175.78	59.71	-940.76	1,150.70	1,130.55	20.15	57.113	
3,200.00	3,190.99	3,101.30	3,090.08	11.67	10.12	175.95	63.24	-948.58	1,167.54	1,148.87	20.87	55.943	
3,300.00	3,290.61	3,202.79	3,188.22	12.06	10.51	176.13	66.78	-956.41	1,184.39	1,162.80	21.59	54.846	
3,400.00	3,390.23	3,304.28	3,286.35	12.44	10.89	176.29	70.31	-964.23	1,201.26	1,178.94	22.32	53.821	
3,500.00	3,489.85	3,405.77	3,384.49	12.82	11.28	176.45	73.84	-972.06	1,218.13	1,195.09	23.04	52.860	
3,528.29	3,519.03	3,423.08	3,413.22	12.94	11.34	176.50	74.88	-974.35	1,223.07	1,199.86	23.21	52.692	
3,600.00	3,589.51	3,492.81	3,482.69	13.21	11.61	176.62	77.38	-979.89	1,234.58	1,210.87	23.72	52.056	
3,700.00	3,689.29	3,608.34	3,581.16	13.58	12.05	176.77	80.92	-987.74	1,249.40	1,224.91	24.49	51.015	
3,800.00	3,789.17	3,690.75	3,679.87	13.94	12.36	176.92	84.48	-995.61	1,262.49	1,237.35	25.14	50.210	
3,900.00	3,889.12	3,790.05	3,778.80	14.30	12.74	177.06	88.04	-1,003.50	1,273.87	1,248.01	25.86	49.264	
4,000.00	3,989.11	3,889.55	3,877.92	14.65	13.12	177.19	91.61	-1,011.40	1,283.51	1,256.94	26.57	48.304	
4,029.29	4,018.39	3,918.71	3,906.97	14.75	13.23	-84.08	92.65	-1,013.72	1,286.01	1,259.23	26.78	48.025	
4,100.00	4,089.11	3,989.16	3,977.15	14.98	13.50	-83.97	95.18	-1,019.31	1,291.86	1,264.59	27.27	47.371	
4,200.00	4,189.11	4,088.78	4,076.39	15.31	13.88	-83.65	98.75	-1,027.23	1,300.15	1,272.18	27.97	46.483	
4,300.00	4,289.11	4,188.40	4,175.63	15.64	14.26	-83.73	102.32	-1,035.14	1,308.43	1,279.78	28.67	45.637	
4,400.00	4,389.11	4,294.80	4,281.64	15.97	14.67	-83.61	106.11	-1,043.52	1,316.67	1,287.26	29.41	44.776	
4,500.00	4,489.11	4,422.58	4,409.09	16.31	15.15	-83.49	109.82	-1,051.74	1,323.39	1,293.15	30.24	43.762	
4,600.00	4,589.11	4,550.70	4,537.06	16.64	15.61	-83.41	112.37	-1,057.39	1,328.00	1,296.94	31.06	42.752	
4,700.00	4,689.11	4,679.04	4,665.35	16.96	16.06	-83.36	113.74	-1,060.43	1,330.47	1,298.60	31.87	41.745	
4,800.00	4,789.11	4,802.21	4,784.11	17.32	16.47	-83.36	114.00	-1,061.00	1,330.94	1,298.30	32.64	40.773	
4,900.00	4,889.11	4,902.21	4,884.11	17.65	16.80	-83.36	114.00	-1,061.00	1,330.94	1,297.61	33.33	39.934	

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11200-MWD - OWSG													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)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,000.00	4,989.11	5,002.21	4,984.11	17.99	17.14	-83.36	114.00	-1,061.00	1,330.94	1,296.92	34.02	39.128		
5,100.00	5,089.11	5,102.21	5,084.11	18.33	17.47	-83.36	114.00	-1,061.00	1,330.94	1,296.24	34.70	38.351		
5,200.00	5,189.11	5,202.21	5,184.11	18.67	17.80	-83.36	114.00	-1,061.00	1,330.94	1,295.55	35.39	37.604		
5,300.00	5,289.11	5,302.21	5,284.11	19.01	18.14	-83.36	114.00	-1,061.00	1,330.94	1,294.86	36.08	36.885		
5,400.00	5,389.11	5,402.21	5,384.11	19.35	18.47	-83.36	114.00	-1,061.00	1,330.94	1,294.16	36.78	36.191		
5,500.00	5,489.11	5,502.21	5,484.11	19.69	18.81	-83.36	114.00	-1,061.00	1,330.94	1,293.47	37.47	35.522		
5,600.00	5,589.11	5,602.21	5,584.11	20.04	19.15	-83.36	114.00	-1,061.00	1,330.94	1,292.78	38.16	34.876		
5,700.00	5,689.11	5,702.21	5,684.11	20.38	19.49	-83.36	114.00	-1,061.00	1,330.94	1,292.08	38.86	34.253		
5,800.00	5,789.11	5,802.21	5,784.11	20.72	19.82	-83.36	114.00	-1,061.00	1,330.94	1,291.39	39.55	33.651		
5,900.00	5,889.11	5,902.21	5,884.11	21.07	20.16	-83.36	114.00	-1,061.00	1,330.94	1,290.69	40.25	33.089		
6,000.00	5,989.11	6,002.21	5,984.11	21.41	20.50	-83.36	114.00	-1,061.00	1,330.94	1,290.00	40.94	32.507		
6,100.00	6,089.11	6,102.21	6,084.11	21.76	20.85	-83.36	114.00	-1,061.00	1,330.94	1,289.30	41.64	31.962		
6,200.00	6,189.11	6,202.21	6,184.11	22.10	21.19	-83.36	114.00	-1,061.00	1,330.94	1,288.60	42.34	31.435		
6,300.00	6,289.11	6,302.21	6,284.11	22.45	21.53	-83.36	114.00	-1,061.00	1,330.94	1,287.90	43.04	30.925		
6,400.00	6,389.11	6,402.21	6,384.11	22.79	21.87	-83.36	114.00	-1,061.00	1,330.94	1,287.20	43.74	30.431		
6,500.00	6,489.11	6,502.21	6,484.11	23.14	22.21	-83.36	114.00	-1,061.00	1,330.94	1,286.50	44.44	29.952		
6,600.00	6,589.11	6,602.21	6,584.11	23.49	22.56	-83.36	114.00	-1,061.00	1,330.94	1,285.80	45.14	29.487		
6,700.00	6,689.11	6,702.21	6,684.11	23.83	22.90	-83.36	114.00	-1,061.00	1,330.94	1,285.10	45.84	29.036		
6,800.00	6,789.11	6,802.21	6,784.11	24.18	23.25	-83.36	114.00	-1,061.00	1,330.94	1,284.40	46.54	28.598		
6,900.00	6,889.11	6,902.21	6,884.11	24.53	23.59	-83.36	114.00	-1,061.00	1,330.94	1,283.70	47.24	28.174		
7,000.00	6,989.11	7,002.21	6,984.11	24.88	23.94	-83.36	114.00	-1,061.00	1,330.94	1,283.00	47.94	27.761		
7,100.00	7,089.11	7,102.21	7,084.11	25.22	24.28	-83.36	114.00	-1,061.00	1,330.94	1,282.29	48.65	27.360		
7,200.00	7,189.11	7,202.21	7,184.11	25.57	24.63	-83.36	114.00	-1,061.00	1,330.94	1,281.59	49.35	26.970		
7,300.00	7,289.11	7,302.21	7,284.11	25.92	24.98	-83.36	114.00	-1,061.00	1,330.94	1,280.89	50.05	26.591		
7,400.00	7,389.11	7,402.21	7,384.11	26.27	25.32	-83.36	114.00	-1,061.00	1,330.94	1,280.18	50.76	26.222		
7,500.00	7,489.11	7,502.21	7,484.11	26.62	25.67	-83.36	114.00	-1,061.00	1,330.94	1,279.48	51.46	25.864		
7,600.00	7,589.11	7,602.21	7,584.11	26.97	26.02	-83.36	114.00	-1,061.00	1,330.94	1,278.77	52.16	25.514		
7,700.00	7,689.11	7,702.21	7,684.11	27.32	26.36	-83.36	114.00	-1,061.00	1,330.94	1,278.07	52.87	25.174		
7,800.00	7,789.11	7,802.21	7,784.11	27.67	26.71	-83.36	114.00	-1,061.00	1,330.94	1,277.36	53.57	24.843		
7,900.00	7,889.11	7,902.21	7,884.11	28.02	27.06	-83.36	114.00	-1,061.00	1,330.94	1,276.66	54.28	24.520		
8,000.00	7,989.11	8,002.21	7,984.11	28.37	27.41	-83.36	114.00	-1,061.00	1,330.94	1,275.95	54.99	24.205		
8,100.00	8,089.11	8,102.21	8,084.11	28.72	27.76	-83.36	114.00	-1,061.00	1,330.94	1,275.25	55.69	23.898		
8,200.00	8,189.11	8,202.21	8,184.11	29.07	28.11	-83.36	114.00	-1,061.00	1,330.94	1,274.54	56.40	23.599		
8,300.00	8,289.11	8,302.21	8,284.11	29.42	28.46	-83.36	114.00	-1,061.00	1,330.94	1,273.83	57.11	23.307		
8,400.00	8,389.11	8,402.21	8,384.11	29.78	28.80	-83.36	114.00	-1,061.00	1,330.94	1,273.13	57.81	23.022		
8,500.00	8,489.11	8,502.21	8,484.11	30.13	29.15	-83.36	114.00	-1,061.00	1,330.94	1,272.42	58.52	22.744		
8,600.00	8,589.11	8,602.21	8,584.11	30.48	29.50	-83.36	114.00	-1,061.00	1,330.94	1,271.71	59.23	22.472		
8,700.00	8,689.11	8,702.21	8,684.11	30.83	29.85	-83.36	114.00	-1,061.00	1,330.94	1,271.01	59.93	22.207		
8,800.00	8,789.11	8,802.21	8,784.11	31.18	30.20	-83.36	114.00	-1,061.00	1,330.94	1,270.30	60.64	21.947		
8,900.00	8,889.11	8,902.21	8,884.11	31.54	30.56	-83.36	114.00	-1,061.00	1,330.94	1,269.59	61.35	21.694		
9,000.00	8,989.11	9,002.21	8,984.11	31.89	30.91	-83.36	114.00	-1,061.00	1,330.94	1,268.88	62.06	21.447		
9,100.00	9,089.11	9,102.21	9,084.11	32.24	31.26	-83.36	114.00	-1,061.00	1,330.94	1,268.17	62.77	21.205		
9,200.00	9,189.11	9,202.21	9,184.11	32.59	31.61	-83.36	114.00	-1,061.00	1,330.94	1,267.46	63.48	20.968		
9,300.00	9,289.11	9,302.21	9,284.11	32.94	31.96	-83.36	114.00	-1,061.00	1,330.94	1,266.76	64.18	20.736		
9,400.00	9,389.11	9,402.21	9,384.11	33.30	32.31	-83.36	114.00	-1,061.00	1,330.94	1,266.05	64.89	20.510		
9,500.00	9,489.11	9,502.21	9,484.11	33.65	32.66	-83.36	114.00	-1,061.00	1,330.94	1,265.34	65.60	20.288		
9,600.00	9,589.11	9,602.21	9,584.11	34.00	33.01	-83.36	114.00	-1,061.00	1,330.94	1,264.63	66.31	20.071		
9,700.00	9,689.11	9,702.21	9,684.11	34.36	33.36	-83.36	114.00	-1,061.00	1,330.94	1,263.92	67.02	19.859		
9,800.00	9,789.11	9,802.21	9,784.11	34.71	33.72	-83.36	114.00	-1,061.00	1,330.94	1,263.21	67.73	19.650		
9,900.00	9,889.11	9,902.21	9,884.11	35.06	34.07	-83.36	114.00	-1,061.00	1,330.94	1,262.50	68.44	19.447		
10,000.00	9,989.11	10,002.21	9,984.11	35.42	34.42	-83.36	114.00	-1,061.00	1,330.94	1,261.79	69.15	19.247		
10,100.00	10,089.11	10,102.21	10,084.11	35.77	34.77	-83.36	114.00	-1,061.00	1,330.94	1,261.08	69.86	19.051		

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design: MJ Federal Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error:
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11200-MWD - OWSG													Offset Well Error:
Reference	Offset	Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum	Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)		
10,200.00	10,189.11	10,202.21	10,184.11	36.12	35.13	-83.36	114.00	-1,061.00	1,330.84	1,260.37	70.57	18.860	
10,300.00	10,289.11	10,302.21	10,284.11	36.48	35.48	-83.36	114.00	-1,061.00	1,330.84	1,259.66	71.28	18.672	
10,400.00	10,389.11	10,402.21	10,384.11	36.83	35.83	-83.36	114.00	-1,061.00	1,330.84	1,258.95	71.99	18.487	
10,500.00	10,489.11	10,502.21	10,484.11	37.19	36.18	-83.36	114.00	-1,061.00	1,330.84	1,258.24	72.70	18.307	
10,600.00	10,589.11	10,602.21	10,584.11	37.54	36.54	-83.36	114.00	-1,061.00	1,330.84	1,257.53	73.41	18.129	
10,700.00	10,689.11	10,702.21	10,684.11	37.89	36.89	-83.36	114.00	-1,061.00	1,330.84	1,256.82	74.12	17.956	
10,767.99	10,757.10	10,765.79	10,752.10	38.13	37.11	-83.36	114.00	-1,061.00	1,330.84	1,256.35	74.59	17.843	
10,800.00	10,789.09	10,802.22	10,784.09	38.24	37.24	96.66	114.00	-1,061.00	1,331.05	1,256.22	74.83	17.787	
10,850.00	10,838.83	10,847.52	10,833.83	38.41	37.40	97.11	114.00	-1,061.00	1,331.65	1,256.50	75.16	17.719	
10,900.00	10,887.94	10,903.37	10,882.94	38.57	37.60	97.38	114.00	-1,061.00	1,332.85	1,257.33	75.52	17.650	
10,950.00	10,938.06	10,944.75	10,931.06	38.73	37.75	97.75	114.00	-1,061.00	1,334.70	1,258.88	75.82	17.603	
11,000.00	10,982.82	11,008.49	10,977.82	38.89	37.97	98.19	114.00	-1,061.00	1,337.32	1,261.12	76.20	17.549	
11,050.00	11,027.86	11,036.55	11,022.86	39.04	38.07	98.67	114.00	-1,061.00	1,340.85	1,264.39	76.48	17.538	
11,100.00	11,070.84	11,079.52	11,065.84	39.19	38.22	99.14	114.00	-1,061.00	1,345.43	1,268.67	76.76	17.529	
11,150.00	11,111.43	11,120.12	11,106.43	39.33	38.33	99.56	114.00	-1,061.00	1,351.24	1,274.23	77.01	17.546	
11,200.00	11,149.32	11,158.01	11,144.32	39.47	38.40	99.89	114.00	-1,061.00	1,358.45	1,281.23	77.22	17.592	
11,250.00	11,184.23	11,192.92	11,179.23	39.62	38.46	100.06	114.00	-1,061.00	1,367.21	1,289.79	77.42	17.659	
11,300.00	11,215.89	11,224.39	11,200.49	39.77	38.47	101.58	109.28	-1,060.98	1,377.23	1,299.70	77.53	17.763	
11,350.00	11,244.06	11,400.61	11,382.89	39.92	38.47	104.08	79.51	-1,060.87	1,387.12	1,309.69	77.43	17.914	
11,400.00	11,268.52	11,576.59	11,536.53	40.09	38.50	107.01	-4.89	-1,060.55	1,395.52	1,318.58	78.93	18.139	
11,450.00	11,289.09	11,450.00	11,673.18	40.26	38.45	108.97	-156.58	-1,059.97	1,400.15	1,324.23	75.92	18.442	
11,500.00	11,305.61	11,500.00	11,755.83	40.44	38.54	108.94	-391.84	-1,059.08	1,399.31	1,324.45	74.86	18.692	
11,550.00	11,317.85	12,142.66	11,760.05	40.62	39.32	108.33	-500.83	-1,058.66	1,395.50	1,318.54	78.96	18.133	
11,600.00	11,326.03	12,208.01	11,760.06	40.81	39.50	108.26	-550.15	-1,058.47	1,392.98	1,315.51	77.47	17.981	
11,650.00	11,329.78	12,241.83	11,760.06	41.01	39.70	108.22	-599.99	-1,058.28	1,391.86	1,314.02	77.84	17.681	
11,665.98	11,330.05	12,257.81	11,760.08	41.07	39.77	108.21	-615.97	-1,058.22	1,391.79	1,313.82	77.97	17.850	
11,666.00	11,330.06	12,259.83	11,760.06	41.08	39.78	108.21	-617.99	-1,058.22	1,391.79	1,313.81	77.99	17.846	
11,700.00	11,330.06	12,308.17	11,760.08	41.21	39.99	108.21	-649.99	-1,058.09	1,391.83	1,313.51	78.32	17.771	
11,800.00	11,330.06	12,408.17	11,760.05	41.66	40.49	108.21	-749.99	-1,057.71	1,391.94	1,312.70	79.24	17.566	
11,900.00	11,330.05	12,508.17	11,760.05	42.17	41.05	108.21	-849.99	-1,057.33	1,392.05	1,311.77	80.28	17.341	
12,000.00	11,330.05	12,608.17	11,760.05	42.74	41.67	108.21	-949.99	-1,056.95	1,392.16	1,310.73	81.43	17.097	
12,100.00	11,330.05	12,708.17	11,760.05	43.38	42.35	108.21	-1,049.99	-1,056.57	1,392.27	1,309.99	82.68	16.838	
12,200.00	11,330.05	12,808.17	11,760.05	44.04	43.08	108.20	-1,149.99	-1,056.19	1,392.38	1,308.33	84.05	16.587	
12,300.00	11,330.05	12,908.17	11,760.05	44.77	43.87	108.20	-1,249.99	-1,055.81	1,392.49	1,306.88	85.51	16.285	
12,400.00	11,330.05	13,008.17	11,760.05	45.55	44.70	108.20	-1,349.99	-1,055.43	1,392.60	1,305.54	87.07	15.995	
12,500.00	11,330.05	13,108.17	11,760.05	46.38	45.59	108.20	-1,449.99	-1,055.05	1,392.71	1,304.00	88.71	15.699	
12,600.00	11,330.05	13,208.17	11,760.04	47.25	46.51	108.20	-1,549.98	-1,054.67	1,392.82	1,302.38	90.44	15.400	
12,700.00	11,330.04	13,308.17	11,760.04	48.16	47.47	108.20	-1,649.98	-1,054.29	1,392.93	1,300.68	92.25	15.100	
12,800.00	11,330.04	13,408.17	11,760.04	49.11	48.48	108.20	-1,749.98	-1,053.91	1,393.04	1,299.91	94.13	14.799	
12,900.00	11,330.04	13,508.17	11,760.04	50.11	49.52	108.19	-1,849.98	-1,053.53	1,393.15	1,297.06	96.09	14.499	
13,000.00	11,330.04	13,608.17	11,760.04	51.13	50.59	108.19	-1,949.98	-1,053.15	1,393.26	1,295.15	98.11	14.201	
13,100.00	11,330.04	13,708.17	11,760.04	52.19	51.70	108.19	-2,049.98	-1,052.77	1,393.37	1,293.18	100.19	13.907	
13,200.00	11,330.04	13,808.17	11,760.04	53.28	52.83	108.19	-2,149.98	-1,052.39	1,393.48	1,291.15	102.33	13.617	
13,300.00	11,330.04	13,891.83	11,760.03	54.40	53.80	108.19	-2,249.98	-1,052.01	1,393.59	1,289.25	104.34	13.356	
13,400.00	11,330.03	14,008.17	11,760.03	55.55	55.18	108.19	-2,349.98	-1,051.63	1,393.70	1,288.93	106.78	13.052	
13,500.00	11,330.03	14,108.17	11,760.03	56.72	56.40	108.19	-2,449.98	-1,051.25	1,393.81	1,287.74	109.07	12.779	
13,600.00	11,330.03	14,208.17	11,760.03	57.92	57.83	108.18	-2,549.98	-1,050.87	1,393.92	1,286.51	111.42	12.511	
13,700.00	11,330.03	14,308.17	11,760.03	59.14	58.89	108.18	-2,649.98	-1,050.49	1,394.03	1,285.23	113.80	12.250	
13,800.00	11,330.03	14,408.17	11,760.03	60.38	60.17	108.18	-2,749.98	-1,050.11	1,394.14	1,277.92	116.22	11.995	
13,900.00	11,330.03	14,508.17	11,760.03	61.65	61.46	108.18	-2,849.97	-1,049.73	1,394.25	1,275.57	118.69	11.747	
14,000.00	11,330.03	14,608.17	11,760.03	62.93	62.78	108.18	-2,949.97	-1,049.35	1,394.36	1,273.18	121.18	11.506	
14,100.00	11,330.03	14,708.17	11,760.02	64.23	64.11	108.18	-3,049.97	-1,048.96	1,394.47	1,270.78	123.71	11.272	

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

Pro Directional Anticollision Report

Company: Matador Resources Project: Lea County, NM Reference Site: MJ Federal Slots 3 & 4 Site Error: 0.00 usft Reference Well: 223H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:	Well 223H Rig @ 3690.50usft (GL:3662'+KB:28.5') Rig @ 3690.50usft (GL:3662'+KB:28.5') Grid Minimum Curvature 2.00 sigma WellPlanner1 Offset Datum
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Offset Design MJ Federal Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11200-MWD - OWSG													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,200.00	11,330.02	14,808.17	11,760.02	65.55	65.46	108.18	-3,149.97	-1,048.58	1,394.58	1,268.31	126.27	11.044	
14,300.00	11,330.02	14,908.17	11,760.02	66.88	66.82	108.17	-3,249.97	-1,048.20	1,394.69	1,265.83	128.86	10.823	
14,400.00	11,330.02	15,008.17	11,760.02	68.23	68.19	108.17	-3,349.97	-1,047.82	1,394.81	1,263.32	131.48	10.608	
14,500.00	11,330.02	15,108.17	11,760.02	69.59	69.56	108.17	-3,449.97	-1,047.44	1,394.92	1,260.79	134.13	10.400	
14,600.00	11,330.02	15,208.17	11,760.02	70.96	70.98	108.17	-3,549.97	-1,047.06	1,395.03	1,258.23	136.80	10.198	
14,700.00	11,330.02	15,308.17	11,760.02	72.35	72.39	108.17	-3,649.97	-1,046.68	1,395.14	1,255.65	139.49	10.002	
14,800.00	11,330.02	15,408.17	11,760.02	73.75	73.81	108.17	-3,749.97	-1,046.30	1,395.25	1,253.05	142.20	9.812	
14,900.00	11,330.01	15,508.17	11,760.01	75.16	75.25	108.16	-3,849.97	-1,045.92	1,395.36	1,250.42	144.93	9.628	
15,000.00	11,330.01	15,608.17	11,760.01	76.58	76.69	108.16	-3,949.97	-1,045.54	1,395.47	1,247.78	147.69	9.449	
15,100.00	11,330.01	15,708.17	11,760.01	78.01	78.14	108.16	-4,049.96	-1,045.16	1,395.58	1,245.12	150.46	9.276	
15,200.00	11,330.01	15,808.17	11,760.01	79.45	79.60	108.16	-4,149.96	-1,044.78	1,395.69	1,242.44	153.25	9.107	
15,300.00	11,330.01	15,908.17	11,760.01	80.90	81.07	108.16	-4,249.96	-1,044.40	1,395.80	1,239.75	156.05	8.944	
15,400.00	11,330.01	16,008.18	11,760.01	82.38	82.54	108.16	-4,349.96	-1,044.02	1,395.91	1,237.03	158.87	8.786	
15,500.00	11,330.01	16,108.18	11,760.01	83.82	84.03	108.16	-4,449.96	-1,043.64	1,396.02	1,234.31	161.71	8.633	
15,600.00	11,330.00	16,191.83	11,760.00	85.29	85.27	108.15	-4,549.96	-1,043.26	1,396.13	1,231.81	164.32	8.496	
15,700.00	11,330.00	16,308.18	11,760.00	86.77	87.01	108.15	-4,649.96	-1,042.88	1,396.24	1,228.82	167.42	8.340	
15,800.00	11,330.00	16,408.18	11,760.00	88.26	88.52	108.15	-4,749.96	-1,042.50	1,396.35	1,226.05	170.30	8.200	
15,900.00	11,330.00	16,491.83	11,760.00	89.75	89.78	108.15	-4,849.96	-1,042.12	1,396.46	1,223.51	172.94	8.075	
15,930.10	11,330.00	16,521.92	11,760.00	90.20	90.23	108.15	-4,880.05	-1,042.00	1,396.49	1,222.68	173.82	8.034 SF	

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 124H - OH - Prelim Plan A														Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 9771-MWD - OWSG														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	1.00	1.00	0.00	0.00	90.00	0.00	60.00	60.00						
100.00	100.00	101.00	101.00	0.13	0.13	90.00	0.00	60.00	60.00	59.74	0.26	230.865			
200.00	200.00	201.00	201.00	0.49	0.49	90.00	0.00	60.00	60.00	59.02	0.98	61.423			
300.00	300.00	301.00	301.00	0.85	0.85	90.00	0.00	60.00	60.00	58.31	1.68	35.424			
400.00	400.00	401.00	401.00	1.20	1.21	90.00	0.00	60.00	60.00	57.59	2.41	24.889			
500.00	500.00	501.00	501.00	1.56	1.57	90.00	0.00	60.00	60.00	56.87	3.13	19.184			
600.00	599.99	599.97	599.96	1.91	1.75	-8.70	-0.14	80.86	60.01	56.35	3.66	16.380			
700.00	699.96	699.94	699.90	2.26	1.82	-8.68	-0.56	63.41	59.99	55.92	4.08	14.720			
800.00	799.88	797.92	797.79	2.61	1.98	-8.64	-1.26	67.64	59.98	55.40	4.56	13.159			
900.00	899.68	898.90	896.58	2.96	2.15	-8.58	-2.23	73.56	59.90	54.81	5.09	11.768			
1,000.00	999.37	995.88	995.26	3.32	2.39	-8.51	-3.48	81.16	59.83	54.16	5.67	10.535			
1,005.03	1,004.38	1,000.86	1,000.22	3.34	2.40	-8.50	-3.55	81.59	59.83	54.13	5.70	10.501 CC, ES			
1,100.00	1,098.99	1,094.85	1,093.78	3.89	2.66	-8.30	-5.01	90.44	60.60	54.32	6.28	9.654			
1,200.00	1,198.60	1,193.76	1,192.07	4.06	2.97	-7.66	-6.81	101.39	63.07	56.16	6.91	8.130			
1,300.00	1,298.22	1,292.56	1,290.04	4.44	3.30	-7.26	-8.89	114.00	67.26	56.70	7.56	8.900 SF			
1,400.00	1,397.84	1,391.19	1,387.60	4.81	3.68	-6.55	-11.23	128.25	73.16	64.94	8.22	8.903			
1,500.00	1,497.46	1,489.58	1,484.67	5.19	4.03	-5.81	-13.84	144.11	80.77	71.89	8.89	9.089			
1,600.00	1,597.08	1,587.69	1,581.16	5.57	4.43	-5.09	-16.72	161.57	90.10	80.54	9.56	9.423			
1,700.00	1,696.70	1,686.45	1,677.01	5.94	4.85	-4.42	-19.85	180.57	101.13	90.89	10.24	9.874			
1,800.00	1,796.32	1,782.81	1,772.12	6.32	5.29	-3.82	-23.23	201.11	113.86	102.93	10.92	10.423			
1,900.00	1,895.94	1,879.72	1,866.42	6.70	5.75	-3.28	-26.85	223.13	128.27	116.66	11.61	11.050			
2,000.00	1,895.56	1,878.03	1,861.82	7.08	6.23	-2.82	-30.71	246.56	143.84	131.52	12.32	11.676			
2,100.00	2,095.18	2,076.80	2,057.66	7.47	6.73	-2.45	-34.59	270.14	159.45	146.41	13.04	12.226			
2,200.00	2,194.80	2,175.57	2,153.49	7.85	7.23	-2.14	-38.47	293.71	175.07	161.30	13.77	12.715			
2,300.00	2,294.42	2,274.34	2,249.33	8.23	7.74	-1.89	-42.35	317.29	190.70	176.20	14.50	13.153			
2,400.00	2,394.04	2,373.11	2,345.16	8.61	8.25	-1.67	-46.23	340.87	206.32	191.09	15.23	13.547			
2,500.00	2,493.66	2,471.87	2,441.00	8.99	8.76	-1.48	-50.11	364.45	221.95	205.99	15.96	13.903			
2,600.00	2,593.28	2,570.64	2,536.83	9.38	9.28	-1.32	-53.99	388.02	237.58	220.88	16.70	14.226			
2,700.00	2,692.90	2,669.41	2,632.67	9.76	9.80	-1.18	-57.87	411.60	253.22	235.78	17.44	14.521			
2,800.00	2,792.52	2,768.18	2,728.50	10.14	10.33	-1.05	-61.75	435.18	268.85	250.67	18.18	14.791			
2,900.00	2,892.14	2,866.95	2,824.34	10.52	10.85	-0.94	-65.63	458.75	284.49	265.57	18.92	15.039			
3,000.00	2,991.76	2,965.72	2,920.17	10.91	11.38	-0.84	-69.51	482.33	300.12	280.46	19.66	15.267			
3,100.00	3,091.37	3,064.49	3,016.01	11.29	11.80	-0.75	-73.40	505.91	315.76	295.36	20.40	15.479			
3,200.00	3,190.99	3,163.26	3,111.84	11.67	12.43	-0.67	-77.28	529.48	331.40	310.25	21.14	15.675			
3,300.00	3,290.61	3,262.02	3,207.68	12.06	12.96	-0.60	-81.16	553.06	347.04	325.15	21.89	15.857			
3,400.00	3,390.23	3,360.79	3,303.51	12.44	13.49	-0.53	-85.04	576.64	362.67	340.04	22.63	16.026			
3,500.00	3,489.85	3,459.56	3,399.35	12.82	14.02	-0.47	-88.92	600.22	378.31	354.94	23.37	16.185			
3,529.29	3,519.03	3,488.49	3,427.41	12.94	14.18	-0.45	-90.05	607.12	382.89	359.30	23.59	16.229			
3,600.00	3,589.51	3,558.26	3,495.11	13.21	14.95	-0.41	-92.80	623.78	394.38	370.26	24.12	16.351			
3,700.00	3,689.29	3,656.68	3,590.61	13.58	15.08	-0.35	-96.66	647.27	412.10	387.24	24.86	16.576			
3,800.00	3,789.17	3,754.77	3,685.78	13.94	15.61	-0.30	-100.52	670.68	431.53	405.93	25.60	16.857			
3,900.00	3,889.12	3,852.51	3,780.62	14.30	16.14	-0.26	-104.36	694.02	452.67	426.34	26.34	17.189			
4,000.00	3,989.11	3,949.86	3,875.08	14.65	16.67	-0.21	-108.18	717.26	475.52	448.45	27.07	17.569			
4,029.29	4,018.39	3,978.29	3,902.67	14.75	16.82	98.51	-109.30	724.04	482.53	455.25	27.28	17.690			
4,100.00	4,089.11	4,046.91	3,969.25	14.88	17.19	98.54	-112.00	740.42	499.64	471.85	27.78	17.985			
4,200.00	4,189.11	4,143.94	4,063.39	15.31	17.72	98.58	-115.81	763.58	523.83	495.33	28.49	18.385			
4,300.00	4,289.11	4,240.97	4,157.54	15.64	18.24	98.61	-119.62	786.75	548.02	518.81	29.21	18.764			
4,400.00	4,389.11	4,338.00	4,251.69	15.97	18.77	98.64	-123.43	809.91	572.21	542.29	29.92	19.124			
4,500.00	4,489.11	4,435.03	4,345.83	16.31	19.30	98.67	-127.25	833.07	596.40	565.76	30.64	19.468			
4,600.00	4,589.11	4,532.05	4,439.98	16.64	19.82	98.70	-131.06	856.23	620.59	589.24	31.35	19.794			
4,700.00	4,689.11	4,629.08	4,534.13	16.98	20.35	98.72	-134.87	879.39	644.78	612.71	32.07	20.106			
4,800.00	4,789.11	4,728.11	4,628.26	17.32	20.88	98.74	-138.68	902.55	668.97	636.18	32.79	20.404			

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

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slots 3 & 4
Site Error: 0.00 usft
Reference Well: 223H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 124H - OH - Prelim Plan A												Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 9771-MWD - OWSG												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface [°]	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.00	4,889.11	4,823.14	4,722.42	17.65	21.40	98.77	-142.50	925.72	693.15	659.65	33.51	20.688	
5,000.00	4,989.11	4,920.17	4,818.57	17.99	21.93	98.79	-146.31	948.88	717.35	683.13	34.22	20.960	
5,100.00	5,089.11	5,017.20	4,910.72	18.33	22.46	98.80	-150.12	972.04	741.54	708.60	34.94	21.220	
5,200.00	5,189.11	5,114.23	5,004.87	18.67	22.99	98.82	-153.93	995.20	765.73	730.07	35.67	21.470	
5,300.00	5,289.11	5,211.28	5,099.01	19.01	23.52	98.84	-157.74	1,018.36	789.92	753.54	36.39	21.709	
5,400.00	5,389.11	5,308.29	5,193.16	19.35	24.04	98.85	-161.56	1,041.53	814.12	777.01	37.11	21.938	
5,500.00	5,489.11	5,405.32	5,287.31	19.69	24.57	98.87	-165.37	1,064.69	838.31	800.48	37.83	22.159	
5,600.00	5,589.11	5,502.35	5,381.46	20.04	25.10	98.88	-169.18	1,087.85	862.50	823.94	38.56	22.370	
5,700.00	5,689.11	5,600.62	5,475.60	20.38	25.64	98.89	-172.99	1,111.01	888.69	847.41	39.28	22.571	
5,800.00	5,789.11	5,696.41	5,569.75	20.72	26.16	98.90	-176.81	1,134.17	910.88	870.88	40.00	22.770	
5,900.00	5,889.11	5,793.44	5,663.90	21.07	26.69	98.92	-180.62	1,157.34	935.07	894.34	40.73	22.959	
6,000.00	5,989.11	5,909.53	5,758.05	21.41	27.32	98.93	-184.43	1,180.50	959.26	917.74	41.53	23.099	
6,100.00	6,089.11	5,987.50	5,852.19	21.76	27.74	98.94	-188.24	1,203.66	983.46	941.28	42.18	23.316	
6,200.00	6,189.11	6,084.53	5,946.34	22.10	28.27	98.95	-192.06	1,228.82	1,007.65	964.74	42.91	23.485	
6,300.00	6,289.11	6,181.56	6,040.49	22.45	28.80	98.96	-195.87	1,249.98	1,031.84	988.21	43.63	23.649	
6,400.00	6,389.11	6,278.59	6,134.63	22.79	29.33	98.97	-199.68	1,273.15	1,056.03	1,011.67	44.36	23.807	
6,500.00	6,489.11	6,375.62	6,228.78	23.14	29.86	98.97	-203.49	1,296.31	1,080.22	1,035.14	45.09	23.959	
6,600.00	6,589.11	6,472.65	6,322.93	23.49	30.39	98.98	-207.31	1,319.47	1,104.41	1,058.60	45.81	24.107	
6,700.00	6,689.11	6,569.68	6,417.08	23.83	30.92	98.99	-211.12	1,342.63	1,128.61	1,082.06	46.54	24.249	
6,800.00	6,789.11	6,666.71	6,511.22	24.18	31.45	99.00	-214.93	1,365.79	1,152.80	1,105.53	47.27	24.387	
6,900.00	6,889.11	6,763.74	6,605.37	24.53	31.98	99.00	-218.74	1,388.95	1,176.99	1,128.99	48.00	24.521	
7,000.00	6,989.11	6,860.76	6,699.52	24.88	32.51	99.01	-222.56	1,412.12	1,201.18	1,152.45	48.73	24.651	
7,100.00	7,089.11	6,957.79	6,793.67	25.22	33.04	99.02	-226.37	1,435.28	1,225.37	1,175.92	49.46	24.776	
7,200.00	7,189.11	7,054.82	6,887.81	25.57	33.57	99.02	-230.18	1,458.44	1,249.57	1,199.38	50.19	24.898	
7,300.00	7,289.11	7,151.85	6,981.96	25.92	34.10	99.03	-233.99	1,481.60	1,273.78	1,222.84	50.92	25.016	
7,400.00	7,389.11	7,248.88	7,076.11	26.27	34.63	99.04	-237.81	1,504.76	1,297.95	1,246.30	51.65	25.131	
7,500.00	7,489.11	7,345.91	7,170.26	26.62	35.16	99.04	-241.62	1,527.93	1,322.14	1,269.76	52.38	25.242	
7,600.00	7,589.11	7,442.94	7,264.40	26.97	35.69	99.05	-245.43	1,551.09	1,346.33	1,293.22	53.11	25.350	
7,700.00	7,689.11	7,539.97	7,358.53	27.32	36.22	99.05	-249.24	1,574.25	1,370.52	1,316.68	53.84	25.456	
7,800.00	7,789.11	7,637.00	7,452.70	27.67	36.75	99.06	-253.05	1,597.41	1,394.72	1,340.15	54.57	25.558	
7,900.00	7,889.11	7,734.03	7,546.85	28.02	37.28	99.06	-256.87	1,620.57	1,418.91	1,363.61	55.30	25.657	
8,000.00	7,989.11	7,831.06	7,640.99	28.37	37.81	99.07	-260.68	1,643.74	1,443.10	1,387.07	56.03	25.754	
8,100.00	8,089.11	7,928.09	7,735.14	28.72	38.34	99.07	-264.49	1,666.90	1,467.29	1,410.53	56.77	25.848	
8,200.00	8,189.11	8,025.12	7,829.29	29.07	38.87	99.08	-268.30	1,690.06	1,491.48	1,433.98	57.50	25.939	
8,300.00	8,289.11	8,122.15	7,923.44	29.42	39.40	99.08	-272.12	1,713.22	1,515.68	1,457.44	58.23	26.028	
8,400.00	8,389.11	8,219.18	8,017.58	29.78	39.93	99.09	-275.93	1,736.38	1,539.87	1,480.90	58.96	26.115	
8,500.00	8,489.11	8,338.98	8,133.97	30.13	40.57	99.09	-280.54	1,764.40	1,563.62	1,503.76	59.68	26.123	
8,600.00	8,589.11	8,473.61	8,265.40	30.48	41.28	99.09	-285.27	1,793.13	1,585.25	1,524.43	60.82	26.064	
8,700.00	8,689.11	8,609.57	8,398.81	30.83	41.91	99.10	-289.54	1,819.05	1,604.57	1,542.81	61.76	25.980	
8,800.00	8,789.11	8,746.74	8,533.98	31.18	42.53	99.10	-293.32	1,842.03	1,621.55	1,558.88	62.67	25.874	
8,900.00	8,889.11	8,884.97	8,670.72	31.54	43.10	99.11	-296.60	1,861.95	1,638.15	1,572.60	63.55	25.746	
9,000.00	8,989.11	9,024.10	8,808.81	31.89	43.64	99.11	-299.35	1,878.70	1,648.36	1,583.97	64.39	25.598	
9,100.00	9,089.11	9,163.99	8,948.02	32.24	44.14	99.11	-301.58	1,892.21	1,658.14	1,592.94	65.20	25.431	
9,200.00	9,189.11	9,304.46	9,088.11	32.59	44.61	99.11	-303.25	1,902.39	1,665.49	1,599.52	65.88	25.244	
9,300.00	9,289.11	9,445.36	9,228.84	32.94	45.03	99.11	-304.37	1,909.20	1,670.39	1,603.68	66.71	25.040	
9,400.00	9,389.11	9,586.52	9,366.95	33.30	45.42	99.11	-304.93	1,912.59	1,672.83	1,605.42	67.40	24.819	
9,500.00	9,489.11	9,706.67	9,490.11	33.65	45.71	99.11	-305.00	1,913.00	1,673.12	1,605.07	68.05	24.587	
9,600.00	9,589.11	9,826.81	9,628.22	34.00	46.00	99.13	-305.44	1,913.00	1,673.22	1,604.68	68.55	24.409	
9,700.00	9,689.11	9,946.95	9,748.09	34.36	45.81	99.35	-311.95	1,913.03	1,674.85	1,605.82	69.03	24.264	
9,800.00	9,789.11	9,927.67	9,709.25	34.71	45.64	99.81	-325.57	1,913.10	1,678.55	1,609.06	69.49	24.155	
9,900.00	9,889.11	9,988.54	9,766.97	35.06	45.88	100.45	-344.82	1,913.19	1,684.58	1,614.64	69.94	24.085	

Pro Directional Anticollision Report

Company: Matador Resources	Local Co-ordinate Reference: Well 223H
Project: Lea County, NM	TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site: MJ Federal Slots 3 & 4	MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 223H	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OH	Database: WellPlanner1
Reference Design: Prelim Plan A	Offset TVD Reference: Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 124H - OH - Prelim Plan A													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 9771-MWD - OWSG													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,000.00	9,989.11	10,030.00	9,822.84	35.42	45.94	101.31	-370.35	1,913.32	1,593.30	1,622.93	70.36	24.065		
10,100.00	10,089.11	10,100.00	9,868.07	35.77	46.00	102.14	-395.45	1,913.44	1,705.02	1,634.28	70.78	24.097		
10,200.00	10,189.11	10,150.00	9,906.95	36.12	46.07	103.09	-424.21	1,913.58	1,720.12	1,649.02	71.09	24.195		
10,300.00	10,289.11	10,182.76	9,932.31	36.48	46.12	103.77	-444.95	1,913.68	1,738.77	1,667.43	71.35	24.371		
10,400.00	10,389.11	10,219.25	9,959.11	36.83	46.18	104.57	-469.71	1,913.79	1,751.29	1,689.77	71.52	24.626		
10,500.00	10,489.11	10,250.00	9,980.43	37.19	46.24	105.29	-491.86	1,913.90	1,767.74	1,716.15	71.80	24.989		
10,600.00	10,589.11	10,280.53	10,000.39	37.54	46.31	106.03	-514.95	1,914.01	1,818.18	1,746.59	71.60	25.394		
10,700.00	10,689.11	10,300.00	10,012.47	37.89	46.35	106.52	-530.22	1,914.09	1,852.62	1,781.15	71.47	25.820		
10,767.99	10,757.10	10,322.08	10,025.53	38.13	46.40	107.08	-548.02	1,914.17	1,878.22	1,806.83	71.39	26.309		
10,800.00	10,789.09	10,329.42	10,029.71	38.24	46.42	-71.17	-554.05	1,914.20	1,890.65	1,819.33	71.32	26.509		
10,850.00	10,838.83	10,350.00	10,041.04	38.41	46.47	-68.75	-571.23	1,914.28	1,909.80	1,838.56	71.24	26.809		
10,900.00	10,887.94	10,350.00	10,041.04	38.57	46.47	-66.90	-571.23	1,914.28	1,928.31	1,857.27	71.04	27.144		
10,950.00	10,938.06	10,367.31	10,050.09	38.73	46.52	-64.81	-585.99	1,914.36	1,946.14	1,875.22	70.92	27.442		
11,000.00	10,982.82	10,380.99	10,056.92	38.89	46.55	-62.95	-597.84	1,914.41	1,963.11	1,892.34	70.77	27.740		
11,050.00	11,027.86	10,400.00	10,065.93	39.04	46.60	-61.17	-614.58	1,914.49	1,979.08	1,908.43	70.84	28.014		
11,100.00	11,070.84	10,400.00	10,065.93	39.19	46.60	-59.81	-614.58	1,914.49	1,993.93	1,923.50	70.43	28.311		
11,150.00	11,111.43	10,424.28	10,076.64	39.33	46.67	-58.31	-636.37	1,914.60	2,007.39	1,937.04	70.35	28.534		
11,200.00	11,149.32	10,450.00	10,086.95	39.47	46.75	-56.98	-659.92	1,914.71	2,019.62	1,949.33	70.29	28.734		
11,250.00	11,184.23	10,450.00	10,086.95	39.62	46.75	-56.08	-659.92	1,914.71	2,030.21	1,960.09	70.13	28.951		
11,300.00	11,215.89	10,470.00	10,094.24	39.77	46.81	-55.16	-678.55	1,914.80	2,039.30	1,969.21	70.09	29.095		
11,350.00	11,244.06	10,500.00	10,103.94	39.92	46.91	-54.38	-706.93	1,914.94	2,046.94	1,976.81	70.12	29.190		
11,400.00	11,268.52	10,500.00	10,103.94	40.09	46.91	-53.92	-706.93	1,914.94	2,052.57	1,982.49	70.08	29.290		
11,450.00	11,289.09	10,517.09	10,108.80	40.26	46.98	-53.53	-723.32	1,915.02	2,056.63	1,986.48	70.15	29.319		
11,500.00	11,305.61	10,532.94	10,112.86	40.44	47.02	-53.32	-738.63	1,915.09	2,058.93	1,988.67	70.26	29.305		
11,550.00	11,317.85	10,550.00	10,116.76	40.62	47.07	-53.27	-755.24	1,915.17	2,059.46	1,989.03	70.43	29.242		
11,600.00	11,326.03	10,550.00	10,116.76	40.81	47.07	-53.36	-755.24	1,915.17	2,058.37	1,987.76	70.61	29.153		
11,650.00	11,329.78	10,580.51	10,122.50	41.01	47.18	-53.67	-785.20	1,915.32	2,055.18	1,984.26	70.92	28.977		
11,688.00	11,330.06	10,600.00	10,125.33	41.08	47.25	-53.85	-804.49	1,915.41	2,053.81	1,982.75	71.06	28.901		
11,700.00	11,330.06	10,600.00	10,125.33	41.21	47.25	-53.85	-804.49	1,915.41	2,050.95	1,979.69	71.28	28.782		
11,800.00	11,330.06	10,628.23	10,128.26	41.66	47.36	-53.92	-832.57	1,915.55	2,044.59	1,972.59	72.00	28.397		
11,900.00	11,330.05	10,660.44	10,129.91	42.17	47.49	-53.96	-864.72	1,915.70	2,041.56	1,968.71	72.85	28.025		
12,000.00	11,330.05	10,732.69	10,130.06	42.74	47.78	-53.96	-936.97	1,916.05	2,041.27	1,967.48	73.79	27.683		
12,008.08	11,330.05	10,740.77	10,130.06	42.79	47.82	-53.96	-945.05	1,916.09	2,041.27	1,967.40	73.87	27.633		
12,100.00	11,330.05	10,832.69	10,130.06	43.36	48.23	-53.96	-1,039.97	1,916.53	2,041.26	1,966.45	74.81	27.285		
12,200.00	11,330.05	10,932.69	10,130.05	44.04	48.72	-53.96	-1,138.97	1,917.01	2,041.25	1,965.32	75.93	26.883		
12,300.00	11,330.05	11,032.69	10,130.05	44.77	49.26	-53.96	-1,236.97	1,917.50	2,041.24	1,964.10	77.14	26.462		
12,400.00	11,330.05	11,132.69	10,130.05	45.55	49.85	-53.96	-1,336.97	1,917.98	2,041.23	1,962.80	78.43	26.025		
12,500.00	11,330.05	11,232.69	10,130.05	46.38	50.48	-53.96	-1,436.97	1,918.46	2,041.22	1,961.41	79.81	25.577		
12,600.00	11,330.05	11,332.69	10,130.05	47.25	51.16	-53.96	-1,536.96	1,918.95	2,041.21	1,959.95	81.26	25.120		
12,700.00	11,330.04	11,432.69	10,130.05	48.16	51.89	-53.96	-1,636.96	1,919.43	2,041.20	1,958.41	82.78	24.657		
12,800.00	11,330.04	11,532.69	10,130.05	49.11	52.66	-53.96	-1,736.96	1,919.91	2,041.18	1,958.81	84.38	24.191		
12,900.00	11,330.04	11,632.69	10,130.04	50.11	53.47	-53.96	-1,836.96	1,920.39	2,041.17	1,955.14	86.04	23.724		
13,000.00	11,330.04	11,732.69	10,130.04	51.13	54.33	-53.96	-1,936.96	1,920.88	2,041.16	1,953.40	87.78	23.259		
13,100.00	11,330.04	11,832.69	10,130.04	52.19	55.23	-53.96	-2,036.96	1,921.36	2,041.15	1,951.61	89.54	22.796		
13,200.00	11,330.04	11,932.69	10,130.04	53.28	56.17	-53.96	-2,136.96	1,921.84	2,041.14	1,949.77	91.37	22.339		
13,300.00	11,330.04	12,032.69	10,130.04	54.40	57.14	-53.96	-2,236.96	1,922.32	2,041.13	1,947.87	93.26	21.887		
13,400.00	11,330.03	12,132.69	10,130.04	55.55	58.15	-53.96	-2,336.95	1,922.81	2,041.12	1,945.93	95.19	21.442		
13,500.00	11,330.03	12,232.69	10,130.04	56.72	59.19	-53.96	-2,436.95	1,923.29	2,041.11	1,943.94	97.17	21.005		
13,600.00	11,330.03	12,332.69	10,130.03	57.82	60.27	-53.96	-2,536.95	1,923.77	2,041.10	1,941.80	99.19	20.577		
13,700.00	11,330.03	12,432.69	10,130.03	59.14	61.37	-53.96	-2,636.95	1,924.25	2,041.08	1,939.83	101.26	20.158		
13,800.00	11,330.03	12,532.69	10,130.03	60.38	62.50	-53.96	-2,736.95	1,924.74	2,041.07	1,937.72	103.36	19.748		
13,900.00	11,330.03	12,632.69	10,130.03	61.65	63.66	-53.96	-2,836.95	1,925.22	2,041.06	1,935.57	105.49	19.348		

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

Pro Directional Anticollision Report

Company: Matador Resources	Local Co-ordinate Reference: Well 223H
Project: Lea County, NM	TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site: MJ Federal Slots 3 & 4	MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 223H	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OH	Database: WellPlanner1
Reference Design: Prelim Plan A	Offset TVD Reference: Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 124H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 9771-MWD - OWSG													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Offset	Reference	Offset	Reference	Offset		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,000.00	11,330.03	12,732.69	10,130.03	62.93	64.85	-53.95	-2,936.95	1,925.70	2,041.05	1,933.39	107.66	18.958	
14,100.00	11,330.03	12,832.69	10,130.03	64.23	66.05	-53.95	-3,036.95	1,926.18	2,041.04	1,931.18	109.86	18.578	
14,200.00	11,330.02	12,932.69	10,130.03	65.55	67.28	-53.95	-3,136.95	1,926.67	2,041.03	1,928.94	112.09	18.208	
14,300.00	11,330.02	13,032.69	10,130.02	66.88	68.53	-53.95	-3,236.94	1,927.15	2,041.02	1,926.67	114.35	17.849	
14,400.00	11,330.02	13,132.69	10,130.02	68.23	69.80	-53.95	-3,336.94	1,927.63	2,041.01	1,924.37	116.64	17.499	
14,500.00	11,330.02	13,232.69	10,130.02	69.59	71.09	-53.95	-3,436.94	1,928.11	2,041.00	1,922.05	118.94	17.159	
14,600.00	11,330.02	13,332.69	10,130.02	70.96	72.40	-53.95	-3,536.94	1,928.60	2,040.98	1,919.71	121.28	16.829	
14,700.00	11,330.02	13,432.69	10,130.02	72.35	73.72	-53.95	-3,636.94	1,929.08	2,040.97	1,917.34	123.63	16.509	
14,800.00	11,330.02	13,532.69	10,130.02	73.75	75.05	-53.95	-3,736.94	1,929.56	2,040.96	1,914.96	126.01	16.197	
14,900.00	11,330.01	13,632.69	10,130.02	75.16	76.40	-53.95	-3,836.94	1,930.04	2,040.95	1,912.55	128.40	15.895	
15,000.00	11,330.01	13,732.69	10,130.01	76.58	77.77	-53.95	-3,936.94	1,930.53	2,040.94	1,910.12	130.82	15.602	
15,100.00	11,330.01	13,832.69	10,130.01	78.01	79.15	-53.95	-4,036.93	1,931.01	2,040.93	1,907.68	133.25	15.317	
15,200.00	11,330.01	13,932.69	10,130.01	79.45	80.53	-53.95	-4,136.93	1,931.49	2,040.92	1,905.22	135.69	15.041	
15,300.00	11,330.01	14,032.69	10,130.01	80.90	81.94	-53.95	-4,236.93	1,931.97	2,040.91	1,902.75	138.16	14.772	
15,400.00	11,330.01	14,132.69	10,130.01	82.36	83.35	-53.95	-4,336.93	1,932.46	2,040.90	1,900.26	140.63	14.512	
15,500.00	11,330.01	14,232.69	10,130.01	83.82	84.77	-53.95	-4,436.93	1,932.94	2,040.88	1,897.76	143.13	14.259	
15,600.00	11,330.00	14,332.69	10,130.00	85.29	86.20	-53.95	-4,536.93	1,933.42	2,040.87	1,895.24	145.63	14.014	
15,700.00	11,330.00	14,432.69	10,130.00	86.77	87.64	-53.95	-4,636.93	1,933.90	2,040.86	1,892.71	148.15	13.776	
15,800.00	11,330.00	14,532.69	10,130.00	88.26	89.09	-53.95	-4,736.93	1,934.39	2,040.85	1,890.17	150.68	13.544	
15,900.00	11,330.00	14,632.69	10,130.00	89.75	90.60	-53.95	-4,836.93	1,934.87	2,040.84	1,887.68	153.16	13.325	
15,930.10	11,330.00	14,662.78	10,130.00	90.20	91.10	-53.95	-4,867.02	1,935.01	2,040.84	1,886.97	153.87	13.264	

Pro Directional Anticollision Report

Company: Malador Resources	Local Co-ordinate Reference: Well 223H
Project: Lea County, NM	TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site: MJ Federal Slots 3 & 4	MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 223H	Survey Calculation Method: Minimum Curvature
Well Error: 0.00 usft	Output errors are at: 2.00 sigma
Reference Wellbore: OH	Database: WellPlanner1
Reference Design: Prelim Plan A	Offset TVD Reference: Offset Datum

MJ Federal Slots 3 & 4 - 224H - OH - Prelim Plan A													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10943-MWD - OWSG													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	+N-S (usft)		+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	1.00	-1.00	0.00	0.00	90.00	0.00	90.00	90.00					
100.00	100.00	101.00	99.00	0.13	0.13	90.00	0.00	90.00	90.00	89.74	0.26	346.297		
200.00	200.00	201.00	199.00	0.49	0.49	90.00	0.00	90.00	90.00	89.02	0.98	92.134		
300.00	300.00	301.00	299.00	0.85	0.85	90.00	0.00	90.00	90.00	88.31	1.69	53.136		
400.00	400.00	401.00	399.00	1.20	1.21	90.00	0.00	90.00	90.00	87.59	2.41	37.333		
500.00	500.00	499.00	499.00	1.56	1.56	90.00	0.00	90.00	90.00	86.88	3.12	28.842		
600.00	599.99	597.47	597.47	1.91	1.75	-8.77	-0.04	90.83	89.98	86.32	3.66	24.608		
700.00	699.96	695.93	695.89	2.26	1.82	-8.94	-0.17	93.35	89.95	85.88	4.07	22.082		
800.00	799.86	794.38	794.25	2.61	1.86	-9.22	-0.37	97.55	89.81	85.36	4.55	19.754		
900.00	899.68	892.84	892.53	2.96	2.14	-9.62	-0.66	103.45	89.87	84.79	5.08	17.680		
1,000.00	999.37	991.30	990.69	3.32	2.38	-10.13	-1.04	111.03	89.83	84.17	5.66	15.679		
1,002.29	1,001.65	993.55	992.94	3.33	2.38	-10.14	-1.05	111.22	89.83	84.16	5.87	15.842 CC, ES		
1,100.00	1,098.99	1,089.74	1,088.70	3.69	2.65	-10.65	-1.50	120.29	90.65	84.39	6.26	14.475		
1,200.00	1,198.60	1,188.14	1,188.49	4.06	2.95	-11.06	-2.04	131.22	93.19	86.30	6.89	13.522		
1,300.00	1,298.22	1,286.42	1,283.95	4.44	3.28	-11.35	-2.66	143.82	97.44	89.90	7.54	12.926		
1,400.00	1,397.84	1,384.53	1,381.02	4.81	3.63	-11.53	-3.36	158.06	103.40	95.20	8.20	12.612		
1,500.00	1,497.46	1,482.42	1,477.61	5.19	4.00	-11.60	-4.15	173.92	111.05	102.19	8.87	12.525		
1,600.00	1,597.08	1,580.02	1,573.63	5.57	4.40	-11.58	-5.01	191.37	120.40	110.88	9.54	12.618		
1,700.00	1,696.70	1,677.28	1,669.02	5.94	4.81	-11.49	-5.95	210.38	131.43	121.21	10.22	12.858		
1,800.00	1,796.32	1,776.01	1,765.58	6.32	5.25	-11.36	-6.96	230.84	143.64	132.72	10.93	13.147		
1,900.00	1,895.94	1,875.25	1,862.67	6.70	5.70	-11.26	-7.97	251.45	155.91	144.26	11.64	13.392		
2,000.00	1,895.58	1,874.50	1,859.75	7.08	6.16	-11.17	-8.99	272.05	168.17	155.81	12.36	13.604		
2,100.00	2,095.18	2,073.74	2,056.82	7.47	6.62	-11.09	-10.01	292.66	180.43	167.34	13.09	13.789		
2,200.00	2,194.80	2,172.89	2,153.90	7.85	7.09	-11.02	-11.03	313.27	192.69	178.88	13.81	13.951		
2,300.00	2,294.42	2,272.23	2,250.98	8.23	7.56	-10.96	-12.05	333.88	204.96	190.41	14.54	14.095		
2,400.00	2,394.04	2,371.48	2,348.05	8.61	8.03	-10.91	-13.06	354.49	217.22	201.95	15.27	14.223		
2,500.00	2,493.66	2,470.72	2,445.13	8.99	8.51	-10.86	-14.08	375.10	229.48	213.48	16.00	14.338		
2,600.00	2,593.28	2,569.97	2,542.21	9.38	8.99	-10.82	-15.10	395.71	241.74	225.01	16.74	14.442		
2,700.00	2,692.90	2,669.21	2,639.28	9.76	9.47	-10.78	-16.12	416.32	254.01	238.53	17.47	14.536		
2,800.00	2,792.52	2,768.46	2,736.36	10.14	9.95	-10.74	-17.14	436.93	266.27	248.06	18.21	14.621		
2,900.00	2,892.14	2,867.71	2,833.43	10.52	10.44	-10.71	-18.15	457.54	278.54	259.59	18.95	14.699		
3,000.00	2,891.76	2,866.95	2,830.51	10.91	10.92	-10.68	-19.17	478.15	290.80	271.11	19.69	14.770		
3,100.00	3,091.37	3,066.20	3,027.59	11.29	11.41	-10.65	-20.19	498.75	303.06	282.63	20.43	14.838		
3,200.00	3,190.99	3,165.44	3,124.66	11.67	11.89	-10.63	-21.21	519.36	315.33	294.16	21.17	14.897		
3,300.00	3,290.61	3,264.69	3,221.74	12.06	12.38	-10.60	-22.23	539.97	327.59	305.68	21.91	14.953		
3,400.00	3,390.23	3,363.93	3,318.82	12.44	12.87	-10.58	-23.24	560.58	339.85	317.20	22.65	15.005		
3,500.00	3,489.85	3,463.18	3,415.89	12.82	13.36	-10.56	-24.26	581.19	352.12	328.73	23.39	15.053		
3,529.29	3,519.03	3,507.76	3,444.32	12.94	13.58	-10.56	-24.56	587.23	355.71	332.04	23.67	15.029		
3,600.00	3,589.51	3,562.37	3,512.92	13.21	13.84	-10.55	-25.28	601.79	364.81	340.87	24.13	15.117		
3,700.00	3,689.28	3,661.33	3,608.72	13.58	14.33	-10.50	-26.30	622.34	379.12	354.25	24.87	15.243		
3,800.00	3,789.17	3,760.04	3,706.27	13.94	14.82	-10.41	-27.31	642.84	395.14	369.53	25.61	15.432		
3,900.00	3,889.12	3,858.45	3,802.53	14.30	15.31	-10.29	-28.32	663.27	412.65	386.51	26.34	15.677		
4,000.00	3,889.11	3,856.54	3,898.48	14.65	15.79	-10.15	-28.32	683.64	432.25	405.19	27.06	15.973		
4,029.29	4,018.39	3,985.20	3,926.51	14.75	15.93	88.61	-29.62	689.59	438.25	410.98	27.27	16.070		
4,100.00	4,089.11	4,054.37	3,994.17	14.98	16.28	88.75	-30.33	703.96	452.91	425.14	27.77	16.310		
4,200.00	4,189.11	4,152.19	4,089.85	15.31	16.76	88.93	-31.33	724.27	473.66	445.18	28.48	16.634		
4,300.00	4,289.11	4,250.00	4,185.52	15.64	17.24	89.09	-32.33	744.58	494.40	465.22	29.18	16.942		
4,400.00	4,389.11	4,347.82	4,281.20	15.97	17.73	89.24	-33.34	764.89	515.15	485.26	29.89	17.234		
4,500.00	4,489.11	4,445.63	4,376.88	16.31	18.21	89.38	-34.34	785.21	535.91	505.31	30.60	17.513		
4,600.00	4,589.11	4,543.45	4,472.58	16.64	18.70	89.51	-35.34	805.52	556.66	525.35	31.31	17.778		
4,700.00	4,689.11	4,641.26	4,568.23	16.98	19.18	89.63	-36.35	825.83	577.42	545.40	32.02	18.031		
4,800.00	4,789.11	4,739.07	4,663.91	17.32	19.67	89.74	-37.35	846.14	598.18	565.45	32.74	18.273		

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 224H - OH - Prelim Plan A													Offset Site Error:
Survey Program: 0-MWD - CWSG, 500-MWD - CWSG, 10943-MWD - CWSG													Offset Well Error:
Reference	Vertical	Measured	Vertical	Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
4,900.00	4,889.11	4,836.89	4,759.59	17.85	20.16	89.84	-38.35	866.45	618.95	585.50	33.45	18.503	
5,000.00	4,989.11	4,934.70	4,855.26	17.99	20.64	88.94	-39.36	866.77	639.71	605.55	34.18	18.724	
5,100.00	5,089.11	5,032.52	4,950.94	18.33	21.13	90.03	-40.36	907.08	660.48	625.60	34.88	18.936	
5,200.00	5,189.11	5,130.33	5,048.62	18.67	21.61	90.12	-41.36	927.39	681.25	645.65	35.60	19.138	
5,300.00	5,289.11	5,228.15	5,142.30	19.01	22.10	90.20	-42.37	947.70	702.02	665.70	36.31	19.333	
5,400.00	5,389.11	5,325.96	5,237.97	19.35	22.59	90.27	-43.37	968.01	722.79	685.76	37.03	19.519	
5,500.00	5,489.11	5,423.78	5,333.65	19.69	23.07	90.34	-44.37	988.33	743.56	705.81	37.75	19.698	
5,600.00	5,589.11	5,521.59	5,429.33	20.04	23.56	90.41	-45.38	1,008.64	764.33	725.87	38.47	19.870	
5,700.00	5,689.11	5,619.41	5,525.01	20.38	24.05	90.48	-46.38	1,028.95	785.11	745.92	39.18	20.036	
5,800.00	5,789.11	5,717.22	5,620.68	20.72	24.53	90.54	-47.38	1,049.26	805.88	765.98	39.90	20.195	
5,900.00	5,889.11	5,815.04	5,716.36	21.07	25.02	90.59	-48.39	1,069.58	826.66	786.03	40.62	20.349	
6,000.00	5,989.11	5,912.85	5,812.04	21.41	25.51	90.65	-49.39	1,089.89	847.43	806.09	41.34	20.497	
6,100.00	6,089.11	6,010.67	5,907.71	21.76	25.99	90.70	-50.39	1,110.20	868.21	826.14	42.07	20.640	
6,200.00	6,189.11	6,108.48	6,003.39	22.10	26.48	90.75	-51.40	1,130.51	888.99	846.20	42.79	20.777	
6,300.00	6,289.11	6,206.30	6,099.07	22.45	26.97	90.80	-52.40	1,150.82	909.77	866.26	43.51	20.910	
6,400.00	6,389.11	6,304.11	6,194.75	22.79	27.46	90.84	-53.40	1,171.14	930.55	886.31	44.23	21.039	
6,500.00	6,489.11	6,401.93	6,290.42	23.14	27.94	90.89	-54.41	1,191.45	951.32	906.37	44.95	21.163	
6,600.00	6,589.11	6,499.74	6,386.10	23.49	28.43	90.93	-55.41	1,211.76	972.10	926.43	45.68	21.283	
6,700.00	6,689.11	6,602.44	6,481.78	23.83	28.94	90.97	-56.41	1,232.07	992.89	946.47	46.42	21.390	
6,800.00	6,789.11	6,695.37	6,577.45	24.18	29.40	91.01	-57.42	1,252.38	1,013.67	966.54	47.12	21.511	
6,900.00	6,889.11	6,806.82	6,673.13	24.53	29.86	91.04	-58.42	1,272.70	1,034.45	986.55	47.80	21.596	
7,000.00	6,989.11	6,909.00	6,768.81	24.88	30.47	91.08	-59.42	1,293.01	1,055.23	1,006.59	48.64	21.695	
7,100.00	7,089.11	6,988.81	6,864.49	25.22	30.87	91.11	-60.43	1,313.32	1,076.01	1,026.72	49.29	21.828	
7,200.00	7,189.11	7,086.63	6,960.16	25.57	31.38	91.14	-61.43	1,333.63	1,096.79	1,046.77	50.02	21.927	
7,300.00	7,289.11	7,184.44	7,055.84	25.92	31.84	91.18	-62.43	1,353.94	1,117.58	1,066.83	50.74	22.024	
7,400.00	7,389.11	7,282.26	7,151.52	26.27	32.33	91.21	-63.44	1,374.26	1,138.36	1,086.89	51.47	22.117	
7,500.00	7,489.11	7,380.07	7,247.20	26.62	32.82	91.24	-64.44	1,394.57	1,159.14	1,106.95	52.20	22.208	
7,600.00	7,589.11	7,477.89	7,342.87	26.97	33.31	91.26	-65.44	1,414.88	1,179.93	1,127.00	52.92	22.298	
7,700.00	7,689.11	7,575.70	7,438.55	27.32	33.79	91.29	-66.45	1,435.19	1,200.71	1,147.08	53.65	22.381	
7,800.00	7,789.11	7,673.52	7,534.23	27.67	34.28	91.32	-67.45	1,455.50	1,221.49	1,167.12	54.37	22.465	
7,900.00	7,889.11	7,771.33	7,629.91	28.02	34.77	91.34	-68.45	1,475.82	1,242.28	1,187.18	55.10	22.546	
8,000.00	7,989.11	7,869.15	7,725.58	28.37	35.26	91.37	-69.46	1,496.13	1,263.06	1,207.24	55.83	22.624	
8,100.00	8,089.11	7,966.96	7,821.26	28.72	35.75	91.39	-70.46	1,516.44	1,283.85	1,227.29	56.55	22.701	
8,200.00	8,189.11	8,064.78	7,916.94	29.07	36.23	91.41	-71.46	1,536.75	1,304.63	1,247.35	57.28	22.776	
8,300.00	8,289.11	8,162.59	8,012.61	29.42	36.72	91.44	-72.47	1,557.06	1,325.42	1,267.41	58.01	22.848	
8,400.00	8,389.11	8,260.41	8,108.29	29.78	37.21	91.46	-73.47	1,577.38	1,346.20	1,287.47	58.74	22.919	
8,500.00	8,489.11	8,358.22	8,203.97	30.13	37.70	91.48	-74.47	1,597.69	1,366.99	1,307.52	59.47	22.988	
8,600.00	8,589.11	8,456.04	8,299.65	30.48	38.19	91.50	-75.48	1,618.00	1,387.77	1,327.58	60.19	23.055	
8,700.00	8,689.11	8,553.85	8,395.32	30.83	38.67	91.52	-76.48	1,638.31	1,408.56	1,347.64	60.92	23.121	
8,800.00	8,789.11	8,651.67	8,491.00	31.18	39.16	91.54	-77.48	1,658.62	1,429.35	1,367.70	61.65	23.185	
8,900.00	8,889.11	8,749.48	8,586.68	31.54	39.65	91.55	-78.49	1,678.94	1,450.13	1,387.75	62.38	23.247	
9,000.00	8,989.11	8,847.29	8,682.36	31.89	40.14	91.57	-79.49	1,699.25	1,470.92	1,407.81	63.11	23.308	
9,100.00	9,089.11	8,945.11	8,778.03	32.24	40.63	91.59	-80.49	1,719.56	1,491.71	1,427.87	63.84	23.367	
9,200.00	9,189.11	9,042.92	8,873.71	32.59	41.11	91.61	-81.50	1,739.87	1,512.49	1,447.93	64.57	23.425	
9,300.00	9,289.11	9,140.74	8,969.39	32.94	41.60	91.62	-82.50	1,760.19	1,533.28	1,467.98	65.30	23.482	
9,400.00	9,389.11	9,238.55	9,065.06	33.30	42.09	91.64	-83.50	1,780.50	1,554.07	1,488.04	66.03	23.537	
9,500.00	9,489.11	9,361.66	9,165.63	33.65	42.69	91.66	-84.73	1,805.34	1,574.32	1,507.40	66.92	23.526	
9,600.00	9,589.11	9,497.57	9,319.30	34.00	43.33	91.68	-85.94	1,829.84	1,592.37	1,524.50	67.66	23.484	
9,700.00	9,689.11	9,634.59	9,454.62	34.36	43.93	91.69	-87.00	1,851.33	1,608.07	1,539.29	68.78	23.380	
9,800.00	9,789.11	9,772.53	9,591.38	34.71	44.49	91.71	-87.91	1,869.71	1,621.40	1,551.74	69.66	23.276	
9,900.00	9,889.11	9,911.39	9,729.35	35.06	45.02	91.72	-88.66	1,884.86	1,632.33	1,561.82	70.51	23.151	
10,000.00	9,989.11	10,050.86	9,868.31	35.42	45.52	91.72	-89.25	1,896.72	1,640.84	1,569.52	71.32	23.007	

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 224H - OH - Prelim Plan A														Offset Site Error: 0.00 usft	
Survey Program: 0-MWD - CWSG, 500-MWD - CWSG, 10943-MWD - CWSG														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
10,100.00	10,089.11	10,190.83	10,008.02	35.77	45.98	91.73	-89.67	1,905.23	1,848.93	1,574.83	72.09	22.844			
10,200.00	10,189.11	10,331.13	10,148.22	35.12	46.40	91.73	-89.92	1,910.33	1,850.57	1,577.74	72.83	22.684			
10,300.00	10,289.11	10,471.60	10,288.68	36.48	48.79	91.73	-90.00	1,912.00	1,851.76	1,578.24	73.52	22.468			
10,308.92	10,298.03	10,481.32	10,298.40	38.50	46.82	91.73	-90.00	1,911.99	1,851.75	1,578.19	73.59	22.454			
10,400.00	10,389.11	10,571.03	10,388.11	36.83	47.05	91.73	-90.00	1,912.00	1,851.76	1,577.57	74.18	22.266			
10,500.00	10,489.11	10,671.03	10,488.11	37.19	47.31	91.73	-90.00	1,912.00	1,851.76	1,576.91	74.85	22.067			
10,600.00	10,589.11	10,771.03	10,588.11	37.54	47.57	91.73	-90.00	1,912.00	1,851.76	1,576.24	75.52	21.872			
10,700.00	10,689.11	10,871.03	10,688.11	37.89	47.83	91.73	-90.00	1,912.00	1,851.76	1,575.57	76.19	21.679			
10,767.99	10,757.10	10,939.02	10,756.10	38.13	47.96	91.73	-90.00	1,912.00	1,851.76	1,575.17	76.58	21.588			
10,800.00	10,789.09	10,969.10	10,786.18	38.24	47.97	-88.00	-90.32	1,912.00	1,851.74	1,575.02	76.72	21.529			
10,850.00	10,838.83	11,014.58	10,831.92	38.41	47.98	-88.05	-93.63	1,912.02	1,851.69	1,574.79	76.90	21.477			
10,900.00	10,887.84	11,060.15	10,876.56	38.57	47.98	-88.11	-100.55	1,912.05	1,851.63	1,574.54	77.09	21.425			
10,950.00	10,938.08	11,105.86	10,921.02	38.73	47.99	-88.18	-111.08	1,912.10	1,851.56	1,574.29	77.27	21.373			
11,000.00	10,982.82	11,151.71	10,984.65	38.89	48.01	-89.27	-125.13	1,912.17	1,851.48	1,574.03	77.46	21.322			
11,050.00	11,027.86	11,197.74	11,007.17	39.04	48.03	-88.37	-142.72	1,912.25	1,851.40	1,573.76	77.64	21.269			
11,100.00	11,070.84	11,243.97	11,048.32	39.19	48.06	-88.48	-163.76	1,912.36	1,851.31	1,573.48	77.83	21.218			
11,150.00	11,111.43	11,290.44	11,087.84	39.33	48.09	-88.60	-188.18	1,912.47	1,851.22	1,573.19	78.03	21.162			
11,200.00	11,149.32	11,337.15	11,125.44	39.47	48.13	-88.73	-215.89	1,912.61	1,851.12	1,572.89	78.23	21.105			
11,250.00	11,184.23	11,384.15	11,160.87	39.62	48.18	-88.87	-246.75	1,912.76	1,851.03	1,572.58	78.45	21.046			
11,300.00	11,215.89	11,431.46	11,193.85	39.77	48.24	-89.02	-280.64	1,912.92	1,850.95	1,572.27	78.68	20.984			
11,350.00	11,244.06	11,479.09	11,224.12	39.92	48.30	-89.18	-317.40	1,913.10	1,850.87	1,571.95	78.92	20.917			
11,400.00	11,288.52	11,527.08	11,251.43	40.09	48.38	-89.34	-356.84	1,913.29	1,850.80	1,571.61	79.19	20.846			
11,450.00	11,289.09	11,575.44	11,275.51	40.26	48.46	-89.51	-398.76	1,913.49	1,850.75	1,571.27	79.48	20.771			
11,500.00	11,305.81	11,624.20	11,298.13	40.44	48.56	-89.68	-442.93	1,913.70	1,850.71	1,570.92	79.78	20.690			
11,550.00	11,317.95	11,673.37	11,313.04	40.62	48.67	-89.86	-489.08	1,913.92	1,850.68	1,570.57	80.11	20.605			
11,600.00	11,328.03	11,722.97	11,326.03	40.81	48.78	-90.03	-538.94	1,914.15	1,850.67	1,570.21	80.46	20.516			
11,612.68	11,327.39	11,735.62	11,328.67	40.86	48.82	-90.08	-549.31	1,914.21	1,850.67	1,570.12	80.55	20.492			
11,650.00	11,329.78	11,773.02	11,334.89	41.01	48.91	-90.21	-588.18	1,914.39	1,850.67	1,569.84	80.83	20.422			
11,668.00	11,330.06	11,791.15	11,337.04	41.08	48.96	-90.28	-604.18	1,914.48	1,850.68	1,569.71	80.96	20.388			
11,700.00	11,330.06	11,823.59	11,339.45	41.21	49.05	-90.36	-636.52	1,914.63	1,850.68	1,569.47	81.22	20.324			
11,800.00	11,330.06	11,924.08	11,340.06	41.66	49.36	-90.38	-737.00	1,915.12	1,850.67	1,568.55	82.13	20.099			
11,900.00	11,330.05	12,024.08	11,340.06	42.17	49.71	-90.38	-837.00	1,915.60	1,850.66	1,567.50	83.16	19.849			
12,000.00	11,330.05	12,124.08	11,340.05	42.74	50.11	-90.38	-937.00	1,916.08	1,850.64	1,566.33	84.31	19.577			
12,100.00	11,330.05	12,224.08	11,340.05	43.36	50.55	-90.38	-1,037.00	1,916.56	1,850.63	1,565.05	85.58	19.287			
12,200.00	11,330.05	12,324.08	11,340.05	44.04	51.04	-90.38	-1,137.00	1,917.04	1,850.62	1,563.65	86.96	18.981			
12,300.00	11,330.05	12,424.08	11,340.05	44.77	51.57	-90.38	-1,237.00	1,917.53	1,850.60	1,562.16	88.45	18.662			
12,400.00	11,330.05	12,524.08	11,340.05	45.55	52.16	-90.38	-1,337.00	1,918.01	1,850.59	1,560.56	90.03	18.334			
12,500.00	11,330.05	12,624.08	11,340.05	46.38	52.79	-90.38	-1,437.00	1,918.49	1,850.57	1,558.87	91.71	17.999			
12,600.00	11,330.05	12,724.08	11,340.05	47.25	53.48	-90.38	-1,538.99	1,918.97	1,850.56	1,557.08	93.47	17.658			
12,700.00	11,330.04	12,824.08	11,340.04	48.16	54.20	-90.38	-1,638.99	1,919.45	1,850.54	1,555.22	95.32	17.315			
12,800.00	11,330.04	12,924.08	11,340.04	49.11	54.98	-90.38	-1,738.99	1,919.93	1,850.53	1,553.27	97.25	16.971			
12,900.00	11,330.04	13,024.08	11,340.04	50.11	55.79	-90.38	-1,838.99	1,920.42	1,850.51	1,551.25	99.26	16.628			
13,000.00	11,330.04	13,124.08	11,340.04	51.13	56.65	-90.38	-1,938.99	1,920.90	1,850.50	1,549.16	101.34	16.287			
13,100.00	11,330.04	13,224.08	11,340.04	52.19	57.55	-90.38	-2,038.99	1,921.38	1,850.48	1,547.00	103.48	15.950			
13,200.00	11,330.04	13,324.08	11,340.04	53.28	58.48	-90.38	-2,138.99	1,921.86	1,850.47	1,544.78	105.69	15.617			
13,300.00	11,330.04	13,424.08	11,340.04	54.40	59.45	-90.38	-2,238.99	1,922.34	1,850.45	1,542.51	107.95	15.289			
13,400.00	11,330.03	13,524.08	11,340.04	55.55	60.46	-90.38	-2,338.98	1,922.83	1,850.44	1,540.17	110.27	14.968			
13,500.00	11,330.03	13,624.08	11,340.03	56.72	61.50	-90.38	-2,438.98	1,923.31	1,850.43	1,537.79	112.64	14.653			
13,600.00	11,330.03	13,724.08	11,340.03	57.92	62.56	-90.38	-2,538.98	1,923.79	1,850.41	1,535.36	115.06	14.344			
13,700.00	11,330.03	13,824.08	11,340.03	59.14	63.66	-90.38	-2,638.98	1,924.27	1,850.40	1,532.88	117.52	14.044			
13,800.00	11,330.03	13,924.08	11,340.03	60.38	64.79	-90.38	-2,738.98	1,924.75	1,850.38	1,530.36	120.02	13.750			
13,900.00	11,330.03	14,024.08	11,340.03	61.65	65.94	-90.38	-2,838.98	1,925.23	1,850.37	1,527.80	122.57	13.465			

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 224H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10943-MWD - OWSG													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)							
14,000.00	11,330.03	14,124.08	11,340.03	62.93	67.11	-90.38	-2,936.98	1,925.72	1,650.35	1,525.20	125.15	13.187		
14,100.00	11,330.03	14,224.08	11,340.03	64.23	68.31	-90.38	-3,036.98	1,926.20	1,650.34	1,522.57	127.77	12.916		
14,200.00	11,330.02	14,324.08	11,340.02	65.55	69.53	-90.38	-3,136.98	1,926.68	1,650.32	1,519.90	130.42	12.654		
14,300.00	11,330.02	14,424.08	11,340.02	66.88	70.77	-90.38	-3,236.97	1,927.16	1,650.31	1,517.20	133.11	12.398		
14,400.00	11,330.02	14,524.08	11,340.02	68.23	72.02	-90.38	-3,336.97	1,927.64	1,650.29	1,514.48	135.82	12.151		
14,500.00	11,330.02	14,624.08	11,340.02	69.59	73.30	-90.38	-3,436.97	1,928.12	1,650.28	1,511.72	138.56	11.910		
14,600.00	11,330.02	14,724.08	11,340.02	70.96	74.59	-90.38	-3,536.97	1,928.61	1,650.26	1,508.94	141.32	11.677		
14,700.00	11,330.02	14,824.08	11,340.02	72.35	75.90	-90.38	-3,636.97	1,929.09	1,650.25	1,506.14	144.11	11.451		
14,800.00	11,330.02	14,924.08	11,340.02	73.75	77.22	-90.38	-3,736.97	1,929.57	1,650.24	1,503.31	146.93	11.232		
14,900.00	11,330.01	15,024.08	11,340.01	75.16	78.58	-90.38	-3,836.97	1,930.05	1,650.22	1,500.46	149.76	11.019		
15,000.00	11,330.01	15,124.08	11,340.01	76.58	79.91	-90.38	-3,936.97	1,930.53	1,650.21	1,497.59	152.62	10.813		
15,100.00	11,330.01	15,224.08	11,340.01	78.01	81.27	-90.38	-4,036.97	1,931.02	1,650.19	1,494.70	155.49	10.613		
15,200.00	11,330.01	15,324.08	11,340.01	79.45	82.65	-90.38	-4,136.96	1,931.50	1,650.18	1,491.79	158.38	10.419		
15,300.00	11,330.01	15,424.08	11,340.01	80.90	84.04	-90.38	-4,236.96	1,931.98	1,650.16	1,488.87	161.29	10.231		
15,400.00	11,330.01	15,524.08	11,340.01	82.36	85.43	-90.38	-4,336.96	1,932.46	1,650.15	1,485.93	164.22	10.046		
15,500.00	11,330.01	15,624.08	11,340.01	83.82	86.84	-90.38	-4,436.96	1,932.94	1,650.13	1,482.97	167.16	9.871		
15,600.00	11,330.00	15,724.08	11,340.00	85.29	88.26	-90.38	-4,536.96	1,933.42	1,650.12	1,480.00	170.12	9.700		
15,700.00	11,330.00	15,824.08	11,340.00	86.77	89.69	-90.38	-4,636.96	1,933.91	1,650.10	1,477.01	173.09	9.533		
15,800.00	11,330.00	15,924.08	11,340.00	88.26	91.12	-90.38	-4,736.96	1,934.39	1,650.09	1,474.01	176.08	9.371		
15,900.00	11,330.00	16,024.08	11,340.00	89.75	92.56	-90.38	-4,836.96	1,934.87	1,650.07	1,471.00	179.07	9.215		
15,930.10	11,330.00	16,054.17	11,340.00	90.20	93.00	-90.38	-4,867.05	1,935.01	1,650.07	1,470.09	179.98	9.168 SF		

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slots 3 & 4
Site Error: 0.00 usft
Reference Well: 223H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

MJ Federal Slots 3 & 4 - 233H - OH - Prelim Plan A														Offset Site Error: 0.00 usft
Survey Program: 0-MWD - QWSG, 400-MWD - QWSG, 11163-MWD - QWSG														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)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	90.00	0.00	30.00	30.00					
100.00	100.00	101.00	101.00	0.13	0.13	90.00	0.00	30.00	30.00	29.74	0.26	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	17.729		
400.00	400.00	401.00	401.00	1.20	1.04	90.00	0.00	30.00	30.00	27.76	2.24	13.365		
500.00	500.00	501.00	501.00	1.56	1.16	90.00	0.00	30.00	30.00	27.28	2.72	11.029		
600.00	599.99	600.53	600.52	1.91	1.36	-6.74	0.41	30.78	29.93	26.86	3.27	9.152		
700.00	699.96	700.05	700.01	2.26	1.62	-12.82	1.60	33.10	26.74	25.88	3.87	7.691		
800.00	799.86	799.53	799.39	2.61	1.90	-18.00	3.60	36.95	29.62	25.12	4.50	6.579		
802.43	802.29	801.94	801.80	2.81	1.91	-18.16	3.66	37.06	29.62	25.10	4.52	6.556 CC		
800.00	899.68	898.96	898.64	2.86	2.22	-25.23	6.38	42.33	29.84	24.68	5.16	5.784 ES		
1,000.00	999.37	1,001.69	997.68	3.32	2.56	-34.16	9.95	49.23	30.81	24.96	5.85	5.270		
1,100.00	1,098.99	1,101.84	1,097.16	3.69	2.91	-43.26	13.95	56.96	32.73	26.18	6.55	4.999		
1,200.00	1,198.60	1,201.98	1,195.63	4.06	3.26	-51.18	17.95	64.69	35.37	28.11	7.26	4.871		
1,300.00	1,298.22	1,302.13	1,298.10	4.44	3.62	-57.89	21.95	72.42	38.59	30.61	7.99	4.831		
1,400.00	1,397.84	1,402.27	1,395.58	4.81	3.99	-63.50	25.95	80.15	42.26	33.54	8.73	4.843		
1,500.00	1,497.46	1,502.42	1,495.05	5.19	4.36	-68.19	29.95	87.88	46.27	36.80	9.47	4.886		
1,600.00	1,597.08	1,597.44	1,594.53	5.57	4.71	-72.10	33.95	95.61	50.54	40.34	10.20	4.956		
1,700.00	1,696.70	1,702.71	1,694.00	5.94	5.10	-75.40	37.95	103.34	55.00	44.03	10.97	5.015		
1,800.00	1,796.32	1,802.86	1,793.48	6.32	5.48	-78.19	41.95	111.07	59.82	47.80	11.72	5.087		
1,900.00	1,895.94	1,903.00	1,892.95	6.70	5.85	-80.57	45.95	118.80	64.36	51.89	12.47	5.159		
2,000.00	1,995.56	1,998.85	1,992.43	7.08	6.20	-82.63	49.95	126.52	69.20	55.99	13.21	5.239		
2,100.00	2,095.18	2,103.29	2,091.90	7.47	6.61	-84.41	53.95	134.25	74.11	60.12	13.99	5.298		
2,200.00	2,194.80	2,203.44	2,191.37	7.85	6.98	-85.88	57.95	141.98	79.09	64.34	14.75	5.363		
2,300.00	2,294.42	2,303.56	2,290.85	8.23	7.36	-87.35	61.95	149.71	84.11	68.61	15.51	5.425		
2,400.00	2,394.04	2,403.73	2,390.32	8.61	7.74	-88.57	65.95	157.44	89.19	72.92	16.26	5.483		
2,500.00	2,493.66	2,503.88	2,489.80	8.99	8.12	-89.68	69.95	165.17	94.29	77.27	17.02	5.539		
2,600.00	2,593.28	2,604.02	2,589.27	9.38	8.50	-90.84	73.95	172.90	99.43	81.65	17.78	5.591		
2,700.00	2,692.90	2,704.17	2,688.75	9.76	8.88	-91.52	77.95	180.63	104.59	86.05	18.55	5.640		
2,800.00	2,792.52	2,804.31	2,788.22	10.14	9.26	-92.32	81.95	188.36	109.78	90.47	19.31	5.686		
2,900.00	2,892.14	2,904.48	2,887.69	10.52	9.64	-93.04	85.95	196.09	114.98	94.92	20.07	5.730		
3,000.00	2,991.76	3,004.60	2,987.17	10.91	10.02	-93.71	89.95	203.82	120.21	99.38	20.83	5.771		
3,100.00	3,091.37	3,104.75	3,088.64	11.29	10.40	-94.31	93.95	211.55	125.44	103.85	21.59	5.810		
3,200.00	3,190.99	3,204.89	3,186.12	11.67	10.78	-94.87	97.95	219.27	130.69	108.34	22.35	5.847		
3,300.00	3,290.61	3,305.04	3,285.59	12.06	11.17	-95.39	101.95	227.00	135.95	112.84	23.11	5.882		
3,400.00	3,390.23	3,405.19	3,385.07	12.44	11.55	-95.86	105.95	234.73	141.22	117.35	23.88	5.915		
3,500.00	3,489.85	3,494.98	3,484.86	12.82	11.89	-96.33	109.94	242.44	146.48	121.88	24.60	5.954		
3,529.29	3,519.03	3,524.60	3,514.38	12.94	12.00	-96.52	111.03	244.55	147.93	123.10	24.82	5.959		
3,600.00	3,589.51	3,596.14	3,585.74	13.21	12.27	-97.05	113.38	249.09	151.08	125.71	25.38	5.957		
3,700.00	3,689.29	3,697.36	3,688.79	13.58	12.64	-97.69	116.01	254.17	154.64	128.53	26.11	5.923		
3,800.00	3,789.17	3,798.61	3,787.97	13.94	13.00	-98.24	117.82	257.66	157.14	130.30	26.84	5.855		
3,900.00	3,889.12	3,899.89	3,889.22	14.30	13.35	-98.70	118.80	259.96	158.58	131.03	27.55	5.756		
4,000.00	3,989.11	4,000.78	3,990.11	14.65	13.70	-99.07	119.00	259.94	158.89	130.75	28.24	5.630		
4,029.29	4,018.39	4,030.06	4,019.39	14.75	13.79	-0.38	119.00	259.94	159.00	130.57	28.44	5.591		
4,100.00	4,089.11	4,100.78	4,090.11	14.98	14.03	-0.38	119.00	259.94	159.00	130.09	28.91	5.500		
4,200.00	4,189.11	4,200.78	4,190.11	15.31	14.37	-0.38	119.00	259.94	159.00	129.43	29.58	5.376		
4,300.00	4,289.11	4,300.78	4,290.11	15.64	14.70	-0.38	119.00	259.94	159.00	128.75	30.25	5.257		
4,400.00	4,389.11	4,400.78	4,390.11	15.97	15.04	-0.38	119.00	259.94	159.00	128.08	30.92	5.142		
4,500.00	4,489.11	4,500.78	4,490.11	16.31	15.38	-0.38	119.00	259.94	159.00	127.41	31.60	5.032		
4,600.00	4,589.11	4,600.78	4,590.11	16.64	15.72	-0.38	119.00	259.94	159.00	126.73	32.27	4.927		
4,700.00	4,689.11	4,700.78	4,690.11	16.98	16.06	-0.38	119.00	259.94	159.00	126.05	32.95	4.826		
4,800.00	4,789.11	4,800.78	4,790.11	17.32	16.40	-0.38	119.00	259.94	159.00	125.37	33.63	4.728		

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 233H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 400-MWD - OWSG, 11168-MWD - OWSG													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)	Highside Toolface (°)	Offset Wellbore Centre +N/S (usft)	+E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.00	4,889.11	4,900.78	4,890.11	17.65	18.74	-0.38	119.00	259.94	159.00	124.69	34.31	4.634		
5,000.00	4,989.11	5,000.78	4,990.11	17.99	17.08	-0.38	119.00	259.94	159.00	124.01	34.99	4.544		
5,100.00	5,089.11	5,100.78	5,090.11	18.33	17.43	-0.38	119.00	259.94	159.00	123.33	35.68	4.457		
5,200.00	5,189.11	5,200.78	5,190.11	18.67	17.77	-0.38	119.00	259.94	159.00	122.64	36.36	4.373		
5,300.00	5,289.11	5,300.78	5,290.11	19.01	18.12	-0.38	119.00	259.94	159.00	121.95	37.05	4.292		
5,400.00	5,389.11	5,400.78	5,390.11	19.35	18.46	-0.38	119.00	259.94	159.00	121.27	37.74	4.213		
5,500.00	5,489.11	5,500.78	5,490.11	19.69	18.81	-0.38	119.00	259.94	159.00	120.58	38.43	4.138		
5,600.00	5,589.11	5,600.78	5,590.11	20.04	19.15	-0.38	119.00	259.94	159.00	119.89	39.12	4.065		
5,700.00	5,689.11	5,700.78	5,690.11	20.38	19.50	-0.38	119.00	259.94	159.00	119.20	39.81	3.994		
5,800.00	5,789.11	5,800.78	5,790.11	20.72	19.85	-0.38	119.00	259.94	159.00	118.50	40.50	3.926		
5,900.00	5,889.11	5,900.78	5,890.11	21.07	20.19	-0.38	119.00	259.94	159.00	117.81	41.19	3.860		
6,000.00	5,989.11	6,000.78	5,990.11	21.41	20.54	-0.38	119.00	259.94	159.00	117.12	41.88	3.796		
6,100.00	6,089.11	6,100.78	6,090.11	21.76	20.89	-0.38	119.00	259.94	159.00	116.43	42.58	3.734		
6,200.00	6,189.11	6,200.78	6,190.11	22.10	21.24	-0.38	119.00	259.94	159.00	115.73	43.27	3.674		
6,300.00	6,289.11	6,300.78	6,290.11	22.45	21.58	-0.38	119.00	259.94	159.00	115.03	43.97	3.616		
6,400.00	6,389.11	6,400.78	6,390.11	22.79	21.93	-0.38	119.00	259.94	159.00	114.34	44.66	3.560		
6,500.00	6,489.11	6,500.78	6,490.11	23.14	22.28	-0.38	119.00	259.94	159.00	113.64	45.36	3.505		
6,600.00	6,589.11	6,600.78	6,590.11	23.49	22.63	-0.38	119.00	259.94	159.00	112.94	46.06	3.452		
6,700.00	6,689.11	6,700.78	6,690.11	23.83	22.98	-0.38	119.00	259.94	159.00	112.25	46.76	3.401		
6,800.00	6,789.11	6,800.78	6,790.11	24.18	23.33	-0.38	119.00	259.94	159.00	111.55	47.46	3.351		
6,900.00	6,889.11	6,900.78	6,890.11	24.53	23.68	-0.38	119.00	259.94	159.00	110.85	48.15	3.302		
7,000.00	6,989.11	7,000.78	6,990.11	24.88	24.03	-0.38	119.00	259.94	159.00	110.15	48.85	3.255		
7,100.00	7,089.11	7,100.78	7,090.11	25.22	24.38	-0.38	119.00	259.94	159.00	109.45	49.55	3.209		
7,200.00	7,189.11	7,200.78	7,190.11	25.57	24.74	-0.38	119.00	259.94	159.00	108.75	50.26	3.164		
7,300.00	7,289.11	7,300.78	7,290.11	25.92	25.09	-0.38	119.00	259.94	159.00	108.05	50.96	3.120		
7,400.00	7,389.11	7,400.78	7,390.11	26.27	25.44	-0.38	119.00	259.94	159.00	107.35	51.66	3.078		
7,500.00	7,489.11	7,500.78	7,490.11	26.62	25.79	-0.38	119.00	259.94	159.00	106.64	52.36	3.037		
7,600.00	7,589.11	7,600.78	7,590.11	26.97	26.14	-0.38	119.00	259.94	159.00	105.94	53.06	2.997		
7,700.00	7,689.11	7,700.78	7,690.11	27.32	26.49	-0.38	119.00	259.94	159.00	105.24	53.76	2.957		
7,800.00	7,789.11	7,800.78	7,790.11	27.67	26.85	-0.38	119.00	259.94	159.00	104.54	54.47	2.919		
7,900.00	7,889.11	7,900.78	7,890.11	28.02	27.20	-0.38	119.00	259.94	159.00	103.83	55.17	2.882		
8,000.00	7,989.11	8,000.78	7,990.11	28.37	27.55	-0.38	119.00	259.94	159.00	103.13	55.88	2.846		
8,100.00	8,089.11	8,100.78	8,090.11	28.72	27.90	-0.38	119.00	259.94	159.00	102.42	56.58	2.810		
8,200.00	8,189.11	8,200.78	8,190.11	29.07	28.25	-0.38	119.00	259.94	159.00	101.72	57.28	2.776		
8,300.00	8,289.11	8,300.78	8,290.11	29.42	28.61	-0.38	119.00	259.94	159.00	101.02	57.99	2.742		
8,400.00	8,389.11	8,400.78	8,390.11	29.78	28.96	-0.38	119.00	259.94	159.00	100.31	58.69	2.709		
8,500.00	8,489.11	8,500.78	8,490.11	30.13	29.32	-0.38	119.00	259.94	159.00	99.60	59.40	2.677		
8,600.00	8,589.11	8,600.78	8,590.11	30.48	29.67	-0.38	119.00	259.94	159.00	98.90	60.10	2.645		
8,700.00	8,689.11	8,700.78	8,690.11	30.83	30.02	-0.38	119.00	259.94	159.00	98.19	60.81	2.615		
8,800.00	8,789.11	8,800.78	8,790.11	31.18	30.38	-0.38	119.00	259.94	159.00	97.49	61.52	2.585		
8,900.00	8,889.11	8,900.78	8,890.11	31.54	30.73	-0.38	119.00	259.94	159.00	96.78	62.22	2.555		
9,000.00	8,989.11	9,000.78	8,990.11	31.89	31.08	-0.38	119.00	259.94	159.00	96.07	62.93	2.527		
9,100.00	9,089.11	9,100.78	9,090.11	32.24	31.44	-0.38	119.00	259.94	159.00	95.37	63.64	2.499		
9,200.00	9,189.11	9,200.78	9,190.11	32.59	31.79	-0.38	119.00	259.94	159.00	94.66	64.34	2.471		
9,300.00	9,289.11	9,300.78	9,290.11	32.94	32.15	-0.38	119.00	259.94	159.00	93.95	65.05	2.444		
9,400.00	9,389.11	9,400.78	9,390.11	33.30	32.50	-0.38	119.00	259.94	159.00	93.25	65.76	2.418		
9,500.00	9,489.11	9,500.78	9,490.11	33.65	32.85	-0.38	119.00	259.94	159.00	92.54	66.47	2.392		
9,600.00	9,589.11	9,600.78	9,590.11	34.00	33.21	-0.38	119.00	259.94	159.00	91.83	67.17	2.367		
9,700.00	9,689.11	9,700.78	9,690.11	34.36	33.56	-0.38	119.00	259.94	159.00	91.12	67.88	2.342		
9,800.00	9,789.11	9,800.78	9,790.11	34.71	33.92	-0.38	119.00	259.94	159.00	90.41	68.59	2.318		
9,900.00	9,889.11	9,900.78	9,890.11	35.06	34.27	-0.38	119.00	259.94	159.00	89.71	69.30	2.294		
10,000.00	9,989.11	10,000.78	9,990.11	35.42	34.63	-0.38	119.00	259.94	159.00	89.00	70.01	2.271		

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

Pro Directional Anticollision Report

Company: Matador Resources Project: Lea County, NM Reference Site: MJ Federal Slots 3 & 4 Site Error: 0.00 usft Reference Well: 223H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: Well 223H TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') North Reference: Grid Survey Calculation Method: Minimum Curvature Output errors are at: 2.00 sigma Database: WellPlanner1 Offset TVD Reference: Offset Datum	
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Offset Design MJ Federal Slots 3 & 4 - 233H - OH - Prelim Plan A														Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 400-MWD - OWSG, 11168-MWD - OWSG														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,100.00	10,089.11	10,100.78	10,090.11	35.77	34.88	-0.38	119.00	259.94	159.00	88.29	70.72	2.249			
10,200.00	10,189.11	10,200.78	10,190.11	36.12	35.34	-0.38	119.00	259.94	159.00	87.58	71.42	2.228			
10,300.00	10,289.11	10,300.78	10,290.11	36.48	35.69	-0.38	119.00	259.94	159.00	88.87	72.13	2.204			
10,400.00	10,389.11	10,400.78	10,390.11	36.83	36.05	-0.38	119.00	259.94	159.00	88.16	72.84	2.183			
10,500.00	10,489.11	10,500.78	10,490.11	37.19	36.40	-0.38	119.00	259.94	159.00	85.45	73.55	2.162			
10,600.00	10,589.11	10,600.78	10,590.11	37.54	36.76	-0.38	119.00	259.94	159.00	84.74	74.26	2.141			
10,700.00	10,689.11	10,700.78	10,690.11	37.89	37.11	-0.38	119.00	259.94	159.00	84.03	74.97	2.121			
10,767.99	10,757.10	10,768.77	10,758.10	38.13	37.35	-0.38	119.00	259.94	159.00	83.55	75.45	2.107 SF			
10,800.00	10,789.09	10,800.78	10,790.09	38.24	37.47	179.90	119.00	259.94	159.00	84.22	75.68	2.113			
10,850.00	10,838.83	10,850.50	10,839.83	38.41	37.64	179.91	119.00	259.94	164.86	88.84	76.02	2.169			
10,900.00	10,887.84	10,900.39	10,888.94	38.57	37.82	179.91	119.00	259.94	174.14	97.79	76.36	2.281			
10,950.00	10,938.06	10,947.73	10,937.06	38.73	37.99	179.91	119.00	259.94	187.67	110.99	76.68	2.447			
11,000.00	10,982.82	11,005.51	10,983.82	38.89	38.19	179.92	119.00	259.94	205.34	128.30	77.04	2.665			
11,050.00	11,027.86	11,039.53	11,028.86	39.04	38.32	179.92	119.00	259.94	227.01	149.71	77.30	2.837			
11,100.00	11,070.84	11,082.51	11,071.84	39.19	38.47	179.93	119.00	259.94	252.53	174.95	77.59	3.255			
11,150.00	11,111.43	11,123.10	11,112.43	39.33	38.61	179.93	119.00	259.94	281.70	203.85	77.85	3.618			
11,200.00	11,149.32	11,160.99	11,150.32	39.47	38.75	179.93	119.00	259.94	314.30	236.20	78.09	4.025			
11,250.00	11,184.23	11,239.70	11,228.84	39.62	38.83	179.94	114.49	259.97	348.30	270.47	77.84	4.475			
11,300.00	11,215.89	11,347.59	11,333.98	39.77	38.93	179.95	91.01	260.09	379.29	303.49	75.80	5.004			
11,350.00	11,244.06	11,463.87	11,457.41	39.92	38.85	179.96	33.99	260.37	405.15	334.16	70.99	5.707			
11,400.00	11,268.52	11,653.15	11,586.47	40.09	38.81	179.96	-74.59	260.92	422.85	380.32	62.62	6.754			
11,450.00	11,289.09	11,847.62	11,888.28	40.26	39.09	179.97	-239.19	261.74	429.51	376.66	52.86	8.126			
11,500.00	11,305.61	12,042.52	11,729.50	40.44	39.53	179.97	-428.71	262.69	423.31	375.16	48.15	8.792			
11,550.00	11,317.95	12,108.62	11,730.06	40.62	39.75	179.97	-495.80	263.03	411.11	382.83	48.28	8.516			
11,600.00	11,326.03	12,158.94	11,730.06	40.81	39.94	179.97	-545.12	263.28	403.03	354.62	48.41	8.326			
11,650.00	11,329.78	12,208.79	11,730.06	41.01	40.14	179.97	-584.67	263.53	399.28	350.74	48.54	8.226			
11,688.00	11,330.06	12,228.79	11,730.06	41.08	40.22	179.97	-612.96	263.62	399.00	350.41	48.59	8.212			
11,689.00	11,330.06	12,228.79	11,730.06	41.08	40.22	179.97	-612.96	263.62	399.00	350.41	48.59	8.212			
11,700.00	11,330.06	12,258.78	11,730.06	41.21	40.37	179.97	-644.96	263.78	399.00	350.32	48.68	8.197			
11,800.00	11,330.06	12,358.78	11,730.05	41.68	40.86	179.97	-744.96	264.28	399.00	350.01	48.99	8.144			
11,900.00	11,330.05	12,458.78	11,730.05	42.17	41.42	179.97	-844.96	264.78	399.00	349.65	49.35	8.085			
12,000.00	11,330.05	12,558.78	11,730.05	42.74	42.03	179.97	-944.96	265.28	399.00	349.24	49.76	8.018			
12,100.00	11,330.05	12,658.78	11,730.05	43.36	42.71	179.97	-1,044.96	265.78	399.00	348.78	50.21	7.946			
12,200.00	11,330.05	12,758.78	11,730.05	44.04	43.44	179.97	-1,144.86	266.29	399.00	348.29	50.71	7.868			
12,300.00	11,330.05	12,858.78	11,730.05	44.77	44.21	179.97	-1,244.96	266.79	399.00	347.74	51.25	7.785			
12,400.00	11,330.05	12,958.78	11,730.05	45.55	45.04	179.97	-1,344.95	267.29	399.00	347.16	51.84	7.697			
12,500.00	11,330.05	13,058.78	11,730.05	46.38	45.91	179.97	-1,444.95	267.79	399.00	346.54	52.46	7.605			
12,600.00	11,330.05	13,158.78	11,730.04	47.25	46.83	179.97	-1,544.85	268.29	399.00	345.87	53.13	7.510			
12,700.00	11,330.04	13,258.78	11,730.04	48.16	47.79	179.98	-1,644.65	268.79	399.00	345.17	53.83	7.413			
12,800.00	11,330.04	13,358.78	11,730.04	49.11	48.79	179.98	-1,744.95	269.30	399.00	344.43	54.56	7.312			
12,900.00	11,330.04	13,458.78	11,730.04	50.11	49.82	179.98	-1,844.95	269.80	399.00	343.66	55.34	7.210			
13,000.00	11,330.04	13,558.78	11,730.04	51.13	50.88	179.98	-1,944.95	270.30	399.00	342.86	56.14	7.107			
13,100.00	11,330.04	13,658.78	11,730.04	52.19	51.98	179.98	-2,044.95	270.80	399.00	342.02	56.98	7.003			
13,200.00	11,330.04	13,758.78	11,730.04	53.28	53.11	179.98	-2,144.94	271.30	399.00	341.15	57.85	6.898			
13,300.00	11,330.04	13,858.78	11,730.03	54.40	54.27	179.98	-2,244.94	271.80	399.00	340.26	58.74	6.792			
13,400.00	11,330.03	13,958.78	11,730.03	55.55	55.45	179.98	-2,344.94	272.31	399.00	339.33	59.67	6.687			
13,500.00	11,330.03	14,058.78	11,730.03	56.72	56.66	179.98	-2,444.94	272.81	399.00	338.38	60.62	6.582			
13,600.00	11,330.03	14,158.78	11,730.03	57.92	57.89	179.98	-2,544.94	273.31	399.00	337.40	61.60	6.478			
13,700.00	11,330.03	14,258.78	11,730.03	59.14	59.14	179.98	-2,644.94	273.81	399.00	336.40	62.60	6.374			
13,800.00	11,330.03	14,358.78	11,730.03	60.38	60.41	179.98	-2,744.94	274.31	399.00	335.38	63.62	6.272			
13,900.00	11,330.03	14,458.78	11,730.03	61.65	61.70	179.98	-2,844.94	274.82	399.00	334.33	64.67	6.170			
14,000.00	11,330.03	14,558.78	11,730.03	62.93	63.01	179.99	-2,944.93	275.32	399.00	333.27	65.73	6.070			

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

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slots 3 & 4
Site Error: 0.00 usft
Reference Well: 223H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 233H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 400-MWD - OWSG, 11158-MWD - OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	11,330.03	14,658.78	11,730.02	64.23	64.34	179.99	-3,044.93	275.82	399.00	332.18	66.82	5.971		
14,200.00	11,330.02	14,758.78	11,730.02	65.55	65.66	179.99	-3,144.93	276.32	399.00	331.08	67.92	5.874		
14,300.00	11,330.02	14,858.78	11,730.02	66.88	67.04	179.99	-3,244.93	276.82	399.00	329.95	69.05	5.779		
14,400.00	11,330.02	14,958.78	11,730.02	68.23	68.41	179.99	-3,344.93	277.32	399.00	328.81	70.19	5.685		
14,500.00	11,330.02	15,058.78	11,730.02	69.59	69.79	179.99	-3,444.93	277.83	399.00	327.66	71.34	5.593		
14,600.00	11,330.02	15,158.78	11,730.02	70.96	71.18	179.99	-3,544.93	278.33	399.00	326.48	72.52	5.502		
14,700.00	11,330.02	15,258.78	11,730.02	72.35	72.59	179.99	-3,644.93	278.83	399.00	325.30	73.70	5.414		
14,800.00	11,330.02	15,358.78	11,730.02	73.75	74.01	179.99	-3,744.92	279.33	399.00	324.10	74.90	5.327		
14,900.00	11,330.01	15,458.78	11,730.01	75.16	75.44	179.99	-3,844.92	279.83	399.00	322.88	76.12	5.242		
15,000.00	11,330.01	15,558.78	11,730.01	76.58	76.88	179.99	-3,944.92	280.33	399.00	321.65	77.35	5.159		
15,100.00	11,330.01	15,658.78	11,730.01	78.01	78.33	179.99	-4,044.92	280.84	399.00	320.41	78.59	5.077		
15,200.00	11,330.01	15,758.78	11,730.01	79.45	79.78	179.99	-4,144.92	281.34	399.00	319.18	79.84	4.998		
15,300.00	11,330.01	15,858.78	11,730.01	80.90	81.25	180.00	-4,244.92	281.84	399.00	317.90	81.10	4.920		
15,400.00	11,330.01	15,958.78	11,730.01	82.36	82.72	180.00	-4,344.92	282.34	399.00	316.63	82.37	4.844		
15,500.00	11,330.01	16,058.78	11,730.01	83.82	84.20	180.00	-4,444.92	282.84	399.00	315.35	83.65	4.770		
15,600.00	11,330.00	16,158.78	11,730.00	85.29	85.69	180.00	-4,544.91	283.34	399.00	314.05	84.95	4.697		
15,700.00	11,330.00	16,258.78	11,730.00	86.77	87.18	180.00	-4,644.91	283.85	399.00	312.75	86.25	4.626		
15,800.00	11,330.00	16,358.78	11,730.00	88.26	88.68	180.00	-4,744.91	284.35	399.00	311.44	87.56	4.557		
15,900.00	11,330.00	16,458.78	11,730.00	89.75	90.19	180.00	-4,844.91	284.85	399.00	310.12	88.88	4.489		
15,930.10	11,330.00	16,488.88	11,730.00	90.20	90.84	-180.00	-4,875.01	285.00	399.00	309.72	89.28	4.469		

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 234H - OH - Prelim Plan A													Offset Site Error:
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11353-MWD - OWSG													Offset Well Error:
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)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+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	89.52	1.00	119.00	119.00				
100.00	100.00	102.00	102.00	0.13	0.14	89.52	1.00	119.00	119.00	118.74	0.28	451.668	
200.00	200.00	202.00	202.00	0.49	0.49	89.52	1.00	119.00	119.00	118.02	0.98	121.381	
300.00	300.00	302.00	302.00	0.85	0.85	89.52	1.00	119.00	119.00	117.31	1.70	70.111	
400.00	400.00	402.00	402.00	1.20	1.21	89.52	1.00	119.00	119.00	116.59	2.41	49.201	
500.00	500.00	502.00	502.00	1.56	1.57	89.52	1.00	119.00	119.00	115.87	3.13	38.005 CC	
600.00	599.99	599.93	599.92	1.91	1.75	-9.28	1.06	119.87	119.03	115.37	3.66	32.512	
700.00	699.66	697.69	697.85	2.26	1.82	-9.55	1.22	122.41	119.04	114.97	4.07	29.215	
800.00	799.86	795.88	795.72	2.61	1.96	-10.00	1.50	126.62	119.05	114.49	4.55	26.145	
900.00	899.88	893.81	893.50	2.96	2.15	-10.62	1.89	132.50	119.05	113.97	5.08	23.413	
1,000.00	999.37	991.76	991.16	3.32	2.38	-11.42	2.39	140.05	119.07	113.41	5.66	21.045 ES	
1,100.00	1,098.99	1,089.70	1,088.66	3.69	2.65	-12.31	2.99	149.25	119.97	113.70	6.26	19.158	
1,200.00	1,198.60	1,187.58	1,185.93	4.06	2.95	-13.17	3.71	160.12	122.60	115.71	6.89	17.795	
1,300.00	1,298.22	1,285.34	1,282.88	4.44	3.27	-13.98	4.53	172.62	126.97	119.43	7.53	16.851	
1,400.00	1,397.84	1,382.93	1,379.44	4.81	3.62	-14.70	5.46	189.75	133.08	124.87	8.19	16.241	
1,500.00	1,497.46	1,480.29	1,475.51	5.19	3.99	-15.33	6.50	202.47	140.87	132.01	8.86	15.899	
1,600.00	1,597.08	1,577.36	1,571.02	5.57	4.38	-15.85	7.64	219.77	150.38	140.85	9.53	15.773	
1,700.00	1,696.70	1,676.18	1,668.04	5.94	4.80	-16.28	8.87	238.55	161.09	150.86	10.23	15.741	
1,800.00	1,796.32	1,775.59	1,765.62	6.32	5.23	-16.67	10.12	257.47	171.86	160.91	10.95	15.701	
1,900.00	1,895.94	1,875.01	1,863.21	6.70	5.66	-17.01	11.36	276.40	182.63	170.96	11.66	15.660	
2,000.00	1,895.56	1,874.42	1,860.80	7.08	6.10	-17.31	12.61	295.33	193.40	181.02	12.38	15.618	
2,100.00	2,095.18	2,073.83	2,058.38	7.47	6.55	-17.58	13.86	314.26	204.18	191.07	13.11	15.577	
2,200.00	2,194.80	2,173.25	2,155.97	7.85	7.00	-17.82	15.10	333.19	214.97	201.13	13.84	15.537	
2,300.00	2,294.42	2,272.66	2,253.56	8.23	7.45	-18.04	16.35	352.11	225.75	211.19	14.57	15.498	
2,400.00	2,394.04	2,372.07	2,351.14	8.61	7.91	-18.24	17.60	371.04	236.54	221.24	15.30	15.462	
2,500.00	2,493.66	2,471.46	2,448.73	8.99	8.37	-18.42	18.84	389.97	247.34	231.30	16.03	15.427	
2,600.00	2,593.28	2,570.90	2,546.31	9.38	8.83	-18.59	20.09	408.90	258.13	241.36	16.77	15.394	
2,700.00	2,692.90	2,670.31	2,643.90	9.76	9.29	-18.74	21.34	427.82	268.93	251.42	17.51	15.362	
2,800.00	2,792.52	2,769.72	2,741.49	10.14	9.75	-18.88	22.58	446.75	279.73	261.48	18.24	15.333	
2,900.00	2,892.14	2,869.14	2,839.07	10.52	10.21	-19.01	23.83	465.68	290.53	271.55	18.98	15.304	
3,000.00	2,991.76	2,968.55	2,936.66	10.91	10.68	-19.14	25.07	484.61	301.33	281.61	19.72	15.278	
3,100.00	3,091.37	3,067.96	3,034.25	11.29	11.14	-19.25	26.32	503.54	312.14	291.67	20.46	15.252	
3,200.00	3,190.99	3,167.37	3,131.83	11.67	11.61	-19.35	27.57	522.46	322.94	301.73	21.21	15.228	
3,300.00	3,290.61	3,266.79	3,229.42	12.06	12.08	-19.45	28.81	541.39	333.75	311.80	21.95	15.205	
3,400.00	3,390.23	3,366.20	3,327.01	12.44	12.55	-19.55	30.06	560.32	344.55	321.86	22.69	15.184	
3,500.00	3,489.85	3,465.61	3,424.59	12.82	13.01	-19.63	31.31	579.25	355.36	331.92	23.44	15.163	
3,529.28	3,519.03	3,505.27	3,453.17	12.94	13.20	-19.66	31.67	584.79	358.52	334.83	23.69	15.131	
3,600.00	3,589.51	3,564.98	3,522.13	13.21	13.48	-19.72	32.55	598.17	366.58	342.40	24.18	15.101	
3,700.00	3,689.29	3,664.16	3,619.49	13.58	13.95	-19.73	33.80	617.05	379.35	354.44	24.92	15.224	
3,800.00	3,789.17	3,763.11	3,716.63	13.94	14.42	-19.66	35.04	635.89	393.76	368.11	25.65	15.351	
3,900.00	3,889.12	3,861.81	3,813.51	14.30	14.88	-19.53	36.27	654.68	409.79	383.41	26.38	15.536	
4,000.00	3,989.11	3,960.22	3,910.11	14.65	15.35	-19.33	37.51	673.42	427.45	400.35	27.10	15.774	
4,029.29	4,018.39	3,988.98	3,938.34	14.75	15.48	79.44	37.87	678.89	432.93	405.63	27.31	15.854	
4,100.00	4,089.11	4,058.40	4,008.48	14.98	15.81	79.65	38.74	692.11	446.34	418.54	27.80	16.054	
4,200.00	4,189.11	4,158.58	4,102.84	15.31	16.28	79.92	39.97	710.80	465.30	436.80	28.50	16.324	
4,300.00	4,289.11	4,254.72	4,199.20	15.64	16.74	80.17	41.20	729.49	484.28	455.07	29.21	16.581	
4,400.00	4,389.11	4,352.88	4,295.56	15.97	17.21	80.40	42.43	748.18	503.26	473.35	29.91	16.825	
4,500.00	4,489.11	4,451.05	4,391.92	16.31	17.67	80.61	43.66	766.87	522.25	491.63	30.62	17.057	
4,600.00	4,589.11	4,549.21	4,488.28	16.64	18.14	80.81	44.89	785.56	541.24	509.92	31.32	17.278	
4,700.00	4,689.11	4,647.37	4,584.64	16.98	18.60	80.99	46.12	804.25	560.24	528.21	32.03	17.490	
4,800.00	4,789.11	4,745.53	4,681.00	17.32	19.07	81.16	47.35	822.94	579.25	546.51	32.74	17.691	
4,900.00	4,889.11	4,843.70	4,777.36	17.65	19.54	81.33	48.58	841.63	598.26	564.81	33.45	17.884	

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

Pro Directional Anticollision Report

Company:	Malador Resources	Local Co-ordinate Reference:	Well 223H
Project:	Lea County, NM	TVD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	Rig @ 3690.50usft (GL:3662'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	223H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 234H - OH - Prelim Plan A													Offset Site Error:
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11353-MWD - OWSG													Offset Well Error:
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)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.00	4,989.11	4,941.86	4,873.72	17.99	20.00	81.48	49.81	860.32	817.28	583.11	34.16	18.068	
5,100.00	5,089.11	5,040.02	4,970.07	18.33	20.47	81.62	51.05	879.01	838.30	601.42	34.88	18.245	
5,200.00	5,189.11	5,138.19	5,066.43	18.67	20.93	81.75	52.28	897.70	855.32	619.73	35.59	18.414	
5,300.00	5,289.11	5,236.35	5,162.79	19.01	21.40	81.88	53.51	916.39	874.35	638.05	36.30	18.577	
5,400.00	5,389.11	5,334.61	5,259.15	19.35	21.87	82.00	54.74	935.08	893.38	656.36	37.02	18.732	
5,500.00	5,489.11	5,432.87	5,355.51	19.69	22.33	82.11	55.97	953.77	912.41	674.68	37.73	18.882	
5,600.00	5,589.11	5,530.84	5,451.87	20.04	22.80	82.22	57.20	972.46	931.44	693.00	38.45	19.026	
5,700.00	5,689.11	5,629.00	5,548.23	20.38	23.27	82.32	58.43	991.15	950.48	711.32	39.16	19.164	
5,800.00	5,789.11	5,727.16	5,644.59	20.72	23.73	82.42	59.66	1,009.84	969.52	729.64	39.88	19.297	
5,900.00	5,889.11	5,825.32	5,740.95	21.07	24.20	82.51	60.89	1,028.53	988.56	747.97	40.59	19.425	
6,000.00	5,989.11	5,923.49	5,837.31	21.41	24.67	82.60	62.12	1,047.22	1,007.60	766.29	41.31	19.549	
6,100.00	6,089.11	6,021.65	5,933.87	21.76	25.14	82.68	63.35	1,065.91	1,026.85	784.62	42.03	19.668	
6,200.00	6,189.11	6,119.81	6,030.03	22.10	25.60	82.76	64.58	1,084.60	1,045.69	802.95	42.75	19.783	
6,300.00	6,289.11	6,217.98	6,126.38	22.45	26.07	82.84	65.81	1,103.29	1,064.74	821.28	43.47	19.894	
6,400.00	6,389.11	6,316.14	6,222.74	22.79	26.54	82.91	67.04	1,121.98	1,083.79	839.61	44.19	20.002	
6,500.00	6,489.11	6,414.30	6,319.10	23.14	27.00	82.98	68.27	1,140.67	1,102.84	857.94	44.91	20.105	
6,600.00	6,589.11	6,512.46	6,415.46	23.49	27.47	83.05	69.51	1,159.36	1,121.89	876.27	45.63	20.205	
6,700.00	6,689.11	6,610.63	6,511.82	23.83	27.94	83.11	70.74	1,178.05	1,140.95	894.60	46.35	20.303	
6,800.00	6,789.11	6,708.79	6,608.18	24.18	28.41	83.18	71.97	1,196.74	1,160.00	912.93	47.07	20.398	
6,900.00	6,889.11	6,806.95	6,704.54	24.53	28.87	83.24	73.20	1,215.43	1,179.06	931.27	47.79	20.487	
7,000.00	6,989.11	6,905.11	6,800.90	24.88	29.34	83.29	74.43	1,234.12	1,198.11	949.60	48.51	20.576	
7,100.00	7,089.11	7,003.28	6,897.26	25.22	29.81	83.35	75.66	1,252.81	1,017.17	967.94	49.23	20.661	
7,200.00	7,189.11	7,101.44	6,993.62	25.57	30.28	83.40	76.89	1,271.50	1,036.23	986.27	49.95	20.744	
7,300.00	7,289.11	7,200.40	7,089.98	25.92	30.75	83.45	78.12	1,290.19	1,055.29	1,004.61	50.68	20.823	
7,400.00	7,389.11	7,302.24	7,186.34	26.27	31.23	83.50	79.35	1,308.88	1,074.35	1,022.93	51.42	20.895	
7,500.00	7,489.11	7,404.07	7,282.70	26.62	31.72	83.55	80.58	1,327.57	1,093.41	1,041.25	52.15	20.968	
7,600.00	7,589.11	7,494.09	7,379.05	26.97	32.15	83.60	81.81	1,346.26	1,112.47	1,059.62	52.84	21.052	
7,700.00	7,689.11	7,607.75	7,475.41	27.32	32.69	83.64	83.04	1,364.95	1,131.53	1,077.90	53.63	21.100	
7,800.00	7,789.11	7,709.58	7,571.77	27.67	33.18	83.68	84.27	1,383.64	1,150.59	1,096.23	54.37	21.164	
7,900.00	7,889.11	7,788.58	7,668.13	28.02	33.55	83.72	85.50	1,402.33	1,169.66	1,114.64	55.02	21.260	
8,000.00	7,989.11	7,888.74	7,764.49	28.37	34.02	83.76	86.74	1,421.02	1,188.72	1,132.98	55.74	21.326	
8,100.00	8,089.11	7,984.90	7,860.85	28.72	34.49	83.80	87.97	1,439.71	1,207.78	1,151.32	56.46	21.390	
8,200.00	8,189.11	8,083.07	7,957.21	29.07	34.96	83.84	89.20	1,458.40	1,226.85	1,169.66	57.19	21.453	
8,300.00	8,289.11	8,181.23	8,053.57	29.42	35.42	83.88	90.43	1,477.09	1,245.91	1,188.00	57.91	21.513	
8,400.00	8,389.11	8,279.39	8,149.93	29.76	35.89	83.91	91.66	1,495.77	1,264.98	1,206.34	58.64	21.572	
8,500.00	8,489.11	8,377.55	8,246.29	30.13	36.36	83.95	92.89	1,514.46	1,284.04	1,224.68	59.36	21.630	
8,600.00	8,589.11	8,475.72	8,342.65	30.48	36.83	83.98	94.12	1,533.15	1,303.11	1,243.02	60.09	21.686	
8,700.00	8,689.11	8,573.88	8,439.01	30.83	37.30	84.01	95.35	1,551.84	1,322.18	1,261.36	60.82	21.741	
8,800.00	8,789.11	8,672.04	8,535.36	31.18	37.76	84.05	96.58	1,570.53	1,341.25	1,279.70	61.54	21.794	
8,900.00	8,889.11	8,770.21	8,631.72	31.54	38.23	84.08	97.81	1,589.22	1,360.31	1,298.05	62.27	21.846	
9,000.00	8,989.11	8,868.37	8,728.08	31.89	38.70	84.11	99.04	1,607.91	1,379.38	1,316.39	62.99	21.897	
9,100.00	9,089.11	8,966.53	8,824.44	32.24	39.17	84.14	100.27	1,626.60	1,398.45	1,334.73	63.72	21.947	
9,200.00	9,189.11	9,064.69	8,920.80	32.59	39.64	84.16	101.50	1,645.29	1,417.52	1,353.07	64.45	21.995	
9,300.00	9,289.11	9,162.86	9,017.16	32.94	40.11	84.19	102.73	1,663.98	1,436.59	1,371.41	65.17	22.043	
9,400.00	9,389.11	9,261.02	9,113.52	33.30	40.57	84.22	103.97	1,682.67	1,455.66	1,389.78	65.90	22.089	
9,500.00	9,489.11	9,359.18	9,209.88	33.65	41.04	84.24	105.20	1,701.36	1,474.73	1,408.10	66.63	22.134	
9,600.00	9,589.11	9,457.34	9,306.24	34.00	41.51	84.27	106.43	1,720.05	1,493.80	1,426.44	67.35	22.178	
9,700.00	9,689.11	9,555.51	9,402.60	34.36	41.98	84.29	107.66	1,738.74	1,512.87	1,444.78	68.08	22.221	
9,800.00	9,789.11	9,653.67	9,498.96	34.71	42.45	84.32	108.89	1,757.43	1,531.94	1,463.13	68.81	22.263	
9,900.00	9,889.11	9,751.83	9,595.32	35.06	42.92	84.34	110.12	1,776.12	1,551.01	1,481.47	69.54	22.305	
10,000.00	9,989.11	9,850.00	9,691.68	35.42	43.38	84.36	111.35	1,794.81	1,570.08	1,499.81	70.27	22.345	
10,100.00	10,089.11	9,948.16	9,788.04	35.77	43.82	84.39	112.58	1,813.50	1,588.96	1,517.87	71.00	22.382	

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

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slots 3 & 4
Site Error: 0.00 usft
Reference Well: 223H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

Offset Design MJ Federal Slots 3 & 4 - 234H - OH - Prelim Plan A														Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11353-MWD - OWSG														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,200.00	10,189.11	10,099.98	9,937.64	38.12	44.54	84.42	114.28	1,839.27	1,605.92	1,533.88	72.04	22.283		
10,300.00	10,289.11	10,237.65	10,073.84	38.48	45.12	84.44	115.60	1,859.33	1,620.52	1,547.57	72.95	22.214		
10,400.00	10,389.11	10,376.23	10,211.37	36.83	45.68	84.46	118.71	1,878.22	1,632.73	1,558.90	73.83	22.115		
10,500.00	10,489.11	10,515.55	10,350.02	37.19	46.20	84.47	117.61	1,889.85	1,642.53	1,567.85	74.67	21.998		
10,600.00	10,589.11	10,655.46	10,489.55	37.54	46.69	84.48	118.29	1,900.15	1,649.90	1,574.42	75.48	21.859		
10,700.00	10,689.11	10,795.80	10,629.70	37.89	47.14	84.49	118.74	1,907.06	1,654.84	1,578.69	76.25	21.703		
10,787.99	10,757.10	10,891.37	10,725.24	38.13	47.43	84.49	118.92	1,909.80	1,656.79	1,580.04	76.73	21.587		
10,800.00	10,789.09	10,936.36	10,770.22	38.24	47.56	-95.20	118.97	1,910.55	1,657.40	1,580.43	76.97	21.532		
10,850.00	10,836.83	11,008.33	10,840.19	38.41	47.78	-95.36	119.00	1,911.00	1,658.19	1,580.88	77.31	21.449		
10,900.00	10,887.94	11,056.08	10,889.94	38.57	47.89	-95.59	119.00	1,911.00	1,659.09	1,581.45	77.64	21.370		
10,950.00	10,936.06	11,104.20	10,938.06	38.73	48.02	-95.90	119.00	1,911.00	1,660.50	1,582.53	77.97	21.297		
11,000.00	10,982.82	11,150.96	10,984.82	38.89	48.15	-96.26	119.00	1,911.00	1,662.50	1,584.20	78.30	21.233		
11,050.00	11,027.86	11,204.00	11,029.86	39.04	48.29	-96.66	119.00	1,911.00	1,665.21	1,586.55	78.66	21.171		
11,100.00	11,070.84	11,238.98	11,072.84	39.19	48.39	-97.06	119.00	1,911.00	1,668.75	1,589.79	78.96	21.133		
11,150.00	11,111.43	11,279.57	11,113.43	39.33	48.49	-97.42	119.00	1,911.00	1,673.27	1,593.97	79.30	21.100		
11,200.00	11,149.32	11,317.46	11,151.32	39.47	48.57	-97.70	119.00	1,911.00	1,678.91	1,599.29	79.62	21.087		
11,250.00	11,184.23	11,352.37	11,186.23	39.62	48.62	-97.86	119.00	1,911.00	1,685.80	1,605.89	79.91	21.096		
11,300.00	11,215.89	11,444.27	11,277.75	39.77	48.62	-99.34	111.78	1,911.03	1,693.52	1,613.60	79.92	21.191		
11,350.00	11,244.06	11,350.00	11,367.39	39.92	48.63	-100.83	89.45	1,911.14	1,701.07	1,621.34	79.73	21.336		
11,400.00	11,268.52	11,731.92	11,538.81	40.09	48.67	-103.45	-1.85	1,911.58	1,707.58	1,628.50	79.09	21.591		
11,450.00	11,288.09	11,946.33	11,879.80	40.26	48.81	-105.14	-161.51	1,912.35	1,711.47	1,633.25	78.22	21.880		
11,500.00	11,305.61	12,184.42	11,755.93	40.44	49.14	-105.08	-385.29	1,913.43	1,711.34	1,633.45	77.89	21.972		
11,550.00	11,317.85	12,287.14	11,760.06	40.62	49.34	-104.63	-487.85	1,913.92	1,708.34	1,630.02	78.33	21.811		
11,600.00	11,326.03	12,336.46	11,760.06	40.81	49.46	-104.57	-537.17	1,914.16	1,706.27	1,627.49	78.78	21.658		
11,650.00	11,329.78	12,386.31	11,760.06	41.01	49.58	-104.54	-587.02	1,914.40	1,705.32	1,626.12	79.20	21.531		
11,688.00	11,330.06	12,404.31	11,760.06	41.08	49.63	-104.54	-605.01	1,914.49	1,705.25	1,625.90	79.35	21.491		
11,700.00	11,330.06	12,436.30	11,760.06	41.21	49.72	-104.54	-637.01	1,914.84	1,705.24	1,625.83	79.62	21.418		
11,800.00	11,330.06	12,536.30	11,760.05	41.88	50.03	-104.54	-737.01	1,915.12	1,705.23	1,624.71	80.52	21.177		
11,900.00	11,330.05	12,636.30	11,760.05	42.17	50.39	-104.54	-837.01	1,915.80	1,705.21	1,623.67	81.55	20.911		
12,000.00	11,330.05	12,736.30	11,760.05	42.74	50.79	-104.54	-937.01	1,916.09	1,705.20	1,622.51	82.69	20.623		
12,100.00	11,330.05	12,836.30	11,760.05	43.36	51.25	-104.54	-1,037.01	1,916.57	1,705.19	1,621.25	83.94	20.315		
12,200.00	11,330.05	12,936.30	11,760.05	44.04	51.75	-104.54	-1,137.01	1,917.05	1,705.17	1,619.88	85.29	19.991		
12,300.00	11,330.05	13,036.30	11,760.05	44.77	52.31	-104.54	-1,237.01	1,917.53	1,705.16	1,618.40	86.75	19.655		
12,400.00	11,330.05	13,136.30	11,760.05	45.55	52.91	-104.54	-1,337.00	1,918.01	1,705.14	1,616.83	88.31	19.309		
12,500.00	11,330.05	13,236.30	11,760.05	46.38	53.57	-104.54	-1,437.00	1,918.49	1,705.13	1,615.17	89.95	18.955		
12,600.00	11,330.05	13,336.30	11,760.04	47.25	54.27	-104.54	-1,537.00	1,918.98	1,705.11	1,613.43	91.69	18.597		
12,700.00	11,330.04	13,436.30	11,760.04	48.16	55.02	-104.54	-1,637.00	1,919.48	1,705.10	1,611.60	93.50	18.238		
12,800.00	11,330.04	13,536.30	11,760.04	49.11	55.82	-104.54	-1,737.00	1,919.94	1,705.09	1,609.69	95.39	17.875		
12,900.00	11,330.04	13,636.30	11,760.04	50.11	56.66	-104.54	-1,837.00	1,920.42	1,705.07	1,607.72	97.35	17.514		
13,000.00	11,330.04	13,736.30	11,760.04	51.13	57.54	-104.54	-1,937.00	1,920.90	1,705.06	1,605.87	99.39	17.156		
13,100.00	11,330.04	13,836.30	11,760.04	52.19	58.45	-104.54	-2,037.00	1,921.38	1,705.04	1,603.56	101.48	16.802		
13,200.00	11,330.04	13,936.30	11,760.04	53.28	59.41	-104.54	-2,137.00	1,921.87	1,705.03	1,601.39	103.64	16.452		
13,300.00	11,330.04	14,036.30	11,760.03	54.40	60.40	-104.54	-2,236.99	1,922.35	1,705.01	1,599.17	105.85	16.108		
13,400.00	11,330.03	14,136.30	11,760.03	55.55	61.42	-104.54	-2,336.99	1,922.83	1,705.00	1,596.89	108.11	15.771		
13,500.00	11,330.03	14,236.30	11,760.03	56.72	62.48	-104.54	-2,436.99	1,923.31	1,704.99	1,594.56	110.43	15.440		
13,600.00	11,330.03	14,336.30	11,760.03	57.92	63.56	-104.54	-2,536.99	1,923.79	1,704.97	1,592.18	112.79	15.117		
13,700.00	11,330.03	14,436.30	11,760.03	59.14	64.67	-104.54	-2,636.99	1,924.27	1,704.96	1,589.76	115.19	14.801		
13,800.00	11,330.03	14,536.30	11,760.03	60.38	65.81	-104.54	-2,736.99	1,924.76	1,704.94	1,587.30	117.64	14.493		
13,900.00	11,330.03	14,636.30	11,760.03	61.65	66.97	-104.54	-2,836.99	1,925.24	1,704.93	1,584.80	120.12	14.193		
14,000.00	11,330.03	14,736.30	11,760.03	62.93	68.16	-104.54	-2,936.99	1,925.72	1,704.91	1,582.27	122.64	13.901		
14,100.00	11,330.03	14,836.30	11,760.02	64.23	69.36	-104.54	-3,036.98	1,926.20	1,704.90	1,579.70	125.20	13.617		
14,200.00	11,330.02	14,936.30	11,760.02	65.55	70.59	-104.54	-3,136.98	1,926.68	1,704.89	1,577.10	127.79	13.342		

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

Pro Directional Anticollision Report

Company: Matador Resources Project: Lea County, NM Reference Site: MJ Federal Slots 3 & 4 Site Error: 0.00 usft Reference Well: 223H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:	Well 223H Rig @ 3690.50usft (GL:3662'+KB:28.5') Rig @ 3690.50usft (GL:3662'+KB:28.5') Grid Minimum Curvature 2.00 sigma WellPlanner1 Offset Datum
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Offset Design MJ Federal Slots 3 & 4 - 234H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11353-MWD - OWSG													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,300.00	11,330.02	15,036.30	11,760.02	66.88	71.84	-104.54	-3,236.98	1,927.16	1,704.87	1,574.47	130.40	13.074	
14,400.00	11,330.02	15,136.30	11,760.02	68.23	73.10	-104.54	-3,336.98	1,927.65	1,704.86	1,571.81	133.05	12.814	
14,500.00	11,330.02	15,236.30	11,760.02	69.59	74.38	-104.54	-3,436.98	1,928.13	1,704.84	1,569.12	135.72	12.561	
14,600.00	11,330.02	15,336.30	11,760.02	70.96	75.68	-104.54	-3,536.98	1,928.61	1,704.83	1,566.41	138.42	12.316	
14,700.00	11,330.02	15,436.30	11,760.02	72.35	76.99	-104.54	-3,636.98	1,929.09	1,704.81	1,563.68	141.14	12.079	
14,800.00	11,330.02	15,536.30	11,760.02	73.75	78.32	-104.54	-3,736.98	1,929.57	1,704.80	1,560.92	143.88	11.849	
14,900.00	11,330.01	15,636.30	11,760.01	75.16	79.66	-104.54	-3,836.98	1,930.05	1,704.79	1,558.14	146.65	11.625	
15,000.00	11,330.01	15,736.30	11,760.01	76.58	81.01	-104.54	-3,936.97	1,930.54	1,704.77	1,555.34	149.43	11.408	
15,100.00	11,330.01	15,836.30	11,760.01	78.01	82.38	-104.54	-4,036.97	1,931.02	1,704.76	1,552.52	152.23	11.198	
15,200.00	11,330.01	15,936.30	11,760.01	79.45	83.76	-104.54	-4,136.97	1,931.50	1,704.74	1,549.69	155.06	10.994	
15,300.00	11,330.01	16,036.30	11,760.01	80.90	85.15	-104.54	-4,236.97	1,931.98	1,704.73	1,546.84	157.89	10.797	
15,400.00	11,330.01	16,136.30	11,760.01	82.36	86.55	-104.54	-4,336.97	1,932.46	1,704.72	1,543.97	160.75	10.605	
15,500.00	11,330.01	16,236.30	11,760.01	83.82	87.95	-104.54	-4,436.97	1,932.94	1,704.70	1,541.08	163.62	10.419	
15,600.00	11,330.00	16,336.30	11,760.00	85.29	89.37	-104.54	-4,536.97	1,933.42	1,704.69	1,538.19	166.50	10.238	
15,700.00	11,330.00	16,436.30	11,760.00	86.77	90.80	-104.54	-4,636.97	1,933.91	1,704.67	1,535.28	169.40	10.063	
15,800.00	11,330.00	16,536.30	11,760.00	88.26	92.24	-104.54	-4,736.96	1,934.39	1,704.66	1,532.35	172.31	9.893	
15,900.00	11,330.00	16,636.30	11,760.00	89.75	93.68	-104.54	-4,836.96	1,934.87	1,704.64	1,529.42	175.23	9.728	
15,930.10	11,330.00	16,666.40	11,760.00	90.20	94.11	-104.54	-4,867.06	1,935.01	1,704.64	1,528.53	176.11	9.679 SF	

Pro Directional Anticollision Report

Company: Matador Resources Project: Lea County, NM Reference Site: MJ Federal Slots 3 & 4 Site Error: 0.00 usft Reference Well: 223H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5') North Reference: Grid Survey Calculation Method: Minimum Curvature Output errors are at: 2.00 sigma Database: WellPlanner1 Offset TVD Reference: Offset Datum	Well 223H Rig @ 3690.50usft (GL:3662'+KB:28.5') Rig @ 3690.50usft (GL:3662'+KB:28.5') Grid Minimum Curvature 2.00 sigma WellPlanner1 Offset Datum
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Reference Depths are relative to Rig @ 3690.50usft (GL:3662'+KB:28.5)

Offset Depths are relative to Offset Datum

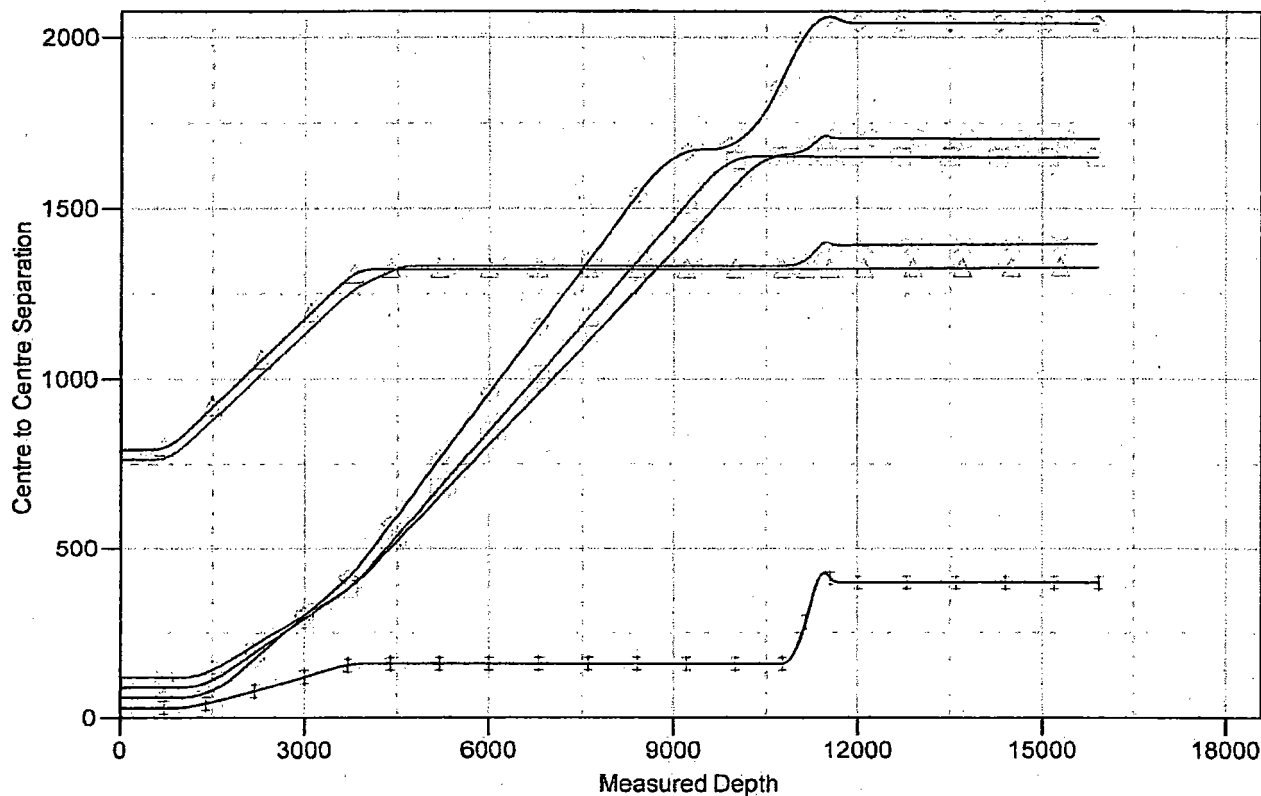
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 223H

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

Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

224H, OH, Prelim Plan A VO	234H, OH, Prelim Plan A VO	222H, OH, Prelim Plan A VO
233H, OH, Prelim Plan A VO	124H, OH, Prelim Plan A VO	220H, OH, Prelim Plan A VO

Pro Directional Anticollision Report

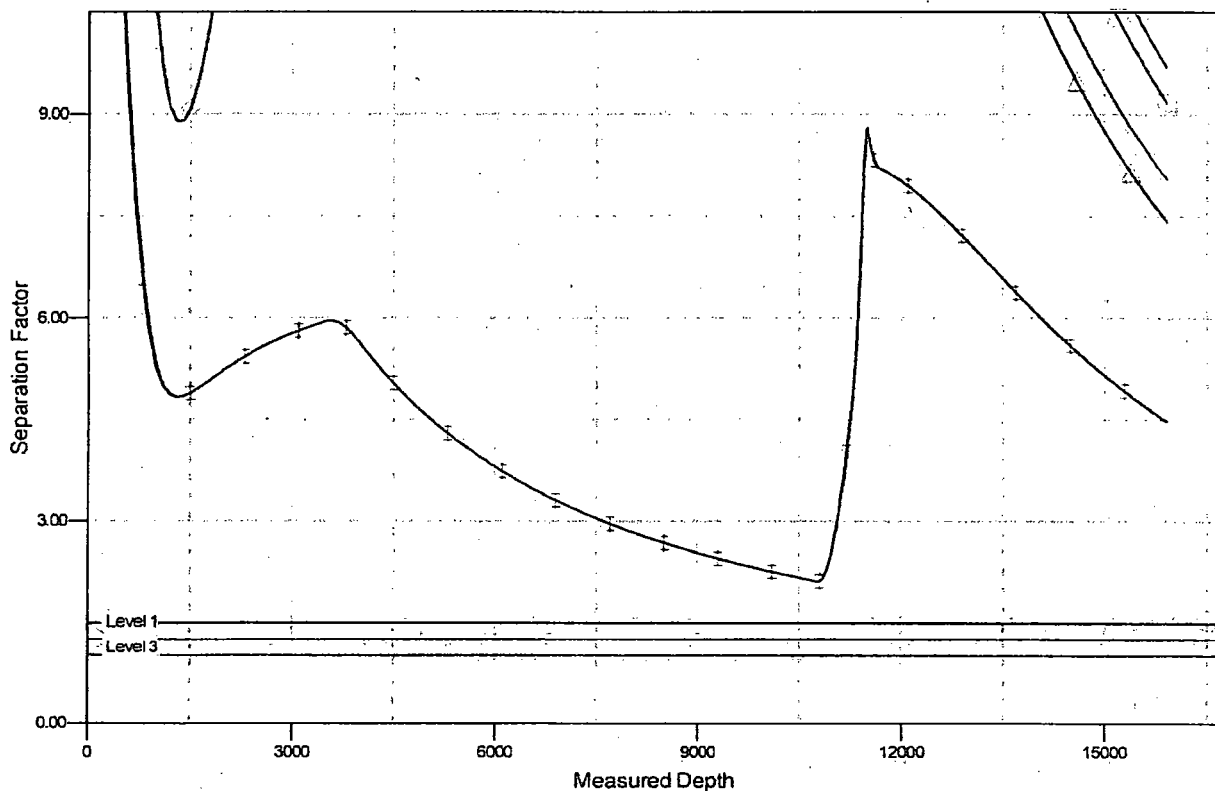
Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slots 3 & 4
Site Error: 0.00 usft
Reference Well: 223H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 223H
TVD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
MD Reference: Rig @ 3690.50usft (GL:3662'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

Reference Depths are relative to Rig @ 3690.50usft (GL:3662'+KB:28.5)
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 223H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

224H, OH, Prelim Plan A VO
 223H, OH, Prelim Plan A VO
 222H, OH, Prelim Plan A VO
 221H, OH, Prelim Plan A VO

Matador Production Company
 MJ Federal 223H
 SHL 169' FNL & 2241' FEL
 BHL 240' FSL & 1980' FEL
 Sec. 23, T. 19 S., R. 33 E., Lea County, NM

DRILL PLAN PAGE 1

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Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD	MD	Bearing
Quaternary	000'	000'	water
Rustler anhydrite	1490'	1493'	N/A
Top salt	1595'	1598'	N/A
Base salt	3200'	3209'	N/A
Yates gypsum	3390'	3400'	N/A
Seven Rivers dolomite	3800'	3811'	N/A
Queen sandstone	4335'	4346'	N/A
Grayburg sandstone	4825'	4836'	N/A
Delaware Mt. Group sandstones	5550'	5561'	hydrocarbons
Brushy Canyon sandstone	6150'	6161'	hydrocarbons
Bone Spring Limestone	7975'	7986'	hydrocarbons
1 st Bone Spring sandstone	9200'	9211'	hydrocarbons
2 nd Bone Spring sandstone	9700'	9711'	hydrocarbons
3 rd Bone Spring sandstone	10575'	10586'	hydrocarbons
Wolfcamp carbonates	10770'	10786'	hydrocarbons
(KOP)	10789'	10800'	hydrocarbons
Wolfcamp B sandstone	10980'	10997'	hydrocarbons & goal
TD	11330'	15930'	hydrocarbons

2. NOTABLE ZONES

Wolfcamp B is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be $\geq 330'$ from the dedication perimeter. Closest water well (CP 00658) is 8318' SSE. Depth to water is unknown in this 100' deep inactive well.

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DRILL PLAN PAGE 2

3. PRESSURE CONTROL

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

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

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

A third party company will test the BOPs.

After surface casing is set and the BOP is nipped up, then BOP pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 1 pressure tests will be made to 250 psi low and 3000 psi high. Intermediate 2 pressure tests will be made to 250 psi low and 7500 psi high. Annular preventer will be tested to 250 psi low and 2500 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate 1 and 2 casing.

In the case of running a speed head with landing mandrel for 9.625" and 7" casing, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high. Wellhead seals will be tested to 5000 psi once the 9.625" casing has been landed and cemented. BOP will then be lifted to install the C-section of the wellhead. BOP will then be nipped back up and pressure tested to 250 psi low and 7500 psi high. Annular will be tested to 250 psi low and 2500 psi high.

Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 7.625" x 5.5".

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DRILL PLAN PAGE 3

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

4. CASING & CEMENT

All casing will be API and new. See attached casing assumption work sheet. Minimum safety factors are: burst = 1.125, collapse = 1.125, tension = 1.

Hole O. D.	Set MD	Set TVD	Name	Casing O. D.	TOC	Weight (lb/ft)	Grade	Joint
20"	0' - 1515'	0' - 1512'	Surface	13.375"	GL	54.5	J-55	BTC
12.25"	0' - 5000'	0' - 4989'	Intermediate 1	9.625"	GL	40	J-55	BTC
8.75"	0' - 4900'	0' - 4889'	Intermediate 2	7.625"	4000'	29.7	P-110	BTC
	4900' - 10717'	4889' - 10706'		7.625"		29.7	P-110	VAM HTF-NR
	10717' - 11575'	10706' - 11322'		7"		29	P-110	BTC
6.125"	0' - 10617'	0' - 10606'	Production	5.5"	10575'	20	P-110	Tenaris XP
	10617' - 15930'	10606' - 11350'		4.5"		13.5	P-110	Tenaris XP

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DRILL PLAN PAGE 4

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	1670	1.75	2922	13.5	Class C + 3% NaCl + LCM
	Tail	530	1.38	731	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	1166	1.81	2110	13.5	Class C + Bentonite + 1% CaCl ₂ + 8% NaCl + LCM
	Tail	454	1.38	626	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	836	2.36	1972	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	187	1.38	258	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 4000'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC), 1 every 4 th jt to GL	
Production	Tail	402	1.38	554	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 10575'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of tail cement (1000' tie back)	

Matador requests the option to run a DV tool with annular packer as contingency in the intermediate or production casing if lost circulation occurs. If losses occur, then a DV tool with packer will be placed $\geq 100'$ above the loss zone to have the option to pump cement as either a single stage or two stage.

5. MUD PROGRAM

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

Matador Production Company

DRILL PLAN PAGE 5

MJ Federal 223H

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Sec. 23, T. 19 S., R. 33 E., Lea County, NM

Type	Casing	Interval (MD)	lb/gal	Viscosity	Fluid Loss
fresh water spud	surface	0' - 1515'	8.3	28	NC
brine water	intermediate 1	1515' - 5000'	10.0	30-32	NC
fresh water & cut brine	intermediate 2	5000' - 11575'	9.0	30-31	NC
OBM	production	11575' - 15930'	12.5	50-60	<10

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud logging program will be used from $\approx 1515'$ to TD.

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

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 7931 psi. Expected bottom hole temperature is $\approx 170^\circ$ F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring to meet BLM's minimum requirements for submitting an " H_2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H_2S safety package on all wells, an " H_2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

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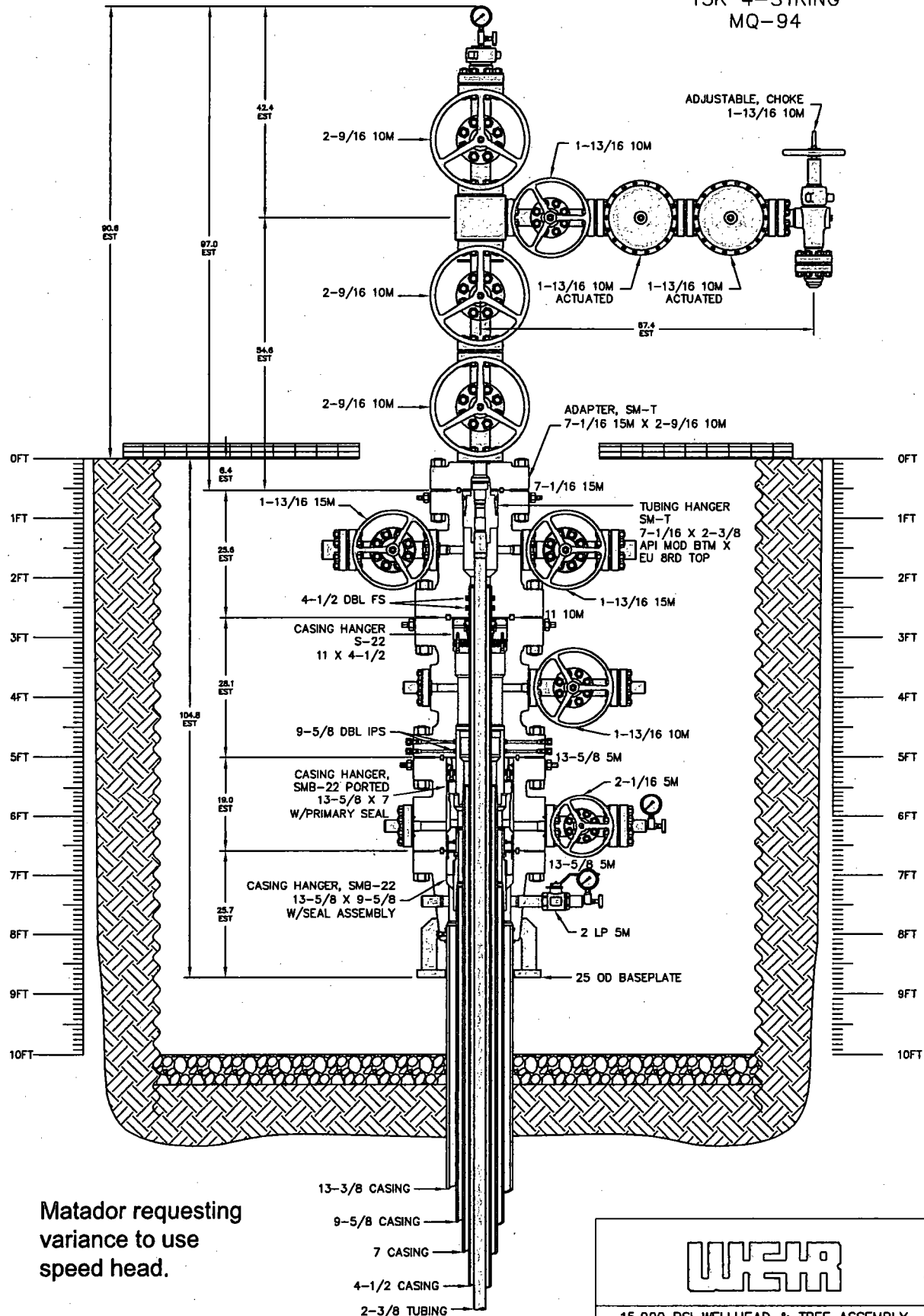
DRILL PLAN PAGE 6

8. OTHER INFORMATION

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

Matador Production Company through its affiliate MRC Delaware Resources LLC is a Lessee of the lease.

MATADOR
15K 4-STRING
MQ-94



Matador requesting
variance to use
speed head.

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

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

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

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SURFACE USE PLAN PAGE 1
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Surface Use Plan

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

From the junction of US 285 and US 62/180 in Carlsbad...
Go E 26.6 miles on US 62/180 to NM 243
Then turn left and go N and NE 3.7 miles on paved NM 243
Then turn left and go N 6.1 miles on paved County Road 126
Then turn right and go ENE 5.1 miles on a caliche road
Then turn left and go N 0.15 miles on a caliche road.
Then turn right and go ESE 4.1 miles on a caliche road
Then turn left and go N 0.8 miles on a caliche road
Then turn right and go E 0.4 mile on a caliche road to SE corner of Legacy's pad
Then turn left and go E 300' on the slot 2 road
Then bear left and go NE 553' cross-country to the proposed 223H et al pad

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

2. ROAD TO BE BUILT OR UPGRADED (See MAP 5)

The 553' of new road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 1%. Maximum cut or fill = 1'. No culvert, cattle guard, or vehicle turn out is needed. Upgrading will consist of patching potholes with caliche.

3. EXISTING WELLS (See MAP 3)

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

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SURFACE PLAN PAGE 2

4. PROPOSED PRODUCTION FACILITIES

No pipeline or power line plans have been finalized at this time. No flare will be installed on the pad. Instead, a CBU will be used.

5. WATER SUPPLY (See MAP 6)

Water will be trucked from existing water stations on private land. Sonny's water station (L 07431A) is in NENE 5-19s-36e. Berry's water station (CP 00802) is in SWNE 2-21s-33e.

6. CONSTRUCTION MATERIALS & METHODS (See MAPS 6 & 7)

NM One Call (811) will be notified before construction starts. A fence will be built east of the pad to protect dunes (wildlife habitat). Top $\approx 6"$ of soil and brush will be stockpiled north of the pad. V-door will face north. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land. Caviness pit is in SWNE 9-18s-33e. Berry pit is in SENE 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.

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SURFACE PLAN PAGE 3

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 7)

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

10. RECLAMATION (See MAPS 8 & 9)

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad $\approx 11\%$ (0.40 acre) by removing caliche and reclaiming the northwest corner (130' x 270' x 300'). This will leave 3.25 acres for the production equipment (e. g., tank battery, heater-treaters, CBU), 5 pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the well is plugged, then the rest of the pad and 553' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled. Land use:

553' x 30' road = 0.38 acre
+ 370' x 430' pad = 3.65 acres
4.03 acres short term
- 0.4 acre interim reclamation
3.63 acres long term (0.38 ac. road + 3.25 ac. pad)

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SURFACE PLAN PAGE 4

11. SURFACE OWNER

All construction will be on BLM.

12. OTHER INFORMATION

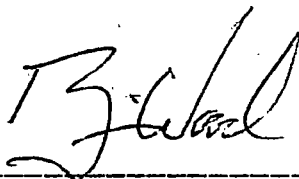
On site inspection was held with Vance Wolf (BLM) on April 20, 2017. Lone Mountain will inspect and file an archaeology report.

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SURFACE PLAN PAGE 5

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 8th day of August, 2017.



Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman

Matador Production Company

5400 LBJ Freeway, Suite 1500

Dallas TX 75240

Phone: (972) 371-5241

FAX: (214) 866-4841



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

PWD Data Report

02/01/2018

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:

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