

HOBBS OCD

FEB 06 2018

RECEIVED

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM-63763
WELL NAME & NO.:	MJ Fed Com 233H
SURFACE HOLE FOOTAGE:	0169' FNL & 2211' 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 1534 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
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RECEIVED**

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
LEASE NO.:	NMNM63763
WELL NAME & NO.:	233H -MJ FEDERAL
SURFACE HOLE FOOTAGE:	169'/N & 2211'/E
BOTTOM HOLE FOOTAGE:	240'/S & 1980'/E
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

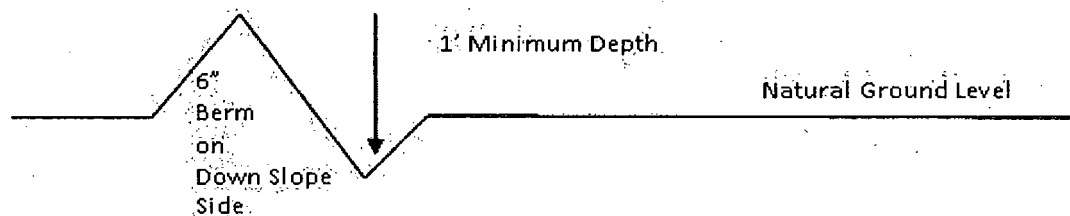
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

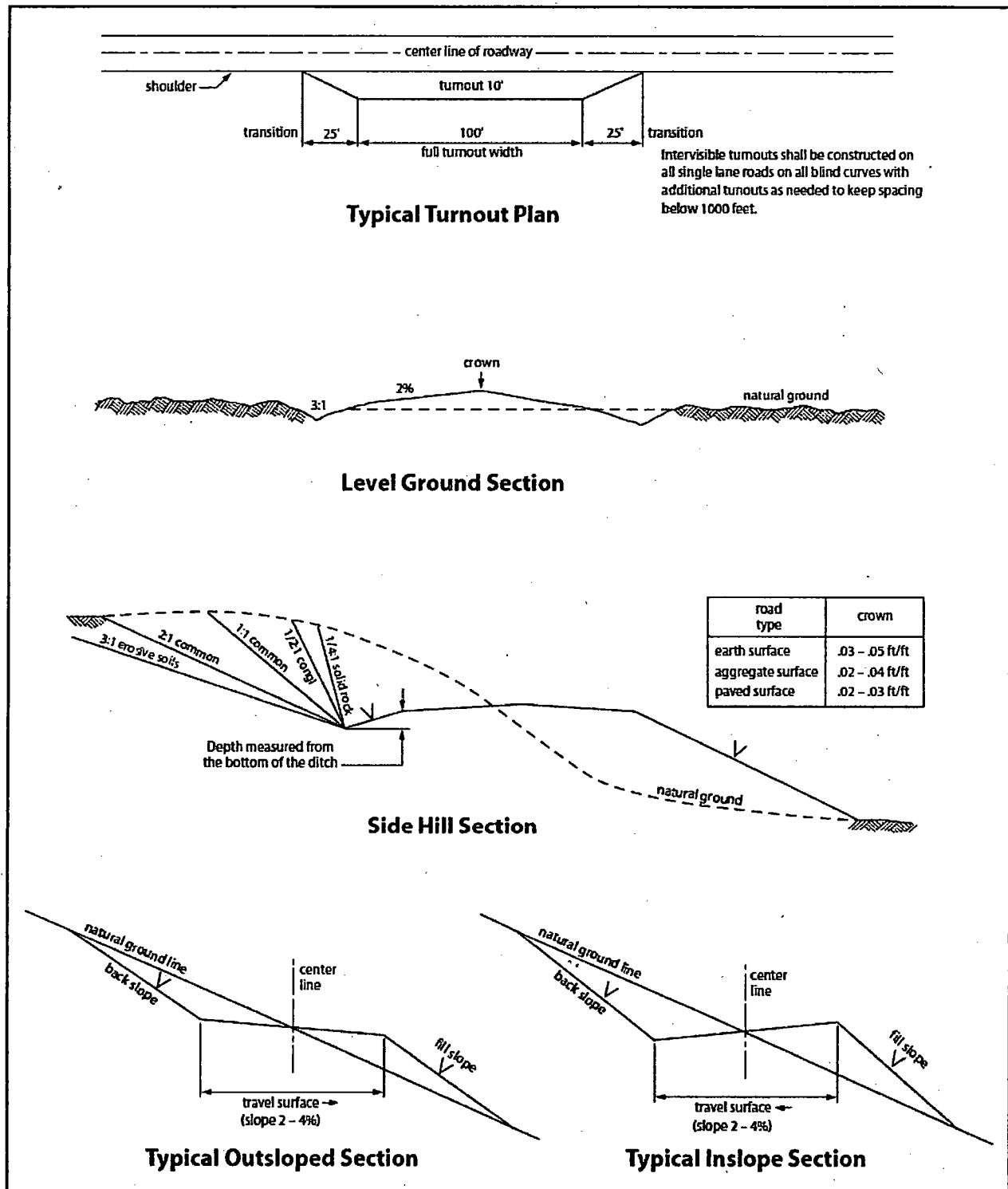


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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: 08/17/2017

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:

HOBBS OLD
FEB 06 2018



Matador Resources
Lea County, NM
MJ Federal Slots 3 & 4
233H
Prelim Plan A
GL:3663+KB:28.5'

US State Plane 1927 (Erect solution)
NAD 1927 (NADCON CONUS)
Zone 180
New Mexico East 3001
Mean Sea Level



RKB Elevation:		RIG @ 3601.60m (GL:3663+KB:28.5')			
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	801758.00	715894.00	32° 39' 8.5471 N	103° 37' 54.7850 W

SECTION DETAILS- Lateral

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	V-Sect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
3	1000.00	5.00	62.74	998.37	9.98	19.38	1.00	-6.68
4	3481.13	5.00	62.74	3471.05	106.02	211.82	0.00	-107.98
5	3981.13	0.00	0.00	3970.42	119.00	231.00	1.00	-117.87
6	11187.81	0.00	0.00	11187.10	118.00	231.00	0.00	-117.87
7	12067.02	90.00	179.72	11730.06	-453.96	233.75	10.00	-455.10
8	16488.91	90.00	179.72	11730.00	-4873.00	255.00	0.00	-4876.19



Azimuth to Old North
True North: -0.35°
Magnetic North: 0.85°

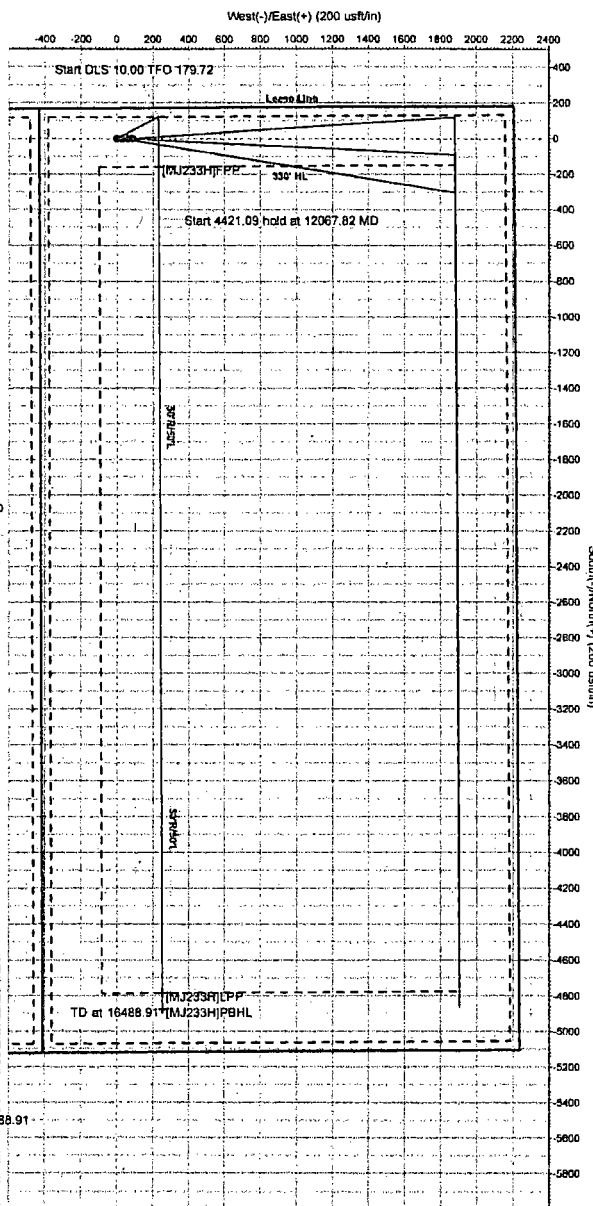
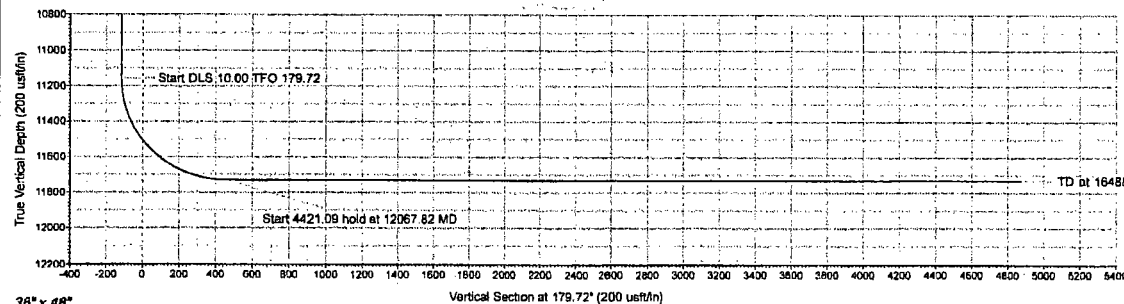
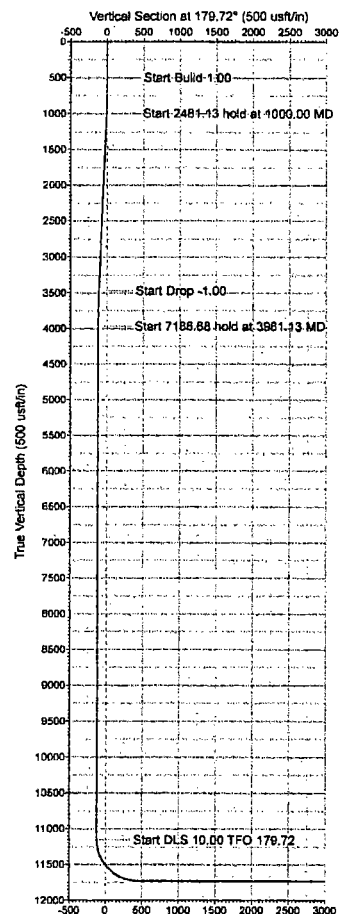
Magnetic Field
Strength: 48413.8nT
Dip Angle: 86.70°
Date: 02/2017
Model: HOCM

Azimuth Corrections

Total Magnetic Corr. (M to G): 0.45°
Declination (M to T): 0.85° East

Legend

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



Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 233H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 233H
TVD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
MD Reference: RIG @ 3691.50usft (GL:3663'+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
From:	Map	Easting:	715,864.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 39' 8.5491 N
		Longitude:	103° 37' 55.1358 W
		Grid Convergence:	0.38 °

Well	233H		
Well Position	+N/-S	0.00 usft	Northing: 601,758.00 usft
	+E/-W	0.00 usft	Easting: 715,894.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 39' 8.5471 N
		Longitude:	103° 37' 54.7850 W
		Ground Level:	3,663.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	6/2/2017	6.83
			60.70
			48,413.80

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

Survey Tool Program	Date 6/9/2017		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
0.00	400.00	Prelim Plan A (OH)	MWD - OWSG
400.00	11,168.00	Prelim Plan A (OH)	MWD - OWSG
11,168.00	16,488.87	Prelim Plan A (OH)	MWD - OWSG

Planned Survey										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/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	62.74	599.99	0.40	0.78	-0.40	1.00	1.00	0.00	
700.00	2.00	62.74	699.96	1.60	3.10	-1.58	1.00	1.00	0.00	
800.00	3.00	62.74	799.86	3.60	6.88	-3.56	1.00	1.00	0.00	

FEB 06 2018

Pro Directional
Survey Report

RECEIVED

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Well:	233H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
900.00	4.00	62.74	899.68	6.39	12.41	-6.33	1.00	1.00	0.00
1,000.00	5.00	62.74	999.37	9.98	19.38	-9.89	1.00	1.00	0.00
1,100.00	5.00	62.74	1,098.99	13.98	27.13	-13.84	0.00	0.00	0.00
1,200.00	5.00	62.74	1,198.60	17.97	34.88	-17.80	0.00	0.00	0.00
1,300.00	5.00	62.74	1,298.22	21.96	42.63	-21.75	0.00	0.00	0.00
1,400.00	5.00	62.74	1,397.84	25.95	50.37	-25.70	0.00	0.00	0.00
1,500.00	5.00	62.74	1,497.46	29.94	58.12	-29.66	0.00	0.00	0.00
1,600.00	5.00	62.74	1,597.08	33.93	65.87	-33.61	0.00	0.00	0.00
1,700.00	5.00	62.74	1,696.70	37.92	73.62	-37.56	0.00	0.00	0.00
1,800.00	5.00	62.74	1,796.32	41.92	81.37	-41.52	0.00	0.00	0.00
1,900.00	5.00	62.74	1,895.94	45.91	89.11	-45.47	0.00	0.00	0.00
2,000.00	5.00	62.74	1,995.56	49.90	96.86	-49.42	0.00	0.00	0.00
2,100.00	5.00	62.74	2,095.18	53.89	104.61	-53.38	0.00	0.00	0.00
2,200.00	5.00	62.74	2,194.80	57.88	112.36	-57.33	0.00	0.00	0.00
2,300.00	5.00	62.74	2,294.42	61.87	120.11	-61.28	0.00	0.00	0.00
2,400.00	5.00	62.74	2,394.04	65.86	127.85	-65.24	0.00	0.00	0.00
2,500.00	5.00	62.74	2,493.66	69.86	135.60	-69.19	0.00	0.00	0.00
2,600.00	5.00	62.74	2,593.28	73.85	143.35	-73.14	0.00	0.00	0.00
2,700.00	5.00	62.74	2,692.90	77.84	151.10	-77.10	0.00	0.00	0.00
2,800.00	5.00	62.74	2,792.52	81.83	158.84	-81.05	0.00	0.00	0.00
2,900.00	5.00	62.74	2,892.14	85.82	166.59	-85.01	0.00	0.00	0.00
3,000.00	5.00	62.74	2,991.76	89.81	174.34	-88.96	0.00	0.00	0.00
3,100.00	5.00	62.74	3,091.37	93.80	182.09	-92.91	0.00	0.00	0.00
3,200.00	5.00	62.74	3,190.99	97.79	189.84	-96.87	0.00	0.00	0.00
3,300.00	5.00	62.74	3,290.61	101.79	197.58	-100.82	0.00	0.00	0.00
3,400.00	5.00	62.74	3,390.23	105.78	205.33	-104.77	0.00	0.00	0.00
3,481.13	5.00	62.74	3,471.05	109.02	211.62	-107.98	0.00	0.00	0.00
3,500.00	4.81	62.74	3,489.86	109.75	213.05	-108.71	1.00	-1.00	0.00
3,600.00	3.81	62.74	3,589.57	113.20	219.74	-112.12	1.00	-1.00	0.00
3,700.00	2.81	62.74	3,689.40	115.84	224.87	-114.74	1.00	-1.00	0.00
3,800.00	1.81	62.74	3,789.32	117.69	228.46	-116.57	1.00	-1.00	0.00
3,900.00	0.81	62.74	3,889.29	118.74	230.49	-117.61	1.00	-1.00	0.00
3,981.13	0.00	0.00	3,970.42	119.00	231.00	-117.87	1.00	-1.00	0.00
4,000.00	0.00	0.00	3,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,100.00	0.00	0.00	4,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,200.00	0.00	0.00	4,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,300.00	0.00	0.00	4,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,400.00	0.00	0.00	4,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,500.00	0.00	0.00	4,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,600.00	0.00	0.00	4,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,700.00	0.00	0.00	4,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,800.00	0.00	0.00	4,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
4,900.00	0.00	0.00	4,889.29	119.00	231.00	-117.87	0.00	0.00	0.00

Pro Directional Survey Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Well:	233H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.00	0.00	0.00	4,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,100.00	0.00	0.00	5,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,200.00	0.00	0.00	5,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,300.00	0.00	0.00	5,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,400.00	0.00	0.00	5,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,500.00	0.00	0.00	5,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,600.00	0.00	0.00	5,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,700.00	0.00	0.00	5,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,800.00	0.00	0.00	5,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
5,900.00	0.00	0.00	5,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,000.00	0.00	0.00	5,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,100.00	0.00	0.00	6,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,200.00	0.00	0.00	6,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,300.00	0.00	0.00	6,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,400.00	0.00	0.00	6,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,500.00	0.00	0.00	6,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,600.00	0.00	0.00	6,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,700.00	0.00	0.00	6,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,800.00	0.00	0.00	6,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
6,900.00	0.00	0.00	6,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,000.00	0.00	0.00	6,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,100.00	0.00	0.00	7,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,200.00	0.00	0.00	7,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,300.00	0.00	0.00	7,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,400.00	0.00	0.00	7,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,500.00	0.00	0.00	7,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,600.00	0.00	0.00	7,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,700.00	0.00	0.00	7,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,800.00	0.00	0.00	7,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
7,900.00	0.00	0.00	7,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,000.00	0.00	0.00	7,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,100.00	0.00	0.00	8,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,200.00	0.00	0.00	8,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,300.00	0.00	0.00	8,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,400.00	0.00	0.00	8,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,500.00	0.00	0.00	8,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,600.00	0.00	0.00	8,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,700.00	0.00	0.00	8,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,800.00	0.00	0.00	8,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
8,900.00	0.00	0.00	8,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,000.00	0.00	0.00	8,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,100.00	0.00	0.00	9,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,200.00	0.00	0.00	9,189.29	119.00	231.00	-117.87	0.00	0.00	0.00

Pro Directional Survey Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Well:	233H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.00	0.00	0.00	9,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,400.00	0.00	0.00	9,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,500.00	0.00	0.00	9,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,600.00	0.00	0.00	9,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,700.00	0.00	0.00	9,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,800.00	0.00	0.00	9,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
9,900.00	0.00	0.00	9,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,000.00	0.00	0.00	9,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,100.00	0.00	0.00	10,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,200.00	0.00	0.00	10,189.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,300.00	0.00	0.00	10,289.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,400.00	0.00	0.00	10,389.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,500.00	0.00	0.00	10,489.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,600.00	0.00	0.00	10,589.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,700.00	0.00	0.00	10,689.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,800.00	0.00	0.00	10,789.29	119.00	231.00	-117.87	0.00	0.00	0.00
10,900.00	0.00	0.00	10,889.29	119.00	231.00	-117.87	0.00	0.00	0.00
11,000.00	0.00	0.00	10,989.29	119.00	231.00	-117.87	0.00	0.00	0.00
11,100.00	0.00	0.00	11,089.29	119.00	231.00	-117.87	0.00	0.00	0.00
11,187.81	0.00	0.00	11,157.10	119.00	231.00	-117.87	0.00	0.00	0.00
11,200.00	3.22	179.72	11,189.27	118.10	231.00	-116.97	10.00	10.00	0.00
11,250.00	8.22	179.72	11,239.01	113.12	231.03	-111.98	10.00	10.00	0.00
11,300.00	13.22	179.72	11,288.12	103.82	231.07	-102.69	10.00	10.00	0.00
11,350.00	18.22	179.72	11,336.24	90.28	231.14	-89.15	10.00	10.00	0.00
11,400.00	23.22	179.72	11,382.99	72.59	231.22	-71.46	10.00	10.00	0.00
11,450.00	28.22	179.72	11,428.02	50.90	231.33	-49.77	10.00	10.00	0.00
11,500.00	33.22	179.72	11,470.99	25.37	231.45	-24.24	10.00	10.00	0.00
11,550.00	38.22	179.72	11,511.57	-3.81	231.59	4.94	10.00	10.00	0.00
11,600.00	43.22	179.72	11,549.46	-36.42	231.75	37.55	10.00	10.00	0.00
11,650.00	48.22	179.72	11,584.35	-72.20	231.92	73.33	10.00	10.00	0.00
11,700.00	53.22	179.72	11,616.00	-110.89	232.10	112.02	10.00	10.00	0.00
11,750.00	58.22	179.72	11,644.15	-152.19	232.30	153.33	10.00	10.00	0.00
11,800.00	63.22	179.72	11,668.60	-195.79	232.51	196.92	10.00	10.00	0.00
11,850.00	68.22	179.72	11,689.15	-241.35	232.73	242.49	10.00	10.00	0.00
11,900.00	73.22	179.72	11,705.66	-288.53	232.96	289.67	10.00	10.00	0.00
11,950.00	78.22	179.72	11,717.99	-336.97	233.19	338.11	10.00	10.00	0.00
12,000.00	83.22	179.72	11,726.05	-386.30	233.43	387.44	10.00	10.00	0.00
12,050.00	88.22	179.72	11,729.78	-436.14	233.67	437.28	10.00	10.00	0.00
12,067.82	90.00	179.72	11,730.06	-453.96	233.75	455.10	10.00	10.00	0.00
12,100.00	90.00	179.72	11,730.06	-486.14	233.91	487.28	0.00	0.00	0.00
12,200.00	90.00	179.72	11,730.06	-586.14	234.39	587.28	0.00	0.00	0.00
12,300.00	90.00	179.72	11,730.06	-686.14	234.87	687.28	0.00	0.00	0.00
12,400.00	90.00	179.72	11,730.05	-786.14	235.35	787.28	0.00	0.00	0.00
12,500.00	90.00	179.72	11,730.05	-886.14	235.83	887.28	0.00	0.00	0.00

Pro Directional Survey Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Well:	233H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,600.00	90.00	179.72	11,730.05	-986.13	236.31	987.28	0.00	0.00	0.00
12,700.00	90.00	179.72	11,730.05	-1,086.13	236.79	1,087.28	0.00	0.00	0.00
12,800.00	90.00	179.72	11,730.05	-1,186.13	237.27	1,187.28	0.00	0.00	0.00
12,900.00	90.00	179.72	11,730.05	-1,286.13	237.75	1,287.28	0.00	0.00	0.00
13,000.00	90.00	179.72	11,730.05	-1,386.13	238.23	1,387.28	0.00	0.00	0.00
13,100.00	90.00	179.72	11,730.04	-1,486.13	238.71	1,487.28	0.00	0.00	0.00
13,200.00	90.00	179.72	11,730.04	-1,586.13	239.19	1,587.28	0.00	0.00	0.00
13,300.00	90.00	179.72	11,730.04	-1,686.13	239.68	1,687.28	0.00	0.00	0.00
13,400.00	90.00	179.72	11,730.04	-1,786.13	240.16	1,787.28	0.00	0.00	0.00
13,500.00	90.00	179.72	11,730.04	-1,886.12	240.64	1,887.28	0.00	0.00	0.00
13,600.00	90.00	179.72	11,730.04	-1,986.12	241.12	1,987.28	0.00	0.00	0.00
13,700.00	90.00	179.72	11,730.04	-2,086.12	241.60	2,087.28	0.00	0.00	0.00
13,800.00	90.00	179.72	11,730.04	-2,186.12	242.08	2,187.28	0.00	0.00	0.00
13,900.00	90.00	179.72	11,730.03	-2,286.12	242.56	2,287.28	0.00	0.00	0.00
14,000.00	90.00	179.72	11,730.03	-2,386.12	243.04	2,387.28	0.00	0.00	0.00
14,100.00	90.00	179.72	11,730.03	-2,486.12	243.52	2,487.28	0.00	0.00	0.00
14,200.00	90.00	179.72	11,730.03	-2,586.12	244.00	2,587.28	0.00	0.00	0.00
14,300.00	90.00	179.72	11,730.03	-2,686.12	244.48	2,687.28	0.00	0.00	0.00
14,400.00	90.00	179.72	11,730.03	-2,786.11	244.96	2,787.28	0.00	0.00	0.00
14,500.00	90.00	179.72	11,730.03	-2,886.11	245.44	2,887.28	0.00	0.00	0.00
14,600.00	90.00	179.72	11,730.02	-2,986.11	245.92	2,987.28	0.00	0.00	0.00
14,700.00	90.00	179.72	11,730.02	-3,086.11	246.40	3,087.28	0.00	0.00	0.00
14,800.00	90.00	179.72	11,730.02	-3,186.11	246.88	3,187.28	0.00	0.00	0.00
14,900.00	90.00	179.72	11,730.02	-3,286.11	247.36	3,287.28	0.00	0.00	0.00
15,000.00	90.00	179.72	11,730.02	-3,386.11	247.84	3,387.28	0.00	0.00	0.00
15,100.00	90.00	179.72	11,730.02	-3,486.11	248.33	3,487.28	0.00	0.00	0.00
15,200.00	90.00	179.72	11,730.02	-3,586.10	248.81	3,587.28	0.00	0.00	0.00
15,300.00	90.00	179.72	11,730.02	-3,686.10	249.29	3,687.28	0.00	0.00	0.00
15,400.00	90.00	179.72	11,730.01	-3,786.10	249.77	3,787.28	0.00	0.00	0.00
15,500.00	90.00	179.72	11,730.01	-3,886.10	250.25	3,887.28	0.00	0.00	0.00
15,600.00	90.00	179.72	11,730.01	-3,986.10	250.73	3,987.28	0.00	0.00	0.00
15,700.00	90.00	179.72	11,730.01	-4,086.10	251.21	4,087.28	0.00	0.00	0.00
15,800.00	90.00	179.72	11,730.01	-4,186.10	251.69	4,187.28	0.00	0.00	0.00
15,900.00	90.00	179.72	11,730.01	-4,286.10	252.17	4,287.28	0.00	0.00	0.00
16,000.00	90.00	179.72	11,730.01	-4,386.10	252.65	4,387.28	0.00	0.00	0.00
16,100.00	90.00	179.72	11,730.01	-4,486.09	253.13	4,487.28	0.00	0.00	0.00
16,200.00	90.00	179.72	11,730.00	-4,586.09	253.61	4,587.28	0.00	0.00	0.00
16,300.00	90.00	179.72	11,730.00	-4,686.09	254.09	4,687.28	0.00	0.00	0.00
16,400.00	90.00	179.72	11,730.00	-4,786.09	254.57	4,787.28	0.00	0.00	0.00
16,488.91	90.00	179.72	11,730.00	-4,875.00	255.00	4,878.19	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slots 3 & 4
Well: 233H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 233H
TVD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
MD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

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
[MJ233H]LPP - plan misses target center by 4791.74usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-4,785.00	254.00	596,973.00	716,148.00	32° 38' 21.1831 N	103° 37' 52.1842 W
[MJ233H]FPP - plan misses target center by 280.43usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-159.00	231.00	601,599.00	716,125.00	32° 39' 6.9587 N	103° 37' 52.0955 W
[MJ233H]PBHL - plan hits target center - Point	0.00	0.00	11,730.00	-4,875.00	255.00	596,883.00	716,149.00	32° 38' 20.2925 N	103° 37' 52.1795 W

Checked By: _____ Approved By: _____ Date: _____

Pro Directional Anticollision Report

Company: Matador Resources	Local Co-ordinate Reference: Well 233H
Project: Lea County, NM	TVD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Sita: MJ Federal Slots 3 & 4	MD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error: 0.00 usft	North Reference: Grid
Reference Well: 233H	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	400.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG	
400.00	11,168.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG	
11,168.00	16,488.87	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	493.00	822.27	819.34	280.511	CC, ES
222H - OH - Prelim Plan A	16,488.91	15,949.39	1,378.44	1,204.26	7.914	SF
232H - OH - Prelim Plan A	500.00	494.00	792.28	789.50	285.270	CC, ES
232H - OH - Prelim Plan A	16,488.91	16,521.92	1,327.50	1,146.96	7.353	SF
MJ Federal Slots 3 & 4						
124H - OH - Prelim Plan A	500.00	500.00	30.00	27.04	10.147	CC
124H - OH - Prelim Plan A	600.00	599.48	30.09	26.85	9.309	ES
124H - OH - Prelim Plan A	1,100.00	1,096.29	38.67	33.32	7.226	SF
224H - OH - Prelim Plan A	500.00	498.00	60.00	57.05	20.344	CC
224H - OH - Prelim Plan A	600.00	596.98	60.05	56.83	18.608	ES
224H - OH - Prelim Plan A	16,488.91	16,054.17	1,695.04	1,517.70	9.558	SF
234H - OH - Prelim Plan A	500.00	501.00	89.01	86.05	30.070	CC
234H - OH - Prelim Plan A	600.00	599.46	89.10	85.87	27.569	ES
234H - OH - Prelim Plan A	16,488.91	16,666.39	1,650.29	1,468.68	9.087	SF

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							
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	7.00	-7.00	0.00	0.01	-91.46	-21.00	-822.00	822.27					
100.00	100.00	107.00	93.00	0.13	0.15	-91.46	-21.00	-822.00	822.27	821.99	0.28	2,922.057		
200.00	200.00	207.00	193.00	0.49	0.51	-91.46	-21.00	-822.00	822.27	821.27	1.00	823.833		
300.00	300.00	307.00	293.00	0.85	0.87	-91.46	-21.00	-822.00	822.27	820.55	1.72	479.377		
400.00	400.00	407.00	393.00	1.20	1.23	-91.46	-21.00	-822.00	822.27	819.84	2.43	338.072		
500.00	500.00	493.00	493.00	1.39	1.54	-91.46	-21.00	-822.00	822.27	819.34	2.93	280.511	CC, ES	
600.00	599.99	581.33	581.33	1.48	1.72	-154.23	-21.05	-822.57	823.71	820.51	3.20	257.517		
700.00	699.96	668.66	668.63	1.65	1.80	-154.29	-21.23	-824.47	828.25	824.60	3.45	240.152		
800.00	799.86	755.73	755.64	1.87	1.90	-154.38	-21.53	-827.68	835.87	832.10	3.77	221.733		
900.00	899.68	842.41	842.20	2.13	2.05	-154.51	-21.95	-832.18	846.57	842.40	4.17	202.946		
1,000.00	999.37	928.57	928.17	2.42	2.23	-154.67	-22.49	-837.95	860.35	855.71	4.63	185.694		

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

Pro Directional
Anticollision Report

FEB 06 2018

RECEIVED

Company: Matador Resources
 Project: Lea County, NM
 Reference Site: MJ Federal Slots 3 & 4
 Site Error: 0.00 usft
 Reference Well: 233H
 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 233H
 RIG @ 3691.50usft (GL:3663'+KB:28.5')
 RIG @ 3691.50usft (GL:3663'+KB:28.5')
 Grid
 Minimum Curvature
 2.00 sigma
 WellPlanner1
 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, 10720-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	Warning
1,100.00	1,098.99	1,016.40	1,015.70	2.74	2.45	-154.91	-23.15	-845.13	878.38	871.24	5.14	170.444	
1,200.00	1,198.60	1,114.53	1,113.86	3.07	2.72	-155.18	-23.95	-853.68	892.94	887.23	5.71	158.275	
1,300.00	1,298.22	1,213.47	1,212.02	3.42	3.02	-155.44	-24.75	-862.23	909.52	903.20	6.32	143.987	
1,400.00	1,397.84	1,312.00	1,310.18	3.77	3.34	-155.68	-25.54	-870.78	928.12	919.17	6.94	133.402	
1,500.00	1,497.46	1,410.54	1,408.34	4.12	3.66	-155.92	-26.34	-879.34	942.73	935.14	7.58	124.304	
1,600.00	1,597.08	1,509.68	1,506.50	4.49	4.00	-156.15	-27.13	-887.89	959.36	951.12	8.24	116.437	
1,700.00	1,596.70	1,607.61	1,604.66	4.85	4.34	-156.37	-27.93	-896.44	976.00	967.10	8.90	109.607	
1,800.00	1,796.32	1,706.15	1,702.83	5.22	4.69	-156.59	-28.73	-904.99	992.66	983.08	9.58	103.843	
1,900.00	1,895.94	1,804.68	1,800.99	5.59	5.05	-156.80	-29.52	-913.54	1,009.33	999.07	10.26	98.403	
2,000.00	1,995.56	1,903.22	1,899.15	5.96	5.41	-157.00	-30.32	-922.09	1,026.01	1,015.07	10.94	93.772	
2,100.00	2,095.18	2,001.75	1,997.31	6.33	5.77	-157.19	-31.12	-930.64	1,042.70	1,031.07	11.63	89.855	
2,200.00	2,194.80	2,100.29	2,095.47	6.70	6.13	-157.38	-31.91	-939.19	1,059.41	1,047.09	12.32	85.974	
2,300.00	2,294.42	2,201.17	2,193.63	7.08	6.50	-157.56	-32.71	-947.74	1,076.12	1,063.10	13.03	82.616	
2,400.00	2,394.04	2,302.84	2,291.79	7.45	6.88	-157.74	-33.50	-956.29	1,092.85	1,079.12	13.73	79.576	
2,500.00	2,493.66	2,404.10	2,389.95	7.83	7.26	-157.91	-34.30	-964.85	1,109.59	1,095.14	14.44	76.823	
2,600.00	2,593.28	2,494.43	2,488.11	8.21	7.60	-158.08	-35.10	-973.40	1,126.33	1,111.22	15.12	74.513	
2,700.00	2,692.90	2,592.97	2,586.27	8.58	7.96	-158.24	-35.89	-981.95	1,143.09	1,127.27	15.82	72.261	
2,800.00	2,792.52	2,708.50	2,684.43	8.96	8.40	-158.40	-36.69	-990.50	1,159.85	1,143.27	16.58	69.940	
2,900.00	2,892.14	2,809.96	2,782.59	9.34	8.78	-158.55	-37.49	-999.05	1,176.62	1,159.32	17.30	68.015	
3,000.00	2,991.76	2,888.58	2,860.76	9.72	9.08	-158.70	-38.28	-1,007.60	1,193.40	1,175.47	17.94	66.540	
3,100.00	3,091.37	2,987.11	2,978.92	10.10	9.45	-158.84	-39.08	-1,016.15	1,210.19	1,191.55	18.64	64.915	
3,200.00	3,190.99	3,085.65	3,077.08	10.48	9.83	-158.98	-39.87	-1,024.70	1,226.98	1,207.63	19.35	63.407	
3,300.00	3,290.61	3,184.18	3,175.24	10.86	10.20	-159.12	-40.67	-1,033.25	1,243.78	1,223.72	20.06	62.004	
3,400.00	3,390.23	3,282.72	3,273.40	11.24	10.57	-159.25	-41.47	-1,041.80	1,260.59	1,239.82	20.77	60.694	
3,481.13	3,471.05	3,362.66	3,353.03	11.54	10.88	-159.36	-42.11	-1,048.74	1,274.23	1,252.89	21.35	59.695	
3,500.00	3,489.86	3,381.26	3,371.56	11.62	10.95	-159.39	-42.26	-1,050.36	1,277.38	1,255.90	21.48	59.489	
3,600.00	3,589.57	3,479.99	3,469.92	11.99	11.32	-159.55	-43.06	-1,058.92	1,293.09	1,270.50	22.19	58.275	
3,700.00	3,689.40	3,578.97	3,568.53	12.36	11.70	-159.68	-43.86	-1,067.51	1,307.18	1,284.28	22.90	57.087	
3,800.00	3,789.32	3,703.44	3,692.60	12.71	12.17	-159.78	-44.77	-1,077.27	1,318.85	1,295.12	23.72	55.591	
3,900.00	3,889.29	3,833.04	3,821.99	13.06	12.64	-159.85	-45.45	-1,084.60	1,326.67	1,302.11	24.56	54.014	
3,981.13	3,970.42	3,938.54	3,927.42	13.33	13.01	-97.12	-45.81	-1,088.41	1,330.15	1,304.92	25.23	52.726	
4,000.00	3,989.29	3,963.11	3,951.98	13.40	13.10	-97.12	-45.86	-1,089.02	1,330.62	1,305.24	25.38	52.426	
4,100.00	4,089.29	4,093.35	4,082.21	13.73	13.54	-97.12	-46.00	-1,090.50	1,331.76	1,305.59	26.17	50.879	
4,200.00	4,189.29	4,206.57	4,182.29	14.08	13.90	-97.12	-46.00	-1,090.50	1,331.76	1,304.87	26.89	49.521	
4,300.00	4,289.29	4,306.57	4,282.29	14.40	14.22	-97.12	-46.00	-1,090.50	1,331.76	1,304.19	27.57	48.306	
4,400.00	4,389.29	4,406.57	4,382.29	14.73	14.54	-97.12	-46.00	-1,090.50	1,331.76	1,303.51	28.25	47.146	
4,500.00	4,489.29	4,506.57	4,482.29	15.07	14.87	-97.12	-46.00	-1,090.50	1,331.76	1,302.83	28.93	46.037	
4,600.00	4,589.29	4,606.57	4,582.29	15.41	15.20	-97.12	-46.00	-1,090.50	1,331.76	1,302.15	29.61	44.977	
4,700.00	4,689.29	4,706.57	4,682.29	15.75	15.52	-97.12	-46.00	-1,090.50	1,331.76	1,301.47	30.29	43.962	
4,800.00	4,789.29	4,806.57	4,782.29	16.09	15.85	-97.12	-46.00	-1,090.50	1,331.76	1,300.78	30.98	42.990	
4,900.00	4,889.29	4,906.57	4,882.29	16.43	16.18	-97.12	-46.00	-1,090.50	1,331.76	1,300.10	31.67	42.058	
5,000.00	4,989.29	5,006.57	4,982.29	16.77	16.52	-97.12	-46.00	-1,090.50	1,331.76	1,299.41	32.35	41.164	
5,100.00	5,089.29	5,106.57	5,082.29	17.11	16.85	-97.12	-46.00	-1,090.50	1,331.76	1,298.72	33.04	40.305	
5,200.00	5,189.29	5,206.57	5,182.29	17.45	17.18	-97.12	-46.00	-1,090.50	1,331.76	1,298.03	33.73	39.480	
5,300.00	5,289.29	5,306.57	5,282.29	17.80	17.52	-97.12	-46.00	-1,090.50	1,331.76	1,297.34	34.42	38.687	
5,400.00	5,389.29	5,406.57	5,382.29	18.14	17.85	-97.12	-46.00	-1,090.50	1,331.76	1,296.65	35.12	37.925	
5,500.00	5,489.29	5,506.57	5,482.29	18.48	18.19	-97.12	-46.00	-1,090.50	1,331.76	1,295.95	35.81	37.190	
5,600.00	5,589.29	5,606.57	5,582.29	18.83	18.53	-97.12	-46.00	-1,090.50	1,331.76	1,295.26	36.50	36.483	
5,700.00	5,689.29	5,706.57	5,682.29	19.17	18.87	-97.12	-46.00	-1,090.50	1,331.76	1,294.56	37.20	35.801	
5,800.00	5,789.29	5,806.57	5,782.29	19.52	19.20	-97.12	-46.00	-1,090.50	1,331.76	1,293.87	37.89	35.144	
5,900.00	5,889.29	5,906.57	5,882.29	19.87	19.54	-97.12	-46.00	-1,090.50	1,331.76	1,293.17	38.59	34.509	
6,000.00	5,989.29	6,006.57	5,982.29	20.21	19.88	-97.12	-46.00	-1,090.50	1,331.76	1,292.47	39.29	33.897	

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: 233H Well Error: 0.00 usft Reference Wellbore: OH Reference Design: Prelim Plan A	Local Co-ordinate Reference: Well 233H TVD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5') MD Reference: RIG @ 3691.50usft (GL:3663'+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:	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		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	Warning		
6,100.00	6,089.29	6,106.57	6,082.29	20.56	20.23	-97.12	-46.00	-1,090.50	1,331.76	1,291.77	39.99	33.305			
6,200.00	6,189.29	6,206.57	6,182.29	20.81	20.57	-97.12	-46.00	-1,090.50	1,331.76	1,291.08	40.69	32.733			
6,300.00	6,289.29	6,306.57	6,282.29	21.26	20.91	-97.12	-46.00	-1,090.50	1,331.76	1,290.38	41.38	32.180			
6,400.00	6,389.29	6,406.57	6,382.29	21.60	21.25	-97.12	-46.00	-1,090.50	1,331.76	1,289.68	42.06	31.645			
6,500.00	6,489.29	6,506.57	6,482.29	21.95	21.59	-97.12	-46.00	-1,090.50	1,331.76	1,288.98	42.79	31.126			
6,600.00	6,589.29	6,606.57	6,582.29	22.30	21.94	-97.12	-46.00	-1,090.50	1,331.76	1,288.27	43.49	30.625			
6,700.00	6,689.29	6,706.57	6,682.29	22.65	22.28	-97.12	-46.00	-1,090.50	1,331.76	1,287.57	44.19	30.138			
6,800.00	6,789.29	6,806.57	6,782.29	23.00	22.63	-97.12	-46.00	-1,090.50	1,331.76	1,286.87	44.89	29.687			
6,900.00	6,889.29	6,906.57	6,882.29	23.35	22.97	-97.12	-46.00	-1,090.50	1,331.76	1,286.17	45.59	29.210			
7,000.00	6,989.29	7,006.57	6,982.29	23.70	23.32	-97.12	-46.00	-1,090.50	1,331.76	1,285.47	46.30	28.766			
7,100.00	7,089.29	7,106.57	7,082.29	24.05	23.66	-97.12	-46.00	-1,090.50	1,331.76	1,284.76	47.00	28.336			
7,200.00	7,189.29	7,206.57	7,182.29	24.40	24.01	-97.12	-46.00	-1,090.50	1,331.76	1,284.06	47.70	27.918			
7,300.00	7,289.29	7,306.57	7,282.29	24.75	24.36	-97.12	-46.00	-1,090.50	1,331.76	1,283.35	48.41	27.512			
7,400.00	7,389.29	7,406.57	7,382.29	25.10	24.70	-97.12	-46.00	-1,090.50	1,331.76	1,282.65	49.11	27.117			
7,500.00	7,489.29	7,506.57	7,482.29	25.45	25.05	-97.12	-46.00	-1,090.50	1,331.76	1,281.94	49.82	26.733			
7,600.00	7,589.29	7,606.57	7,582.29	25.81	25.40	-97.12	-46.00	-1,090.50	1,331.76	1,281.24	50.52	26.360			
7,700.00	7,689.29	7,706.57	7,682.29	26.16	25.75	-97.12	-46.00	-1,090.50	1,331.76	1,280.53	51.23	25.997			
7,800.00	7,789.29	7,806.57	7,782.29	26.51	26.09	-97.12	-46.00	-1,090.50	1,331.76	1,279.83	51.93	25.644			
7,900.00	7,889.29	7,906.57	7,882.29	26.86	26.44	-97.12	-46.00	-1,090.50	1,331.76	1,279.12	52.64	25.300			
8,000.00	7,989.29	8,006.57	7,982.29	27.21	26.79	-97.12	-46.00	-1,090.50	1,331.76	1,278.41	53.35	24.964			
8,100.00	8,089.29	8,106.57	8,082.29	27.57	27.14	-97.12	-46.00	-1,090.50	1,331.76	1,277.71	54.05	24.638			
8,200.00	8,189.29	8,206.57	8,182.29	27.92	27.49	-97.12	-46.00	-1,090.50	1,331.76	1,277.00	54.76	24.320			
8,300.00	8,289.29	8,306.57	8,282.29	28.27	27.84	-97.12	-46.00	-1,090.50	1,331.76	1,276.29	55.47	24.010			
8,400.00	8,389.29	8,406.57	8,382.29	28.62	28.19	-97.12	-46.00	-1,090.50	1,331.76	1,275.58	56.17	23.707			
8,500.00	8,489.29	8,506.57	8,482.29	28.98	28.54	-97.12	-46.00	-1,090.50	1,331.76	1,274.88	56.88	23.412			
8,600.00	8,589.29	8,606.57	8,582.29	29.33	28.89	-97.12	-46.00	-1,090.50	1,331.76	1,274.17	57.59	23.125			
8,700.00	8,689.29	8,706.57	8,682.29	29.68	29.24	-97.12	-46.00	-1,090.50	1,331.76	1,273.46	58.30	22.844			
8,800.00	8,789.29	8,806.57	8,782.29	30.04	29.59	-97.12	-46.00	-1,090.50	1,331.76	1,272.75	59.01	22.569			
8,900.00	8,889.29	8,906.57	8,882.29	30.39	29.94	-97.12	-46.00	-1,090.50	1,331.76	1,272.05	59.72	22.302			
9,000.00	8,989.29	9,006.57	8,982.29	30.74	30.29	-97.12	-46.00	-1,090.50	1,331.76	1,271.34	60.42	22.040			
9,100.00	9,089.29	9,106.57	9,082.29	31.10	30.64	-97.12	-46.00	-1,090.50	1,331.76	1,270.63	61.13	21.784			
9,200.00	9,189.29	9,206.57	9,182.29	31.45	30.99	-97.12	-46.00	-1,090.50	1,331.76	1,269.92	61.84	21.535			
9,300.00	9,289.29	9,306.57	9,282.29	31.80	31.34	-97.12	-46.00	-1,090.50	1,331.76	1,269.21	62.55	21.290			
9,400.00	9,389.29	9,406.57	9,382.29	32.16	31.69	-97.12	-46.00	-1,090.50	1,331.76	1,268.50	63.26	21.052			
9,500.00	9,489.29	9,506.57	9,482.29	32.51	32.05	-97.12	-46.00	-1,090.50	1,331.76	1,267.79	63.97	20.818			
9,600.00	9,589.29	9,606.57	9,582.29	32.87	32.40	-97.12	-46.00	-1,090.50	1,331.76	1,267.08	64.68	20.590			
9,700.00	9,689.29	9,706.57	9,682.29	33.22	32.75	-97.12	-46.00	-1,090.50	1,331.76	1,266.37	65.39	20.366			
9,800.00	9,789.29	9,806.57	9,782.29	33.57	33.10	-97.12	-46.00	-1,090.50	1,331.76	1,265.66	66.10	20.147			
9,900.00	9,889.29	9,906.57	9,882.29	33.93	33.45	-97.12	-46.00	-1,090.50	1,331.76	1,264.95	66.81	19.933			
10,000.00	9,989.29	10,006.57	9,982.29	34.28	33.81	-97.12	-46.00	-1,090.50	1,331.76	1,264.24	67.52	19.723			
10,100.00	10,089.29	10,106.57	10,082.29	34.64	34.16	-97.12	-46.00	-1,090.50	1,331.76	1,263.53	68.23	19.518			
10,200.00	10,189.29	10,206.57	10,182.29	34.99	34.51	-97.12	-46.00	-1,090.50	1,331.76	1,262.82	68.94	19.317			
10,300.00	10,289.29	10,306.57	10,282.29	35.35	34.86	-97.12	-46.00	-1,090.50	1,331.76	1,262.11	69.65	19.120			
10,400.00	10,389.29	10,406.57	10,382.29	35.70	35.22	-97.12	-46.00	-1,090.50	1,331.76	1,261.40	70.37	18.926			
10,500.00	10,489.29	10,506.57	10,482.29	36.06	35.57	-97.12	-46.00	-1,090.50	1,331.76	1,260.68	71.08	18.737			
10,600.00	10,589.29	10,606.57	10,582.29	36.41	35.92	-97.12	-46.00	-1,090.50	1,331.76	1,259.97	71.79	18.551			
10,700.00	10,689.29	10,706.57	10,682.29	36.77	36.27	-97.12	-46.00	-1,090.50	1,331.76	1,259.27	72.49	18.372			
10,800.00	10,789.29	10,793.43	10,782.29	37.12	36.42	-97.12	-46.00	-1,090.50	1,331.76	1,258.56	73.00	18.244			
10,900.00	10,889.29	10,889.92	10,858.50	37.48	36.41	-97.37	-51.81	-1,090.43	1,332.68	1,259.34	73.34	18.171			
11,000.00	10,989.29	10,944.85	10,931.57	37.83	36.43	-98.02	-67.22	-1,090.42	1,335.44	1,261.76	73.68	18.125			
11,100.00	11,089.29	11,014.31	10,997.35	38.19	36.44	-98.99	-90.03	-1,090.33	1,340.46	1,266.47	73.99	18.118			
11,167.81	11,157.10	11,057.97	11,036.98	38.43	36.46	-99.78	-108.33	-1,090.26	1,345.44	1,271.27	74.17	18.141			

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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 - QWSG, 500-MWD - QWSG, 10750-MWD - QWSG												Offset Well Error:	0.00 usft
Reference													
Offset													
Semi Major Axis													
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
11,200.00	11,189.27	11,077.89	11,054.57	38.49	38.47	79.87	-117.87	-1,090.23	1,349.18	1,273.99	74.17	18.176	
11,250.00	11,239.01	11,108.59	11,081.02	38.49	38.48	78.81	-133.25	-1,090.17	1,352.42	1,278.32	74.10	18.251	
11,300.00	11,288.12	11,139.02	11,106.38	38.49	38.50	78.01	-150.07	-1,090.10	1,358.65	1,282.63	74.02	18.329	
11,350.00	11,338.24	11,169.23	11,130.63	38.49	38.52	77.16	-168.07	-1,090.03	1,360.76	1,286.84	73.92	18.408	
11,400.00	11,382.99	11,200.00	11,154.32	38.49	38.55	76.37	-187.70	-1,089.96	1,364.70	1,290.88	73.82	18.486	
11,450.00	11,428.02	11,229.10	11,175.73	38.50	39.57	75.68	-207.40	-1,089.88	1,368.39	1,294.67	73.72	18.562	
11,500.00	11,470.99	11,258.80	11,196.52	38.51	38.60	75.03	-228.81	-1,089.80	1,371.77	1,298.15	73.62	18.633	
11,550.00	11,511.57	11,288.39	11,216.11	38.52	38.64	74.47	-250.78	-1,089.72	1,374.79	1,301.26	73.53	18.697	
11,600.00	11,549.46	11,317.88	11,234.47	38.54	38.67	74.00	-273.86	-1,089.83	1,377.41	1,303.95	73.48	18.751	
11,650.00	11,584.35	11,350.00	11,253.09	38.56	38.72	73.60	-300.02	-1,089.53	1,379.59	1,306.17	73.42	18.791	
11,700.00	11,618.00	11,376.65	11,267.40	38.59	38.77	73.31	-322.50	-1,089.44	1,381.29	1,307.91	73.38	18.824	
11,750.00	11,644.15	11,400.00	11,279.07	38.63	38.81	73.12	-342.72	-1,089.36	1,382.51	1,309.16	73.35	18.847	
11,800.00	11,669.60	11,435.24	11,295.10	38.68	38.88	72.99	-374.09	-1,089.24	1,383.17	1,309.74	73.43	18.838	
11,850.00	11,689.15	11,464.50	11,306.93	38.75	38.95	72.96	-400.86	-1,089.14	1,383.33	1,309.80	73.52	18.815	
11,900.00	11,705.66	11,500.00	11,319.41	38.83	37.04	73.04	-434.08	-1,089.02	1,382.98	1,309.29	73.69	18.768	
11,950.00	11,717.99	11,523.67	11,326.42	38.94	37.10	73.19	-456.07	-1,088.93	1,382.06	1,308.22	73.84	18.717	
12,000.00	11,726.05	11,550.00	11,333.45	39.07	37.18	73.43	-482.05	-1,088.83	1,380.66	1,306.60	74.06	18.643	
12,050.00	11,729.78	11,581.79	11,340.20	39.21	37.29	73.79	-513.11	-1,088.71	1,378.76	1,304.41	74.35	18.543	
12,067.82	11,730.06	11,592.28	11,342.04	39.27	37.33	73.93	-523.44	-1,088.67	1,377.97	1,303.51	74.46	18.505	
12,100.00	11,730.06	11,611.33	11,344.90	39.38	37.39	74.05	-542.27	-1,088.60	1,376.66	1,301.98	74.58	18.435	
12,200.00	11,730.06	11,671.43	11,349.81	39.77	37.63	74.24	-602.15	-1,088.37	1,374.51	1,299.15	75.36	18.240	
12,226.59	11,730.06	11,689.42	11,350.06	39.89	37.70	74.25	-617.79	-1,088.31	1,374.42	1,298.86	75.56	18.190	
12,300.00	11,730.06	11,780.48	11,350.06	40.23	38.03	74.25	-691.20	-1,088.03	1,374.49	1,298.28	76.21	18.035	
12,400.00	11,730.05	11,860.48	11,350.06	40.75	38.54	74.26	-791.19	-1,087.65	1,374.58	1,297.36	77.22	17.800	
12,500.00	11,730.05	11,960.48	11,350.05	41.34	39.12	74.26	-891.19	-1,087.27	1,374.68	1,296.32	78.35	17.544	
12,600.00	11,730.05	12,060.48	11,350.05	41.88	39.76	74.26	-991.19	-1,086.88	1,374.77	1,295.17	79.60	17.270	
12,700.00	11,730.05	12,160.48	11,350.05	42.68	40.46	74.26	-1,091.19	-1,086.50	1,374.87	1,293.90	80.96	16.982	
12,800.00	11,730.05	12,260.48	11,350.05	43.44	41.22	74.26	-1,191.19	-1,086.12	1,374.96	1,292.53	82.43	16.681	
12,900.00	11,730.05	12,360.48	11,350.05	44.24	42.03	74.26	-1,291.19	-1,085.74	1,375.05	1,291.06	83.99	16.372	
13,000.00	11,730.05	12,460.48	11,350.05	45.10	42.89	74.26	-1,391.19	-1,085.35	1,375.15	1,289.50	85.65	16.056	
13,100.00	11,730.04	12,560.48	11,350.05	45.99	43.80	74.26	-1,491.19	-1,084.97	1,375.24	1,287.85	87.40	15.736	
13,200.00	11,730.04	12,660.48	11,350.04	46.93	44.75	74.26	-1,591.19	-1,084.59	1,375.34	1,286.11	89.23	15.414	
13,300.00	11,730.04	12,760.48	11,350.04	47.91	45.74	74.27	-1,691.19	-1,084.21	1,375.43	1,284.29	91.14	15.092	
13,400.00	11,730.04	12,860.48	11,350.04	48.93	46.78	74.27	-1,791.19	-1,083.82	1,375.53	1,282.40	93.12	14.771	
13,500.00	11,730.04	12,960.48	11,350.04	49.98	47.84	74.27	-1,891.19	-1,083.44	1,375.62	1,280.45	95.17	14.454	
13,600.00	11,730.04	13,060.48	11,350.04	51.07	48.95	74.27	-1,991.18	-1,083.06	1,375.71	1,279.42	97.29	14.140	
13,700.00	11,730.04	13,160.48	11,350.04	52.19	50.08	74.27	-2,091.18	-1,082.67	1,375.81	1,278.34	99.47	13.831	
13,800.00	11,730.04	13,260.48	11,350.04	53.33	51.24	74.27	-2,191.18	-1,082.29	1,375.90	1,277.19	101.71	13.528	
13,900.00	11,730.03	13,360.48	11,350.04	54.50	52.43	74.27	-2,291.18	-1,081.91	1,376.00	1,276.00	104.00	13.231	
14,000.00	11,730.03	13,460.48	11,350.03	55.70	53.65	74.27	-2,391.18	-1,081.53	1,376.09	1,269.76	106.34	12.941	
14,100.00	11,730.03	13,560.48	11,350.03	56.92	54.89	74.27	-2,491.18	-1,081.14	1,376.19	1,267.46	108.72	12.658	
14,200.00	11,730.03	13,660.48	11,350.03	58.17	56.15	74.28	-2,591.18	-1,080.76	1,376.28	1,265.13	111.15	12.382	
14,300.00	11,730.03	13,760.48	11,350.03	59.43	57.44	74.28	-2,691.18	-1,080.38	1,376.37	1,262.75	113.62	12.114	
14,400.00	11,730.03	13,860.48	11,350.03	60.72	58.74	74.28	-2,791.18	-1,080.00	1,376.47	1,260.34	116.13	11.853	
14,500.00	11,730.03	13,960.48	11,350.03	62.02	60.06	74.28	-2,891.18	-1,079.61	1,376.56	1,257.89	118.67	11.600	
14,600.00	11,730.02	14,060.48	11,350.03	63.34	61.40	74.28	-2,991.18	-1,079.23	1,376.66	1,255.41	121.25	11.354	
14,700.00	11,730.02	14,160.48	11,350.02	64.68	62.75	74.28	-3,091.18	-1,078.85	1,376.75	1,252.89	123.86	11.116	
14,800.00	11,730.02	14,260.48	11,350.02	66.03	64.12	74.28	-3,191.18	-1,078.47	1,376.85	1,250.35	126.50	10.884	
14,900.00	11,730.02	14,360.48	11,350.02	67.40	65.51	74.28	-3,291.17	-1,078.08	1,376.94	1,247.78	129.16	10.661	
15,000.00	11,730.02	14,460.48	11,350.02	68.78	66.90	74.28	-3,391.17	-1,077.70	1,377.03	1,245.18	131.85	10.444	
15,100.00	11,730.02	14,560.48	11,350.02	70.17	68.31	74.28	-3,491.17	-1,077.32	1,377.13	1,242.56	134.57	10.234	
15,200.00	11,730.02	14,660.48	11,350.02	71.57	69.73	74.29	-3,591.17	-1,076.94	1,377.22	1,239.91	137.31	10.030	

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		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)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
15,300.00	11,730.02	14,760.48	11,350.02	72.99	71.16	74.29	-3,691.17	-1,076.55	1,377.32	1,237.25	140.07	9.833		
15,400.00	11,730.01	14,860.48	11,350.02	74.41	72.60	74.29	-3,791.17	-1,076.17	1,377.41	1,234.58	142.85	9.842		
15,500.00	11,730.01	14,960.48	11,350.01	75.85	74.05	74.29	-3,891.17	-1,075.79	1,377.51	1,231.86	145.55	9.458		
15,600.00	11,730.01	15,060.48	11,350.01	77.30	75.51	74.29	-3,991.17	-1,075.40	1,377.60	1,229.13	148.47	9.279		
15,700.00	11,730.01	15,160.48	11,350.01	78.75	76.98	74.29	-4,091.17	-1,075.02	1,377.69	1,226.39	151.31	9.105		
15,800.00	11,730.01	15,260.48	11,350.01	80.21	78.46	74.29	-4,191.17	-1,074.64	1,377.79	1,223.63	154.16	8.938		
15,900.00	11,730.01	15,360.48	11,350.01	81.69	79.94	74.29	-4,291.17	-1,074.26	1,377.88	1,220.88	157.02	8.775		
16,000.00	11,730.01	15,460.48	11,350.01	83.16	81.44	74.29	-4,391.17	-1,073.87	1,377.98	1,218.07	159.91	8.617		
16,100.00	11,730.01	15,560.48	11,350.01	84.65	82.93	74.30	-4,491.17	-1,073.49	1,378.07	1,215.27	162.80	8.465		
16,200.00	11,730.00	15,660.48	11,350.00	86.14	84.44	74.30	-4,591.16	-1,073.11	1,378.17	1,212.46	165.71	8.317		
16,300.00	11,730.00	15,760.48	11,350.00	87.64	85.95	74.30	-4,691.16	-1,072.73	1,378.26	1,209.63	168.63	8.173		
16,400.00	11,730.00	15,860.48	11,350.00	89.15	87.47	74.30	-4,791.16	-1,072.34	1,378.35	1,206.79	171.56	8.034		
16,468.91	11,730.00	15,949.39	11,350.00	90.49	88.82	74.30	-4,880.07	-1,072.00	1,378.44	1,204.26	174.18	7.914 SF		

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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
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
0.00	0.00	6.00	-6.00	0.00	0.01	-91.52	-21.00	-792.00	792.28				
100.00	100.00	106.00	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	462.880	
400.00	400.00	406.00	394.00	1.20	1.22	-91.52	-21.00	-792.00	792.28	789.86	2.42	327.579	
500.00	500.00	494.00	494.00	1.39	1.38	-91.52	-21.00	-792.00	792.28	789.50	2.78	285.270 CC, ES	
600.00	599.99	583.58	583.57	1.48	1.47	-154.26	-20.75	-792.56	793.68	790.73	2.95	268.931	
700.00	699.96	672.38	672.35	1.65	1.60	-154.25	-19.93	-794.36	798.05	794.80	3.25	245.879	
800.00	799.86	760.95	760.86	1.87	1.78	-154.24	-18.56	-797.42	805.38	801.73	3.65	220.760	
900.00	899.68	849.19	848.98	2.13	2.00	-154.21	-16.62	-801.70	815.65	811.53	4.12	197.908	
1,000.00	999.37	936.68	936.56	2.42	2.24	-154.18	-14.15	-807.18	828.86	824.22	4.65	178.425	
1,100.00	1,098.99	1,027.55	1,026.81	2.74	2.51	-154.19	-11.04	-814.06	844.16	838.95	5.21	161.962	
1,200.00	1,198.60	1,126.32	1,125.20	3.07	2.83	-154.19	-7.50	-821.91	859.81	853.98	5.83	147.455	
1,300.00	1,288.22	1,225.09	1,223.60	3.42	3.16	-154.19	-3.86	-829.75	875.46	868.58	6.47	135.280	
1,400.00	1,397.84	1,323.85	1,321.99	3.77	3.50	-154.19	-0.41	-837.60	891.10	883.98	7.13	125.023	
1,500.00	1,497.46	1,422.62	1,420.38	4.12	3.85	-154.19	3.13	-845.44	906.75	898.96	7.80	116.298	
1,600.00	1,597.08	1,521.39	1,518.77	4.49	4.21	-154.19	6.67	-853.29	922.40	913.93	8.47	108.838	
1,700.00	1,696.70	1,620.16	1,617.16	4.85	4.57	-154.19	10.21	-861.13	938.05	928.89	9.16	102.404	
1,800.00	1,796.32	1,718.93	1,715.56	5.22	4.93	-154.19	13.76	-868.98	953.70	943.85	9.85	96.809	
1,900.00	1,895.94	1,817.70	1,813.95	5.59	5.29	-154.18	17.30	-876.82	969.34	958.80	10.55	91.909	
2,000.00	1,995.56	1,916.46	1,912.34	5.96	5.66	-154.18	20.84	-884.67	984.99	973.75	11.25	87.586	
2,100.00	2,095.18	2,015.23	2,010.73	6.33	6.02	-154.18	24.38	-892.52	1,000.64	988.69	11.95	83.748	
2,200.00	2,194.80	2,114.00	2,109.13	6.70	6.39	-154.18	27.93	-900.36	1,016.29	1,003.64	12.65	80.320	
2,300.00	2,294.42	2,212.77	2,207.52	7.08	6.76	-154.18	31.47	-908.21	1,031.94	1,018.58	13.36	77.241	
2,400.00	2,394.04	2,311.54	2,305.91	7.45	7.13	-154.18	35.01	-916.05	1,047.59	1,033.52	14.07	74.462	
2,500.00	2,493.66	2,410.30	2,404.30	7.83	7.50	-154.18	38.55	-923.90	1,063.23	1,048.45	14.78	71.942	
2,600.00	2,593.28	2,509.07	2,502.69	8.21	7.88	-154.18	42.09	-931.74	1,078.88	1,063.39	15.49	69.647	
2,700.00	2,692.90	2,607.84	2,601.08	8.58	8.25	-154.18	45.64	-939.59	1,094.53	1,078.33	16.20	67.548	
2,800.00	2,792.52	2,706.61	2,699.48	8.96	8.62	-154.18	49.18	-947.43	1,110.18	1,093.26	16.92	65.623	
2,900.00	2,892.14	2,805.38	2,797.87	9.34	9.00	-154.18	52.72	-955.28	1,125.83	1,108.19	17.63	63.850	
3,000.00	2,891.76	2,804.14	2,896.26	9.72	9.37	-154.18	56.26	-963.13	1,141.47	1,123.13	18.35	62.213	
3,100.00	3,091.37	3,002.91	2,994.66	10.10	9.75	-154.18	59.81	-970.97	1,157.12	1,138.06	19.06	60.696	
3,200.00	3,190.99	3,101.68	3,093.05	10.48	10.12	-154.18	63.35	-978.82	1,172.77	1,152.99	19.78	59.288	
3,300.00	3,290.61	3,200.45	3,191.44	10.86	10.50	-154.18	66.89	-986.66	1,188.42	1,167.92	20.50	57.976	
3,400.00	3,390.23	3,299.22	3,289.83	11.24	10.87	-154.18	70.43	-994.51	1,204.07	1,182.85	21.22	56.751	
3,481.13	3,471.05	3,379.34	3,369.65	11.54	11.18	-154.17	73.31	-1,000.87	1,216.76	1,194.96	21.80	55.816	
3,500.00	3,489.86	3,402.01	3,388.23	11.62	11.26	-154.19	73.98	-1,002.35	1,219.69	1,197.74	21.95	55.568	
3,600.00	3,589.57	3,503.08	3,486.78	11.99	11.65	-154.23	77.52	-1,010.21	1,234.27	1,211.59	22.67	54.434	
3,700.00	3,689.40	3,603.94	3,585.54	12.36	12.03	-154.22	81.08	-1,018.09	1,247.29	1,223.89	23.40	53.311	
3,800.00	3,789.32	3,704.62	3,684.48	12.71	12.42	-154.18	84.64	-1,025.98	1,258.75	1,234.64	24.12	52.197	
3,900.00	3,889.29	3,805.16	3,783.57	13.06	12.80	-154.10	88.21	-1,033.88	1,268.66	1,243.83	24.83	51.090	
3,981.13	3,970.42	3,875.63	3,864.05	13.33	13.07	-91.26	91.11	-1,040.29	1,275.56	1,250.19	25.37	50.283	
4,000.00	3,989.29	3,905.57	3,882.78	13.40	13.18	-91.23	91.78	-1,041.79	1,277.04	1,251.50	25.54	50.001	
4,100.00	4,089.29	4,005.95	3,982.02	13.73	13.57	-91.06	95.35	-1,049.70	1,284.92	1,258.67	26.25	48.957	
4,200.00	4,189.29	4,106.33	4,081.26	14.06	13.95	-90.89	98.93	-1,057.61	1,292.80	1,265.85	26.95	47.967	
4,300.00	4,289.29	4,193.29	4,180.50	14.40	14.28	-90.73	102.50	-1,065.53	1,300.70	1,273.09	27.61	47.109	
4,400.00	4,389.29	4,300.52	4,287.34	14.73	14.69	-90.56	106.30	-1,073.94	1,308.52	1,280.17	28.35	46.152	
4,500.00	4,489.29	4,426.47	4,412.98	15.07	15.16	-90.40	109.92	-1,081.95	1,314.87	1,285.69	29.18	45.064	
4,600.00	4,589.29	4,552.75	4,539.11	15.41	15.62	-90.29	112.40	-1,087.46	1,319.21	1,289.22	29.99	43.987	
4,700.00	4,689.29	4,679.23	4,665.54	15.75	16.06	-90.23	113.74	-1,090.43	1,321.56	1,290.77	30.79	42.902	
4,800.00	4,789.29	4,803.02	4,783.29	16.09	16.47	-90.22	114.00	-1,091.00	1,322.01	1,290.45	31.56	41.884	
4,900.00	4,889.29	4,903.02	4,883.29	16.43	16.81	-90.22	114.00	-1,091.00	1,322.01	1,289.76	32.25	40.992	

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

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		Sami 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)					
5,000.00	4,989.29	5,003.02	4,983.29	16.77	17.14	-90.22	114.00	-1,091.00	1,322.01	1,289.07	32.94	40.136			
5,100.00	5,089.29	5,103.02	5,083.29	17.11	17.47	-90.22	114.00	-1,091.00	1,322.01	1,288.38	33.63	39.313			
5,200.00	5,189.29	5,203.02	5,183.29	17.45	17.81	-90.22	114.00	-1,091.00	1,322.01	1,287.69	34.32	38.522			
5,300.00	5,289.29	5,303.02	5,283.29	17.80	18.14	-90.22	114.00	-1,091.00	1,322.01	1,287.00	35.01	37.761			
5,400.00	5,389.29	5,403.02	5,383.29	18.14	18.48	-90.22	114.00	-1,091.00	1,322.01	1,286.31	35.70	37.028			
5,500.00	5,489.29	5,503.02	5,483.29	18.48	18.81	-90.22	114.00	-1,091.00	1,322.01	1,285.61	36.40	36.323			
5,600.00	5,589.29	5,603.02	5,583.29	18.83	19.15	-90.22	114.00	-1,091.00	1,322.01	1,284.92	37.09	35.643			
5,700.00	5,689.29	5,703.02	5,683.29	19.17	19.49	-90.22	114.00	-1,091.00	1,322.01	1,284.22	37.79	34.987			
5,800.00	5,789.29	5,803.02	5,783.29	19.52	19.83	-90.22	114.00	-1,091.00	1,322.01	1,283.53	38.48	34.354			
5,900.00	5,889.29	5,903.02	5,883.29	19.87	20.17	-90.22	114.00	-1,091.00	1,322.01	1,282.83	39.18	33.743			
6,000.00	5,989.29	6,003.02	5,983.29	20.21	20.51	-90.22	114.00	-1,091.00	1,322.01	1,282.13	39.88	33.153			
6,100.00	6,089.29	6,103.02	6,083.29	20.56	20.85	-90.22	114.00	-1,091.00	1,322.01	1,281.43	40.57	32.582			
6,200.00	6,189.29	6,203.02	6,183.29	20.91	21.19	-90.22	114.00	-1,091.00	1,322.01	1,280.74	41.27	32.030			
6,300.00	6,289.29	6,303.02	6,283.29	21.26	21.53	-90.22	114.00	-1,091.00	1,322.01	1,280.04	41.97	31.497			
6,400.00	6,389.29	6,403.02	6,383.29	21.60	21.87	-90.22	114.00	-1,091.00	1,322.01	1,279.34	42.67	30.980			
6,500.00	6,489.29	6,503.02	6,483.29	21.95	22.22	-90.22	114.00	-1,091.00	1,322.01	1,278.64	43.37	30.480			
6,600.00	6,589.29	6,603.02	6,583.29	22.30	22.56	-90.22	114.00	-1,091.00	1,322.01	1,277.93	44.07	29.995			
6,700.00	6,689.29	6,703.02	6,683.29	22.65	22.91	-90.22	114.00	-1,091.00	1,322.01	1,277.23	44.78	29.525			
6,800.00	6,789.29	6,803.02	6,783.29	23.00	23.25	-90.22	114.00	-1,091.00	1,322.01	1,276.53	45.48	29.069			
6,900.00	6,889.29	6,903.02	6,883.29	23.35	23.59	-90.22	114.00	-1,091.00	1,322.01	1,275.83	46.18	28.627			
7,000.00	6,989.29	7,003.02	6,983.29	23.70	23.94	-90.22	114.00	-1,091.00	1,322.01	1,275.13	46.88	28.197			
7,100.00	7,089.29	7,103.02	7,083.29	24.05	24.29	-90.22	114.00	-1,091.00	1,322.01	1,274.42	47.59	27.781			
7,200.00	7,189.29	7,203.02	7,183.29	24.40	24.63	-90.22	114.00	-1,091.00	1,322.01	1,273.72	48.29	27.376			
7,300.00	7,289.29	7,303.02	7,283.29	24.75	24.98	-90.22	114.00	-1,091.00	1,322.01	1,273.01	49.00	26.982			
7,400.00	7,389.29	7,403.02	7,383.29	25.10	25.32	-90.22	114.00	-1,091.00	1,322.01	1,272.31	49.70	26.600			
7,500.00	7,489.29	7,503.02	7,483.29	25.45	25.67	-90.22	114.00	-1,091.00	1,322.01	1,271.60	50.40	26.228			
7,600.00	7,589.29	7,603.02	7,583.29	25.81	26.02	-90.22	114.00	-1,091.00	1,322.01	1,270.90	51.11	25.866			
7,700.00	7,689.29	7,703.02	7,683.29	26.16	26.37	-90.22	114.00	-1,091.00	1,322.01	1,270.19	51.82	25.514			
7,800.00	7,789.29	7,803.02	7,783.29	26.51	26.71	-90.22	114.00	-1,091.00	1,322.01	1,269.49	52.52	25.171			
7,900.00	7,889.29	7,903.02	7,883.29	26.86	27.06	-90.22	114.00	-1,091.00	1,322.01	1,268.78	53.23	24.837			
8,000.00	7,989.29	8,003.02	7,983.29	27.21	27.41	-90.22	114.00	-1,091.00	1,322.01	1,268.08	53.93	24.512			
8,100.00	8,089.29	8,103.02	8,083.29	27.57	27.76	-90.22	114.00	-1,091.00	1,322.01	1,267.37	54.64	24.195			
8,200.00	8,189.29	8,203.02	8,183.29	27.92	28.11	-90.22	114.00	-1,091.00	1,322.01	1,266.66	55.35	23.888			
8,300.00	8,289.29	8,303.02	8,283.29	28.27	28.46	-90.22	114.00	-1,091.00	1,322.01	1,265.95	56.05	23.584			
8,400.00	8,389.29	8,403.02	8,383.29	28.62	28.81	-90.22	114.00	-1,091.00	1,322.01	1,265.25	56.76	23.290			
8,500.00	8,489.29	8,503.02	8,483.29	28.98	29.16	-90.22	114.00	-1,091.00	1,322.01	1,264.54	57.47	23.003			
8,600.00	8,589.29	8,603.02	8,583.29	29.33	29.51	-90.22	114.00	-1,091.00	1,322.01	1,263.83	58.18	22.724			
8,700.00	8,689.29	8,703.02	8,683.29	29.68	29.86	-90.22	114.00	-1,091.00	1,322.01	1,263.12	58.89	22.450			
8,800.00	8,789.29	8,803.02	8,783.29	30.04	30.21	-90.22	114.00	-1,091.00	1,322.01	1,262.41	59.59	22.183			
8,900.00	8,889.29	8,903.02	8,883.29	30.39	30.56	-90.22	114.00	-1,091.00	1,322.01	1,261.71	60.30	21.923			
9,000.00	8,989.29	9,003.02	8,983.29	30.74	30.91	-90.22	114.00	-1,091.00	1,322.01	1,261.00	61.01	21.668			
9,100.00	9,089.29	9,103.02	9,083.29	31.10	31.26	-90.22	114.00	-1,091.00	1,322.01	1,260.29	61.72	21.419			
9,200.00	9,189.29	9,203.02	9,183.29	31.45	31.61	-90.22	114.00	-1,091.00	1,322.01	1,259.58	62.43	21.176			
9,300.00	9,289.29	9,303.02	9,283.29	31.80	31.96	-90.22	114.00	-1,091.00	1,322.01	1,258.87	63.14	20.938			
9,400.00	9,389.29	9,403.02	9,383.29	32.16	32.31	-90.22	114.00	-1,091.00	1,322.01	1,258.16	63.85	20.705			
9,500.00	9,489.29	9,503.02	9,483.29	32.51	32.66	-90.22	114.00	-1,091.00	1,322.01	1,257.45	64.56	20.478			
9,600.00	9,589.29	9,603.02	9,583.29	32.87	33.02	-90.22	114.00	-1,091.00	1,322.01	1,256.74	65.27	20.255			
9,700.00	9,689.29	9,703.02	9,683.29	33.22	33.37	-90.22	114.00	-1,091.00	1,322.01	1,256.03	65.98	20.037			
9,800.00	9,789.29	9,803.02	9,783.29	33.57	33.72	-90.22	114.00	-1,091.00	1,322.01	1,255.32	66.69	19.824			
9,900.00	9,889.29	9,903.02	9,883.29	33.93	34.07	-90.22	114.00	-1,091.00	1,322.01	1,254.61	67.40	19.615			
10,000.00	9,989.29	10,003.02	9,983.29	34.28	34.42	-90.22	114.00	-1,091.00	1,322.01	1,253.90	68.11	19.410			
10,100.00	10,089.29	10,103.02	10,083.29	34.64	34.78	-90.22	114.00	-1,091.00	1,322.01	1,253.19	68.82	19.210			

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		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)			
10,200.00	10,189.29	10,203.02	10,183.29	34.99	35.13	-90.22	114.00	-1,091.00	1,322.01	1,252.48	69.53	19.013	
10,300.00	10,289.29	10,303.02	10,283.29	35.35	35.48	-90.22	114.00	-1,091.00	1,322.01	1,251.77	70.24	18.821	
10,400.00	10,389.29	10,403.02	10,383.29	35.70	35.83	-90.22	114.00	-1,091.00	1,322.01	1,251.06	70.95	18.633	
10,500.00	10,489.29	10,503.02	10,483.29	36.06	36.19	-90.22	114.00	-1,091.00	1,322.01	1,250.35	71.66	18.448	
10,600.00	10,589.29	10,603.02	10,583.29	36.41	36.54	-90.22	114.00	-1,091.00	1,322.01	1,249.64	72.37	18.266	
10,700.00	10,689.29	10,703.02	10,683.29	36.77	36.89	-90.22	114.00	-1,091.00	1,322.01	1,248.92	73.09	18.089	
10,800.00	10,789.29	10,803.02	10,783.29	37.12	37.25	-90.22	114.00	-1,091.00	1,322.01	1,248.21	73.80	17.914	
10,900.00	10,889.29	10,903.02	10,883.29	37.48	37.60	-90.22	114.00	-1,091.00	1,322.01	1,247.50	74.51	17.743	
11,000.00	10,989.29	11,003.02	10,983.29	37.83	37.95	-90.22	114.00	-1,091.00	1,322.01	1,246.79	75.22	17.575	
11,100.00	11,089.29	11,103.02	11,083.29	38.19	38.30	-90.22	114.00	-1,091.00	1,322.01	1,246.08	75.93	17.412	
11,167.81	11,157.10	11,164.79	11,151.10	38.43	38.41	-90.22	114.00	-1,091.00	1,322.01	1,245.73	76.28	17.332	
11,200.00	11,189.27	11,196.96	11,183.27	38.49	38.47	90.10	114.00	-1,091.00	1,322.01	1,245.62	76.39	17.306	
11,250.00	11,239.01	11,247.07	11,233.34	38.49	38.47	90.23	112.13	-1,090.99	1,322.02	1,245.63	76.40	17.305	
11,300.00	11,238.12	11,297.47	11,283.33	38.49	38.47	90.37	105.86	-1,090.97	1,322.04	1,245.66	76.39	17.307	
11,350.00	11,336.24	11,348.15	11,332.84	38.49	38.47	90.50	85.15	-1,090.93	1,322.08	1,245.70	76.38	17.309	
11,400.00	11,382.99	11,399.10	11,381.49	38.49	38.47	90.63	80.02	-1,090.87	1,322.12	1,245.75	76.37	17.312	
11,450.00	11,428.02	11,450.33	11,428.83	38.50	38.48	90.75	60.51	-1,090.80	1,322.18	1,245.81	76.36	17.314	
11,500.00	11,470.99	11,501.83	11,474.49	38.51	38.48	90.87	36.72	-1,090.71	1,322.24	1,245.88	76.38	17.315	
11,550.00	11,511.57	11,553.59	11,518.03	38.52	38.49	90.98	8.77	-1,090.60	1,322.31	1,245.94	76.37	17.314	
11,600.00	11,549.46	11,605.60	11,559.07	38.54	38.50	91.08	-23.16	-1,090.48	1,322.38	1,245.99	76.40	17.310	
11,650.00	11,584.35	11,657.85	11,597.21	38.56	38.52	91.18	-58.84	-1,090.34	1,322.46	1,246.02	76.44	17.301	
11,700.00	11,616.00	11,710.32	11,632.07	38.59	38.55	91.26	-98.02	-1,090.19	1,322.55	1,246.04	76.51	17.287	
11,750.00	11,644.15	11,762.98	11,663.33	38.63	38.58	91.34	-140.38	-1,090.03	1,322.63	1,246.03	76.60	17.266	
11,800.00	11,668.60	11,815.83	11,690.54	38.68	38.63	91.41	-185.80	-1,089.86	1,322.71	1,245.98	76.73	17.238	
11,850.00	11,689.15	11,868.82	11,713.74	38.75	38.69	91.46	-233.28	-1,089.68	1,322.79	1,245.90	76.89	17.203	
11,900.00	11,705.66	11,921.95	11,732.37	38.83	38.76	91.51	-283.01	-1,089.49	1,322.86	1,245.77	77.10	17.159	
11,950.00	11,717.99	11,975.18	11,746.34	38.94	38.86	91.54	-334.35	-1,089.29	1,322.93	1,245.60	77.34	17.106	
12,000.00	11,726.05	12,028.48	11,755.50	39.07	38.98	91.55	-388.83	-1,089.09	1,323.00	1,245.38	77.62	17.045	
12,050.00	11,729.78	12,081.81	11,759.74	39.21	39.12	91.56	-439.98	-1,088.89	1,323.06	1,245.12	77.94	16.976	
12,067.82	11,730.06	12,100.83	11,760.06	39.27	39.18	91.56	-458.99	-1,088.82	1,323.07	1,245.01	78.06	16.950	
12,100.00	11,730.06	12,133.01	11,760.06	39.38	39.29	91.56	-491.17	-1,088.70	1,323.11	1,244.81	78.29	16.900	
12,200.00	11,730.06	12,233.01	11,760.06	39.77	39.66	91.56	-591.17	-1,088.32	1,323.21	1,244.12	79.08	16.732	
12,300.00	11,730.06	12,333.01	11,760.06	40.23	40.11	91.56	-691.17	-1,087.94	1,323.31	1,243.30	80.00	16.541	
12,400.00	11,730.05	12,433.01	11,760.05	40.75	40.62	91.56	-791.17	-1,087.56	1,323.41	1,242.35	81.05	16.328	
12,500.00	11,730.05	12,533.01	11,760.05	41.34	41.20	91.56	-891.17	-1,087.18	1,323.51	1,241.28	82.22	16.096	
12,600.00	11,730.05	12,633.01	11,760.05	41.98	41.84	91.56	-991.17	-1,086.80	1,323.61	1,240.09	83.51	15.849	
12,700.00	11,730.05	12,733.01	11,760.05	42.68	42.53	91.56	-1,091.17	-1,086.42	1,323.71	1,239.79	84.91	15.589	
12,800.00	11,730.05	12,833.01	11,760.05	43.44	43.28	91.56	-1,191.17	-1,086.04	1,323.81	1,239.39	86.42	15.316	
12,900.00	11,730.05	12,933.01	11,760.05	44.24	44.08	91.56	-1,291.17	-1,085.66	1,323.91	1,238.88	88.03	15.039	
13,000.00	11,730.05	13,033.01	11,760.05	45.10	44.92	91.56	-1,391.17	-1,085.27	1,324.01	1,238.27	89.73	14.755	
13,100.00	11,730.04	13,133.01	11,760.04	45.99	45.81	91.56	-1,491.16	-1,084.89	1,324.11	1,237.58	91.53	14.467	
13,200.00	11,730.04	13,233.01	11,760.04	46.93	46.75	91.56	-1,591.16	-1,084.51	1,324.21	1,236.80	93.41	14.177	
13,300.00	11,730.04	13,333.01	11,760.04	47.91	47.72	91.56	-1,691.16	-1,084.13	1,324.31	1,235.94	95.37	13.887	
13,400.00	11,730.04	13,433.01	11,760.04	48.93	48.74	91.56	-1,791.16	-1,083.75	1,324.41	1,235.01	97.40	13.597	
13,500.00	11,730.04	13,533.01	11,760.04	49.98	49.78	91.56	-1,891.16	-1,083.37	1,324.51	1,234.00	99.51	13.311	
13,600.00	11,730.04	13,633.01	11,760.04	51.07	50.86	91.56	-1,991.16	-1,082.99	1,324.61	1,232.93	101.68	13.028	
13,700.00	11,730.04	13,733.01	11,760.04	52.19	51.98	91.56	-2,091.16	-1,082.61	1,324.71	1,231.80	103.91	12.749	
13,800.00	11,730.04	13,833.01	11,760.04	53.33	53.12	91.56	-2,191.16	-1,082.23	1,324.81	1,230.61	106.20	12.474	
13,900.00	11,730.03	13,933.01	11,760.03	54.50	54.29	91.56	-2,291.16	-1,081.85	1,324.91	1,229.36	108.55	12.206	
14,000.00	11,730.03	14,033.01	11,760.03	55.70	55.48	91.56	-2,391.16	-1,081.47	1,325.01	1,228.06	110.95	11.943	
14,100.00	11,730.03	14,133.01	11,760.03	56.92	56.70	91.56	-2,491.16	-1,081.09	1,325.11	1,226.72	113.39	11.688	
14,200.00	11,730.03	14,233.01	11,760.03	58.17	57.94	91.56	-2,591.16	-1,080.71	1,325.21	1,225.33	115.88	11.436	

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		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			
14,300.00	11,730.03	14,333.01	11,760.03	59.43	59.21	91.56	-2,691.16	-1,080.33	1,325.31	1,206.80	118.41	11.192			
14,400.00	11,730.03	14,433.01	11,760.03	60.72	60.49	91.56	-2,791.15	-1,079.95	1,325.41	1,204.43	120.98	10.955			
14,500.00	11,730.03	14,533.01	11,760.03	62.02	61.79	91.56	-2,891.15	-1,079.57	1,325.51	1,201.92	123.59	10.725			
14,600.00	11,730.02	14,633.01	11,760.02	63.34	63.11	91.56	-2,991.15	-1,079.19	1,325.61	1,199.38	126.23	10.501			
14,700.00	11,730.02	14,733.01	11,760.02	64.68	64.44	91.56	-3,091.15	-1,078.81	1,325.71	1,196.80	128.91	10.284			
14,800.00	11,730.02	14,833.01	11,760.02	66.03	65.79	91.56	-3,191.15	-1,078.43	1,325.81	1,194.20	131.61	10.074			
14,900.00	11,730.02	14,933.01	11,760.02	67.40	67.16	91.56	-3,291.15	-1,078.05	1,325.91	1,191.56	134.35	9.869			
15,000.00	11,730.02	15,033.01	11,760.02	68.78	68.54	91.56	-3,391.15	-1,077.67	1,326.01	1,188.90	137.11	9.671			
15,100.00	11,730.02	15,133.01	11,760.02	70.17	69.93	91.56	-3,491.15	-1,077.29	1,326.11	1,186.22	139.89	9.480			
15,200.00	11,730.02	15,233.01	11,760.02	71.57	71.33	91.56	-3,591.15	-1,076.91	1,326.21	1,183.51	142.70	9.294			
15,300.00	11,730.02	15,333.01	11,760.02	72.99	72.75	91.56	-3,691.15	-1,076.53	1,326.31	1,180.78	145.53	9.113			
15,400.00	11,730.01	15,433.01	11,760.01	74.41	74.17	91.56	-3,791.15	-1,076.15	1,326.41	1,178.02	148.39	8.939			
15,500.00	11,730.01	15,533.01	11,760.01	75.85	75.61	91.56	-3,891.15	-1,075.77	1,326.51	1,175.25	151.26	8.770			
15,600.00	11,730.01	15,633.01	11,760.01	77.30	77.05	91.56	-3,991.15	-1,075.38	1,326.61	1,172.46	154.15	8.608			
15,700.00	11,730.01	15,733.01	11,760.01	78.75	78.50	91.55	-4,091.14	-1,075.00	1,326.71	1,169.65	157.06	8.447			
15,800.00	11,730.01	15,833.01	11,760.01	80.21	79.97	91.55	-4,191.14	-1,074.62	1,326.81	1,166.82	159.99	8.293			
15,900.00	11,730.01	15,933.01	11,760.01	81.69	81.44	91.55	-4,291.14	-1,074.24	1,326.91	1,163.98	162.93	8.144			
16,000.00	11,730.01	16,033.01	11,760.01	83.16	82.91	91.55	-4,391.14	-1,073.86	1,327.01	1,161.12	165.89	7.999			
16,100.00	11,730.01	16,133.01	11,760.01	84.65	84.40	91.55	-4,491.14	-1,073.48	1,327.11	1,158.25	168.86	7.859			
16,200.00	11,730.00	16,233.01	11,760.00	86.14	85.89	91.55	-4,591.14	-1,073.10	1,327.21	1,155.36	171.85	7.723			
16,300.00	11,730.00	16,333.01	11,760.00	87.64	87.39	91.55	-4,691.14	-1,072.72	1,327.31	1,152.47	174.85	7.591			
16,400.00	11,730.00	16,433.01	11,760.00	89.15	88.89	91.55	-4,791.14	-1,072.34	1,327.41	1,149.56	177.86	7.463			
16,488.91	11,730.00	16,521.92	11,760.00	90.49	90.23	91.55	-4,880.05	-1,072.00	1,327.50	1,146.96	180.54	7.353 SF			

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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 - QWSG, 500-MWD - QWSG, 9771-MWD - QWSG														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		
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	30.00	30.00						
100.00	100.00	100.00	100.00	0.13	0.13	90.00	0.00	30.00	30.00	29.74	0.26	117.047			
200.00	200.00	200.00	200.00	0.49	0.49	90.00	0.00	30.00	30.00	29.03	0.97	30.825			
300.00	300.00	300.00	300.00	0.85	0.85	90.00	0.00	30.00	30.00	28.31	1.69	17.749			
400.00	400.00	400.00	400.00	1.20	1.20	90.00	0.00	30.00	30.00	27.59	2.41	12.463			
500.00	500.00	500.00	500.00	1.39	1.56	90.00	0.00	30.00	30.00	27.04	2.96	10.147 CC			
600.00	599.99	599.48	599.48	1.48	1.75	28.28	-0.14	30.85	30.09	26.85	3.23	9.309 ES			
700.00	699.96	698.95	698.91	1.65	1.82	31.31	-0.56	33.41	30.40	26.93	3.47	8.770			
800.00	799.86	798.38	798.24	1.87	1.96	36.20	-1.26	37.66	31.11	27.29	3.82	8.146			
900.00	899.68	897.76	897.44	2.13	2.15	42.60	-2.24	43.62	32.46	28.20	4.26	7.613			
1,000.00	999.37	997.06	996.44	2.42	2.39	49.97	-3.50	51.26	34.74	29.66	4.78	7.268			
1,100.00	1,098.99	1,096.29	1,095.21	2.74	2.67	56.55	-5.03	60.59	38.67	33.32	5.35	7.226 SF			
1,200.00	1,198.60	1,195.40	1,193.69	3.07	2.97	60.82	-6.85	71.59	44.58	38.62	5.96	7.475			
1,300.00	1,298.22	1,294.34	1,291.79	3.42	3.31	63.37	-8.93	84.24	52.23	45.62	6.61	7.907			
1,400.00	1,397.84	1,393.04	1,389.43	3.77	3.66	64.42	-11.28	98.53	61.45	54.18	7.27	8.456			
1,500.00	1,497.46	1,491.45	1,486.51	4.12	4.04	64.55	-13.90	114.43	72.20	64.25	7.94	9.089			
1,600.00	1,597.08	1,589.51	1,582.96	4.49	4.44	64.10	-16.77	131.91	84.45	75.82	8.63	9.786			
1,700.00	1,696.70	1,687.17	1,678.69	4.85	4.86	63.31	-19.90	150.32	98.21	88.88	9.32	10.534			
1,800.00	1,796.32	1,784.37	1,773.64	5.22	5.30	62.34	-23.28	171.45	113.49	103.47	10.02	11.326			
1,900.00	1,895.94	1,881.06	1,867.73	5.59	5.76	61.28	-26.90	193.44	130.31	119.59	10.72	12.156			
2,000.00	1,995.56	1,979.03	1,962.79	5.96	6.24	60.28	-30.75	216.80	148.20	136.75	11.44	12.951			
2,100.00	2,095.18	2,077.38	2,058.22	6.33	6.73	59.43	-34.61	240.28	166.14	153.97	12.18	13.844			
2,200.00	2,194.80	2,175.73	2,153.65	6.70	7.23	58.84	-38.48	263.75	184.12	171.20	12.92	14.255			
2,300.00	2,294.42	2,274.08	2,249.08	7.08	7.74	58.32	-42.34	287.23	202.11	188.45	13.66	14.797			
2,400.00	2,394.04	2,372.44	2,344.51	7.45	8.25	57.88	-46.20	310.71	220.11	205.71	14.40	15.281			
2,500.00	2,493.66	2,470.79	2,439.95	7.83	8.76	57.50	-50.07	334.19	238.12	222.97	15.15	15.715			
2,600.00	2,593.28	2,569.14	2,535.38	8.21	9.27	57.18	-53.93	357.66	256.15	240.24	15.90	16.108			
2,700.00	2,692.90	2,667.50	2,630.81	8.58	9.78	56.90	-57.80	381.14	274.18	257.52	16.66	16.460			
2,800.00	2,792.52	2,765.85	2,726.24	8.96	10.31	56.66	-61.66	404.62	292.21	274.80	17.41	16.783			
2,900.00	2,892.14	2,864.20	2,821.67	9.34	10.84	56.44	-65.53	428.10	310.25	292.08	18.17	17.077			
3,000.00	2,991.76	2,962.58	2,917.10	9.72	11.36	56.25	-69.39	451.58	328.29	309.37	18.93	17.346			
3,100.00	3,091.37	3,060.91	3,012.54	10.10	11.88	56.08	-73.25	475.05	346.34	326.66	19.68	17.594			
3,200.00	3,190.99	3,159.26	3,107.97	10.48	12.41	55.92	-77.12	498.53	364.39	343.95	20.44	17.823			
3,300.00	3,290.61	3,257.81	3,203.40	10.86	12.94	55.78	-80.98	522.01	382.44	361.24	21.21	18.035			
3,400.00	3,390.23	3,355.97	3,298.83	11.24	13.47	55.65	-84.85	545.49	400.50	378.53	21.97	18.231			
3,481.13	3,471.05	3,435.76	3,376.25	11.54	13.89	55.58	-87.98	564.53	415.14	392.56	22.59	18.380			
3,500.00	3,489.86	3,454.32	3,394.26	11.82	13.99	55.56	-88.71	588.96	418.57	395.84	22.73	18.415			
3,600.00	3,589.57	3,552.53	3,489.55	11.99	14.52	55.48	-92.57	592.41	437.30	413.81	23.48	18.622			
3,700.00	3,689.40	3,650.52	3,584.63	12.36	15.05	55.24	-96.42	615.80	457.01	432.79	24.22	18.868			
3,800.00	3,789.32	3,748.25	3,679.46	12.71	15.58	54.87	-100.26	639.13	477.73	452.78	24.95	19.150			
3,900.00	3,889.29	3,845.70	3,774.01	13.06	16.10	54.39	-104.09	662.39	499.48	473.82	25.66	19.468			
3,981.13	3,970.42	3,924.52	3,850.50	13.33	16.53	116.68	-107.19	681.21	517.91	491.69	26.22	19.751			
4,000.00	3,989.29	3,942.84	3,868.27	13.40	16.63	116.53	-107.91	685.58	522.28	495.93	26.35	19.820			
4,100.00	4,089.29	4,039.87	3,962.41	13.73	17.15	115.78	-111.72	708.74	545.50	518.46	27.04	20.174			
4,200.00	4,189.29	4,136.90	4,058.56	14.06	17.68	115.09	-115.53	731.90	568.79	541.06	27.73	20.510			
4,300.00	4,289.29	4,233.93	4,150.71	14.40	18.21	114.46	-119.34	755.06	592.16	563.74	28.43	20.831			
4,400.00	4,389.29	4,330.96	4,244.86	14.73	18.73	113.87	-123.16	778.23	615.60	586.47	29.12	21.137			
4,500.00	4,489.29	4,427.99	4,339.00	15.07	19.26	113.33	-126.97	801.39	639.08	609.26	29.82	21.428			
4,600.00	4,589.29	4,525.02	4,433.15	15.41	19.78	112.82	-130.78	824.55	662.63	632.10	30.53	21.707			
4,700.00	4,689.29	4,622.04	4,527.30	15.75	20.31	112.35	-134.59	847.71	686.21	654.98	31.23	21.973			
4,800.00	4,789.29	4,719.07	4,621.45	16.09	20.84	111.91	-138.41	870.87	709.84	677.90	31.94	22.227			
4,900.00	4,889.29	4,816.10	4,715.59	16.43	21.37	111.50	-142.22	894.04	733.50	700.66	32.64	22.470			

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		
5,000.00	4,989.29	4,913.13	4,809.74	16.77	21.89	111.12	-146.03	917.20	757.20	723.84	33.35	22.702		
5,100.00	5,089.29	5,010.16	4,903.89	17.11	22.42	110.76	-149.84	940.36	780.32	746.86	34.06	22.925		
5,200.00	5,189.29	5,107.19	4,998.04	17.45	22.95	110.42	-153.66	963.52	804.68	769.90	34.78	23.139		
5,300.00	5,289.29	5,204.22	5,092.18	17.80	23.48	110.10	-157.47	986.68	828.46	792.97	35.49	23.344		
5,400.00	5,389.29	5,301.25	5,186.33	18.14	24.00	109.79	-161.28	1,009.85	852.26	816.06	36.20	23.541		
5,500.00	5,489.29	5,401.72	5,280.48	18.48	24.55	109.51	-165.09	1,033.01	876.09	839.15	36.93	23.721		
5,600.00	5,589.29	5,504.69	5,374.63	18.83	25.11	109.23	-168.91	1,056.17	899.93	862.26	37.67	23.888		
5,700.00	5,689.29	5,592.34	5,468.77	19.17	25.59	108.98	-172.72	1,079.33	923.79	885.44	38.35	24.086		
5,800.00	5,789.29	5,689.37	5,562.92	19.52	26.12	108.73	-176.53	1,102.49	947.67	908.60	39.07	24.254		
5,900.00	5,889.29	5,786.40	5,657.07	19.87	26.65	108.50	-180.34	1,125.66	971.57	931.77	39.79	24.416		
6,000.00	5,989.29	5,883.43	5,751.21	20.21	27.18	108.28	-184.16	1,148.82	995.48	954.96	40.51	24.573		
6,100.00	6,089.29	5,980.46	5,845.36	20.56	27.71	108.07	-187.97	1,171.98	1,019.40	978.17	41.23	24.723		
6,200.00	6,189.29	6,077.49	5,939.51	20.91	28.23	107.87	-191.78	1,195.14	1,043.33	1,001.38	41.95	24.868		
6,300.00	6,289.29	6,174.52	6,033.66	21.26	28.76	107.67	-195.59	1,218.30	1,067.28	1,024.60	42.68	25.009		
6,400.00	6,389.29	6,271.55	6,127.80	21.60	29.29	107.49	-199.40	1,241.46	1,091.24	1,047.84	43.40	25.144		
6,500.00	6,489.29	6,368.58	6,221.95	21.95	29.82	107.31	-203.22	1,264.63	1,115.20	1,071.08	44.12	25.275		
6,600.00	6,589.29	6,465.61	6,316.10	22.30	30.35	107.15	-207.03	1,287.79	1,139.18	1,094.33	44.85	25.402		
6,700.00	6,689.29	6,562.64	6,410.25	22.65	30.88	106.98	-210.84	1,310.95	1,163.17	1,117.59	45.57	25.524		
6,800.00	6,789.29	6,659.67	6,504.39	23.00	31.41	106.83	-214.65	1,334.11	1,187.16	1,140.88	46.30	25.643		
6,900.00	6,889.29	6,756.70	6,598.54	23.35	31.94	106.68	-218.47	1,357.27	1,211.16	1,164.14	47.02	25.757		
7,000.00	6,989.29	6,853.73	6,692.69	23.70	32.47	106.54	-222.28	1,380.44	1,235.17	1,187.42	47.75	25.868		
7,100.00	7,089.29	6,950.75	6,786.84	24.05	33.00	106.40	-226.09	1,403.60	1,259.19	1,210.71	48.47	25.976		
7,200.00	7,189.29	7,047.78	6,880.98	24.40	33.53	106.27	-229.90	1,426.76	1,283.21	1,234.01	49.20	26.081		
7,300.00	7,289.29	7,144.81	6,975.13	24.75	34.06	106.14	-233.72	1,449.92	1,307.24	1,257.31	49.93	26.182		
7,400.00	7,389.29	7,241.84	7,069.28	25.10	34.59	106.02	-237.53	1,473.08	1,331.28	1,280.62	50.66	26.280		
7,500.00	7,489.29	7,338.87	7,163.43	25.45	35.12	105.90	-241.34	1,496.25	1,355.32	1,303.93	51.39	26.375		
7,600.00	7,589.29	7,435.90	7,257.57	25.81	35.65	105.78	-245.15	1,519.41	1,379.36	1,327.25	52.11	26.468		
7,700.00	7,689.29	7,532.93	7,351.72	26.16	36.18	105.67	-248.97	1,542.57	1,403.41	1,350.57	52.84	26.558		
7,800.00	7,789.29	7,629.96	7,445.87	26.51	36.71	105.56	-252.78	1,565.73	1,427.47	1,373.90	53.57	26.646		
7,900.00	7,889.29	7,726.99	7,540.01	26.86	37.24	105.45	-256.59	1,588.89	1,451.53	1,397.23	54.30	26.730		
8,000.00	7,989.29	7,824.02	7,634.16	27.21	37.77	105.36	-260.40	1,612.06	1,475.59	1,420.56	55.03	26.813		
8,100.00	8,089.29	7,921.05	7,728.31	27.57	38.30	105.26	-264.22	1,635.22	1,499.66	1,443.90	55.76	26.894		
8,200.00	8,189.29	8,018.08	7,822.46	27.92	38.83	105.17	-268.03	1,658.38	1,523.74	1,467.24	56.49	26.972		
8,300.00	8,289.29	8,115.11	7,916.60	28.27	39.36	105.08	-271.84	1,681.54	1,547.81	1,490.59	57.22	27.048		
8,400.00	8,389.29	8,212.14	8,010.75	28.62	39.89	104.99	-275.65	1,704.70	1,571.89	1,513.94	57.96	27.122		
8,500.00	8,489.29	8,309.17	8,104.90	28.98	40.42	104.89	-280.20	1,732.32	1,595.63	1,536.80	58.69	27.193		
8,600.00	8,589.29	8,406.20	8,200.05	29.33	40.95	104.79	-284.99	1,761.42	1,617.32	1,557.52	59.40	27.267		
8,700.00	8,689.29	8,503.23	8,296.20	29.68	41.48	104.70	-289.31	1,787.67	1,636.69	1,575.95	60.11	27.338		
8,800.00	8,789.29	8,600.26	8,392.35	30.04	42.01	104.62	-293.14	1,810.98	1,653.73	1,592.07	61.65	27.823		
8,900.00	8,889.29	8,697.29	8,488.50	30.39	42.54	104.55	-296.47	1,831.15	1,668.38	1,605.85	62.53	26.679		
9,000.00	8,989.29	8,794.32	8,584.65	30.74	43.07	104.50	-299.28	1,848.14	1,680.63	1,617.25	63.39	26.515		
9,100.00	9,089.29	8,891.35	8,680.80	31.10	43.60	104.48	-301.52	1,861.84	1,690.46	1,626.26	64.20	26.332		
9,200.00	9,189.29	8,988.38	8,777.00	31.45	44.13	104.43	-303.22	1,872.18	1,697.85	1,632.87	64.98	26.130		
9,300.00	9,289.29	9,085.41	8,873.15	31.80	44.66	104.41	-304.36	1,879.10	1,702.78	1,637.06	65.72	25.911		
9,400.00	9,389.29	9,182.44	8,969.30	32.16	45.19	104.40	-304.93	1,882.57	1,705.24	1,638.82	66.42	25.674		
9,500.00	9,489.29	9,279.47	9,065.45	32.51	45.71	104.39	-305.00	1,883.00	1,705.54	1,638.47	67.07	25.429		
9,500.85	9,490.14	9,280.32	9,066.30	32.51	45.71	104.39	-305.00	1,883.00	1,705.54	1,638.47	67.07	25.428		
9,600.00	9,589.29	9,376.50	9,161.45	32.87	46.24	104.40	-305.29	1,883.00	1,705.67	1,638.09	67.58	25.239		
9,700.00	9,689.29	9,472.68	9,257.60	33.22	46.77	104.56	-310.08	1,883.02	1,707.76	1,639.68	68.08	25.065		
9,800.00	9,789.29	9,568.86	9,353.75	33.57	47.30	104.84	-318.87	1,883.07	1,712.45	1,643.88	68.57	24.975		
9,900.00	9,889.29	9,665.04	9,449.90	33.93	47.83	105.27	-331.92	1,883.13	1,719.89	1,650.88	69.01	24.921		
10,000.00	9,989.29	9,761.22	9,546.05	34.28	48.36	105.82	-349.13	1,883.21	1,730.25	1,660.84	69.41	24.826		

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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		Hightside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/S (usft)	+E/W (usft)						
10,100.00	10,089.29	10,050.00	9,822.84	34.64	45.94	106.50	-370.35	1,883.32	1,743.73	1,673.96	69.77	24.992		
10,200.00	10,189.29	10,100.00	9,866.07	34.99	46.00	107.29	-395.45	1,883.44	1,760.59	1,690.51	70.08	25.122		
10,300.00	10,289.29	10,134.44	9,894.50	35.35	46.04	107.90	-414.88	1,883.53	1,780.94	1,710.63	70.31	25.330		
10,400.00	10,389.29	10,169.95	9,922.54	35.70	46.10	108.58	-436.67	1,883.64	1,804.95	1,734.48	70.47	25.614		
10,500.00	10,489.29	10,200.00	9,945.17	36.06	46.15	109.20	-456.43	1,883.73	1,832.68	1,762.14	70.53	25.983		
10,600.00	10,589.29	10,231.33	9,967.63	36.41	46.21	109.87	-478.27	1,883.84	1,854.15	1,793.61	70.54	26.427		
10,700.00	10,689.29	10,250.00	9,980.43	36.77	46.24	110.28	-491.86	1,883.90	1,899.40	1,828.98	70.42	26.972		
10,800.00	10,789.29	10,281.67	10,001.12	37.12	46.31	111.01	-515.83	1,884.02	1,938.22	1,867.91	70.31	27.567		
10,900.00	10,889.29	10,300.00	10,012.47	37.48	46.35	111.44	-530.22	1,884.09	1,980.66	1,910.58	70.08	28.265		
11,000.00	10,989.29	10,323.10	10,028.12	37.83	46.40	112.00	-548.66	1,884.18	2,026.51	1,956.68	69.83	29.022		
11,100.00	11,089.29	10,350.00	10,041.04	38.19	46.47	112.66	-571.23	1,884.28	2,075.71	2,006.15	69.57	29.837		
11,167.81	11,157.10	10,350.00	10,041.04	38.43	46.47	112.66	-571.23	1,884.28	2,110.77	2,041.50	69.27	30.472		
11,260.00	11,189.27	10,350.00	10,041.04	38.49	46.47	-65.25	-571.23	1,884.28	2,127.68	2,058.58	69.08	30.800		
11,250.00	11,239.01	10,366.57	10,049.71	38.49	46.51	-62.22	-585.35	1,884.35	2,153.08	2,084.28	68.80	31.295		
11,300.00	11,288.12	10,376.07	10,054.49	38.49	46.54	-59.58	-593.58	1,884.39	2,177.53	2,109.07	68.46	31.806		
11,350.00	11,335.24	10,400.00	10,065.93	38.49	46.60	-56.93	-614.58	1,884.49	2,200.92	2,132.72	68.21	32.269		
11,400.00	11,382.99	10,400.00	10,065.93	38.49	46.60	-54.94	-614.58	1,884.49	2,222.64	2,154.83	67.81	32.779		
11,450.00	11,429.62	10,400.00	10,065.93	38.50	46.60	-53.13	-614.58	1,884.49	2,243.01	2,175.60	67.41	33.272		
11,500.00	11,470.99	10,419.05	10,074.41	38.51	46.66	-51.31	-631.64	1,884.58	2,261.62	2,194.47	67.14	33.683		
11,550.00	11,511.57	10,430.76	10,079.33	38.52	46.69	-49.81	-642.25	1,884.63	2,278.48	2,211.63	66.85	34.085		
11,600.00	11,549.46	10,450.00	10,086.95	38.54	46.75	-48.48	-659.92	1,884.71	2,293.46	2,226.85	66.81	34.431		
11,650.00	11,584.35	10,450.00	10,086.95	38.58	46.75	-47.47	-659.92	1,884.71	2,306.37	2,240.07	66.30	34.786		
11,700.00	11,616.00	10,467.39	10,093.32	38.59	46.80	-46.56	-676.10	1,884.79	2,317.19	2,251.07	66.12	35.046		
11,750.00	11,644.15	10,479.97	10,097.63	38.63	46.84	-45.86	-687.92	1,884.85	2,325.87	2,259.92	65.95	35.268		
11,800.00	11,668.60	10,500.00	10,103.94	38.68	46.91	-45.34	-706.93	1,884.94	2,332.37	2,266.52	65.85	35.417		
11,850.00	11,689.15	10,500.00	10,103.94	38.75	46.91	-45.04	-708.93	1,884.94	2,336.55	2,270.82	65.72	35.551		
11,900.00	11,705.66	10,518.29	10,109.12	38.83	46.97	-44.88	-724.47	1,885.02	2,338.44	2,272.72	65.73	35.579		
11,950.00	11,717.99	10,531.13	10,112.42	38.94	47.01	-44.91	-736.88	1,885.08	2,338.06	2,272.30	65.76	35.555		
12,000.00	11,726.05	10,550.00	10,116.76	39.07	47.07	-45.13	-755.24	1,885.17	2,335.42	2,269.55	65.87	35.456		
12,050.00	11,729.78	10,550.00	10,116.76	39.21	47.07	-45.48	-755.24	1,885.17	2,330.48	2,264.49	65.98	35.319		
12,067.82	11,730.06	10,550.00	10,116.76	39.27	47.07	-45.64	-755.24	1,885.17	2,328.23	2,262.19	66.04	35.253		
12,100.00	11,730.06	10,563.42	10,120.60	39.38	47.14	-45.71	-774.28	1,885.26	2,323.87	2,257.66	66.21	35.098		
12,200.00	11,730.06	10,600.00	10,125.33	39.77	47.25	-45.80	-804.49	1,885.41	2,312.73	2,246.00	66.72	34.662		
12,300.00	11,730.06	10,621.14	10,127.65	40.23	47.33	-45.84	-825.50	1,885.51	2,304.72	2,237.38	67.34	34.227		
12,400.00	11,730.05	10,650.00	10,129.57	40.75	47.45	-45.87	-854.29	1,885.65	2,299.93	2,231.87	68.07	33.790		
12,497.39	11,730.05	10,676.09	10,130.06	41.32	47.55	-45.88	-875.54	1,885.75	2,298.33	2,229.44	68.89	33.361		
12,500.00	11,730.05	10,673.87	10,130.06	41.34	47.54	-45.88	-878.15	1,885.77	2,298.33	2,229.44	68.90	33.360		
12,600.00	11,730.05	10,773.87	10,130.06	41.98	47.96	-45.88	-978.15	1,886.25	2,298.33	2,228.55	69.78	32.937		
12,700.00	11,730.05	10,873.87	10,130.06	42.68	48.43	-45.88	-1,078.15	1,886.73	2,298.34	2,227.59	70.75	32.487		
12,800.00	11,730.05	10,973.87	10,130.05	43.44	48.94	-45.88	-1,178.15	1,887.21	2,298.34	2,226.54	71.80	32.011		
12,900.00	11,730.05	11,073.87	10,130.05	44.24	49.50	-45.88	-1,278.15	1,887.70	2,298.34	2,225.41	72.93	31.514		
13,000.00	11,730.05	11,173.87	10,130.05	45.10	50.11	-45.88	-1,378.15	1,888.18	2,298.34	2,224.20	74.14	31.001		
13,100.00	11,730.04	11,273.87	10,130.05	45.99	50.76	-45.88	-1,478.14	1,888.66	2,298.34	2,222.92	75.42	30.474		
13,200.00	11,730.04	11,373.87	10,130.05	46.93	51.46	-45.88	-1,578.14	1,889.14	2,298.34	2,221.57	76.77	29.938		
13,300.00	11,730.04	11,473.87	10,130.05	47.91	52.20	-45.88	-1,678.14	1,889.63	2,298.34	2,220.16	78.19	29.396		
13,400.00	11,730.04	11,573.87	10,130.04	48.93	52.99	-45.88	-1,778.14	1,890.11	2,298.35	2,218.68	79.66	28.850		
13,500.00	11,730.04	11,673.87	10,130.04	49.98	53.82	-45.88	-1,878.14	1,890.59	2,298.35	2,217.15	81.20	28.304		
13,600.00	11,730.04	11,773.87	10,130.04	51.07	54.70	-45.88	-1,978.14	1,891.07	2,298.35	2,215.55	82.79	27.760		
13,700.00	11,730.04	11,873.87	10,130.04	52.19	55.61	-45.88	-2,078.14	1,891.56	2,298.35	2,213.91	84.44	27.219		
13,800.00	11,730.04	11,973.87	10,130.04	53.33	56.56	-45.88	-2,178.14	1,892.04	2,298.35	2,212.22	86.13	26.683		
13,900.00	11,730.03	12,073.87	10,130.04	54.50	57.55	-45.88	-2,278.13	1,892.52	2,298.35	2,210.48	87.88	26.155		
14,000.00	11,730.03	12,173.87	10,130.04	55.70	58.57	-45.88	-2,378.13	1,893.00	2,298.36	2,208.70	89.66	25.634		

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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:
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 9771-MWD - OWSG													Offset Well Error:
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre ±N/S (usft)	±E/W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	11,730.03	12,273.87	10,130.03	58.92	59.63	-45.88	-2,478.13	1,893.49	2,298.36	2,206.87	91.49	25.122	
14,200.00	11,730.03	12,373.87	10,130.03	58.17	60.72	-45.88	-2,578.13	1,893.97	2,298.36	2,205.01	93.35	24.821	
14,300.00	11,730.03	12,473.87	10,130.03	59.43	61.83	-45.88	-2,678.13	1,894.45	2,298.36	2,203.11	95.25	24.129	
14,400.00	11,730.03	12,573.87	10,130.03	60.72	62.88	-45.88	-2,778.13	1,894.93	2,298.36	2,201.17	97.19	23.849	
14,500.00	11,730.03	12,673.87	10,130.03	62.02	64.15	-45.88	-2,878.13	1,895.42	2,298.36	2,199.21	99.16	23.179	
14,600.00	11,730.02	12,773.87	10,130.03	63.34	65.34	-45.88	-2,878.13	1,895.90	2,298.36	2,197.21	101.16	22.721	
14,700.00	11,730.02	12,873.87	10,130.03	64.68	66.56	-45.88	-3,078.13	1,896.38	2,298.37	2,195.18	103.18	22.275	
14,800.00	11,730.02	12,973.87	10,130.02	66.03	67.79	-45.88	-3,178.12	1,896.86	2,298.37	2,193.13	105.24	21.840	
14,900.00	11,730.02	13,073.87	10,130.02	67.40	69.05	-45.88	-3,278.12	1,897.35	2,298.37	2,191.05	107.32	21.417	
15,000.00	11,730.02	13,173.87	10,130.02	68.78	70.33	-45.88	-3,378.12	1,897.83	2,298.37	2,188.95	109.42	21.005	
15,100.00	11,730.02	13,273.87	10,130.02	70.17	71.63	-45.88	-3,478.12	1,898.31	2,298.37	2,186.82	111.55	20.604	
15,200.00	11,730.02	13,373.87	10,130.02	71.57	72.94	-45.88	-3,578.12	1,898.79	2,298.37	2,184.68	113.70	20.215	
15,300.00	11,730.02	13,473.87	10,130.02	72.99	74.26	-45.88	-3,678.12	1,899.28	2,298.38	2,182.51	115.87	19.837	
15,400.00	11,730.01	13,573.87	10,130.02	74.41	75.61	-45.88	-3,778.12	1,899.76	2,298.38	2,180.32	118.05	19.469	
15,500.00	11,730.01	13,673.87	10,130.01	75.85	76.96	-45.88	-3,878.12	1,900.24	2,298.38	2,178.12	120.26	19.112	
15,600.00	11,730.01	13,773.87	10,130.01	77.30	78.33	-45.88	-3,978.11	1,900.73	2,298.38	2,175.90	122.48	18.765	
15,700.00	11,730.01	13,873.87	10,130.01	78.75	79.72	-45.88	-4,078.11	1,901.21	2,298.38	2,173.68	124.72	18.428	
15,800.00	11,730.01	13,973.87	10,130.01	80.21	81.11	-45.88	-4,178.11	1,901.69	2,298.38	2,171.41	126.97	18.101	
15,900.00	11,730.01	14,073.87	10,130.01	81.69	82.52	-45.88	-4,278.11	1,902.17	2,298.38	2,169.14	129.24	17.783	
16,000.00	11,730.01	14,173.87	10,130.01	83.16	83.93	-45.88	-4,378.11	1,902.66	2,298.39	2,166.86	131.53	17.475	
16,100.00	11,730.01	14,273.87	10,130.01	84.65	85.36	-45.88	-4,478.11	1,903.14	2,298.39	2,164.57	133.82	17.175	
16,200.00	11,730.00	14,373.87	10,130.00	86.14	86.79	-45.88	-4,578.11	1,903.62	2,298.39	2,162.26	136.13	16.884	
16,300.00	11,730.00	14,473.87	10,130.00	87.64	88.23	-45.88	-4,678.11	1,904.10	2,298.39	2,159.94	138.45	16.601	
16,400.00	11,730.00	14,573.87	10,130.00	89.15	89.69	-45.88	-4,778.11	1,904.59	2,298.39	2,157.61	140.78	16.326	
16,498.91	11,730.00	14,662.78	10,130.00	90.49	91.10	-45.88	-4,867.01	1,905.01	2,298.39	2,155.66	142.73	16.103	

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: 233H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 233H
TVD Reference: RIG @ 3691.50usft (GL:3663'+KB:28.5')
MD Reference: RIG @ 3691.50usft (GL:3663'+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 - 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	2.00	-2.00	0.00	0.00	90.00	0.00	60.00	60.00				
100.00	100.00	102.00	98.00	0.13	0.14	90.00	0.00	60.00	60.00	59.74	0.28	227.724	
200.00	200.00	202.00	198.00	0.49	0.49	90.00	0.00	60.00	60.00	59.02	0.98	61.198	
300.00	300.00	302.00	298.00	0.85	0.85	90.00	0.00	60.00	60.00	58.30	1.70	35.349	
400.00	400.00	402.00	398.00	1.20	1.21	90.00	0.00	60.00	60.00	57.59	2.41	24.852	
500.00	500.00	498.00	498.00	1.39	1.55	90.00	0.00	60.00	60.00	57.05	2.95	20.344 CC	
600.00	599.99	596.98	596.98	1.48	1.74	27.67	-0.04	60.82	60.05	58.83	3.23	18.608 ES	
700.00	699.96	695.94	695.90	1.65	1.82	28.91	-0.17	63.35	60.30	56.84	3.46	17.409	
800.00	799.88	794.87	794.74	1.87	1.98	30.96	-0.37	67.58	60.81	56.99	3.81	15.944	
900.00	899.88	893.76	893.45	2.13	2.15	33.76	-0.67	73.51	61.65	57.40	4.25	14.490	
1,000.00	999.37	992.61	992.00	2.42	2.38	37.23	-1.04	81.14	62.96	59.20	4.76	13.214	
1,100.00	1,098.99	1,091.40	1,090.35	2.74	2.65	40.77	-1.50	90.46	65.53	60.20	5.33	12.302	
1,200.00	1,198.60	1,190.10	1,188.44	3.07	2.95	43.69	-2.05	101.46	70.00	64.08	5.93	11.810	
1,300.00	1,298.22	1,288.65	1,286.16	3.42	3.29	45.90	-2.67	114.13	76.29	69.73	6.56	11.636	
1,400.00	1,397.84	1,386.99	1,383.45	3.77	3.64	47.41	-3.38	128.44	84.31	77.10	7.21	11.999	
1,500.00	1,497.45	1,485.06	1,480.21	4.12	4.01	48.33	-4.17	144.37	93.99	86.12	7.87	11.941	
1,600.00	1,597.08	1,582.81	1,576.37	4.49	4.41	48.77	-5.03	161.89	105.30	96.75	8.55	12.320	
1,700.00	1,696.70	1,680.17	1,671.85	4.85	4.82	48.86	-5.98	180.97	118.21	108.98	9.23	12.806	
1,800.00	1,796.32	1,778.80	1,768.32	5.22	5.26	48.77	-6.99	201.42	132.21	122.27	9.94	13.304	
1,900.00	1,895.94	1,877.81	1,865.17	5.59	5.71	48.69	-8.00	221.88	146.24	135.58	10.66	13.724	
2,000.00	1,895.56	1,876.82	1,862.02	5.96	6.17	48.63	-9.02	242.54	160.27	148.89	11.38	14.083	
2,100.00	2,095.18	2,075.83	2,058.86	6.33	6.63	48.58	-10.03	263.10	174.30	162.19	12.11	14.393	
2,200.00	2,194.80	2,174.84	2,155.71	6.70	7.10	48.53	-11.05	283.66	188.34	175.49	12.84	14.884	
2,300.00	2,294.42	2,273.85	2,252.56	7.08	7.57	48.49	-12.06	304.22	202.37	188.79	13.58	14.901	
2,400.00	2,394.04	2,372.85	2,349.40	7.45	8.04	48.46	-13.08	324.78	216.40	202.08	14.32	15.111	
2,500.00	2,493.66	2,471.87	2,446.25	7.83	8.52	48.43	-14.09	345.34	230.43	215.37	15.06	15.298	
2,600.00	2,593.28	2,570.88	2,543.10	8.21	8.99	48.40	-15.11	365.90	244.46	228.66	15.81	15.465	
2,700.00	2,692.90	2,669.83	2,639.94	8.58	9.47	48.38	-16.13	386.46	258.50	241.94	16.55	15.616	
2,800.00	2,792.52	2,768.93	2,736.79	8.96	9.95	48.35	-17.14	407.02	272.53	255.23	17.30	15.752	
2,900.00	2,892.14	2,867.91	2,833.64	9.34	10.44	48.33	-18.16	427.58	286.56	268.51	18.05	15.876	
3,000.00	2,891.76	2,866.92	2,830.49	9.72	10.92	48.32	-19.17	448.14	300.59	281.79	18.80	15.988	
3,100.00	3,091.37	3,065.83	3,027.33	10.10	11.40	48.30	-20.19	468.70	314.63	295.07	19.55	16.091	
3,200.00	3,190.99	3,164.95	3,124.18	10.48	11.89	48.29	-21.20	489.26	328.66	308.35	20.31	16.186	
3,300.00	3,290.61	3,263.96	3,221.03	10.86	12.38	48.27	-22.22	509.82	342.69	321.63	21.06	16.273	
3,400.00	3,390.23	3,362.97	3,317.87	11.24	12.86	48.26	-23.24	530.38	356.72	334.91	21.81	16.354	
3,481.13	3,471.05	3,443.29	3,396.44	11.54	13.26	48.25	-24.05	547.06	368.11	345.68	22.42	16.415	
3,500.00	3,489.86	3,461.97	3,414.72	11.62	13.35	48.27	-24.25	550.94	370.78	348.21	22.57	16.430	
3,600.00	3,589.57	3,560.86	3,511.45	11.99	13.84	48.23	-25.27	571.48	385.60	362.29	23.31	16.539	
3,700.00	3,689.40	3,659.55	3,607.98	12.36	14.32	48.03	-26.28	591.97	401.58	377.53	24.05	16.699	
3,800.00	3,789.32	3,758.01	3,704.29	12.71	14.81	47.88	-27.29	612.42	418.73	393.88	24.77	16.904	
3,900.00	3,889.29	3,856.21	3,800.34	13.06	15.30	47.21	-28.29	632.81	437.08	411.60	25.48	17.153	
3,981.13	3,970.42	3,935.67	3,878.08	13.33	15.89	109.50	-29.11	649.31	452.86	426.81	26.05	17.386	
4,000.00	3,989.29	3,954.13	3,896.12	13.40	15.78	109.36	-29.30	653.14	456.63	430.45	26.18	17.444	
4,100.00	4,089.29	4,051.94	3,991.79	13.73	16.26	108.65	-30.30	673.45	476.63	449.76	26.87	17.740	
4,200.00	4,189.29	4,149.76	4,087.47	14.06	16.75	107.89	-31.31	693.77	496.70	469.14	27.56	18.022	
4,300.00	4,289.29	4,247.57	4,183.15	14.40	17.23	107.39	-32.31	714.08	516.82	488.57	28.26	18.291	
4,400.00	4,389.29	4,345.39	4,278.82	14.73	17.72	106.83	-33.31	734.39	537.00	508.04	28.95	18.547	
4,500.00	4,489.29	4,443.20	4,374.50	15.07	18.20	106.32	-34.32	754.70	557.22	527.56	29.65	18.791	
4,600.00	4,589.29	4,541.02	4,470.18	15.41	18.69	105.84	-35.32	775.01	577.48	547.12	30.36	19.024	
4,700.00	4,689.29	4,638.83	4,565.86	15.75	19.17	105.39	-36.32	795.33	597.77	566.71	31.06	19.246	
4,800.00	4,789.29	4,736.65	4,661.53	16.09	19.66	104.97	-37.33	815.64	618.10	586.34	31.77	19.459	
4,900.00	4,889.29	4,834.46	4,757.21	16.43	20.14	104.58	-38.33	835.95	638.46	605.99	32.47	19.662	

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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: O-MWD - OWSG, 500-MWD - OWSG, 10943-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	
5,000.00	4,989.29	4,932.27	4,852.89	16.77	20.63	104.21	-39.33	856.26	658.85	625.67	33.18	16.857	
5,100.00	5,089.29	5,030.09	4,948.57	17.11	21.12	103.86	-40.34	876.57	679.26	645.37	33.89	20.043	
5,200.00	5,189.29	5,127.90	5,044.24	17.45	21.60	103.54	-41.34	896.89	699.70	665.10	34.60	20.222	
5,300.00	5,289.29	5,225.72	5,139.92	17.80	22.09	103.23	-42.34	917.20	720.15	684.84	35.31	20.394	
5,400.00	5,389.29	5,323.53	5,235.60	18.14	22.57	102.94	-43.35	937.51	740.62	704.60	36.03	20.558	
5,500.00	5,489.29	5,421.35	5,331.27	18.48	23.06	102.67	-44.35	957.82	761.11	724.37	36.74	20.717	
5,600.00	5,589.29	5,519.16	5,426.95	18.83	23.55	102.41	-45.35	978.13	781.62	744.17	37.45	20.869	
5,700.00	5,689.29	5,616.98	5,522.63	19.17	24.03	102.16	-46.36	998.45	802.14	763.97	38.17	21.016	
5,800.00	5,789.29	5,714.79	5,618.31	19.52	24.52	101.92	-47.36	1,018.76	822.68	783.79	38.89	21.156	
5,900.00	5,889.29	5,812.61	5,713.98	19.87	25.01	101.70	-48.36	1,039.07	843.22	803.62	39.60	21.292	
6,000.00	5,989.29	5,910.42	5,809.66	20.21	25.49	101.49	-49.37	1,059.38	863.78	823.46	40.32	21.423	
6,100.00	6,089.29	6,008.24	5,905.34	20.56	25.98	101.29	-50.37	1,079.69	884.35	843.31	41.04	21.549	
6,200.00	6,189.29	6,106.05	6,001.02	20.91	26.47	101.09	-51.37	1,100.01	904.93	863.17	41.76	21.671	
6,300.00	6,289.29	6,203.87	6,096.69	21.26	26.96	100.91	-52.38	1,120.32	925.52	883.04	42.48	21.789	
6,400.00	6,389.29	6,301.69	6,192.37	21.60	27.44	100.73	-53.38	1,140.63	946.12	902.92	43.20	21.903	
6,500.00	6,489.29	6,399.50	6,288.05	21.95	27.93	100.56	-54.38	1,160.94	966.72	922.81	43.92	22.012	
6,600.00	6,589.29	6,502.69	6,383.72	22.30	28.44	100.40	-55.39	1,181.25	987.34	942.68	44.66	22.108	
6,700.00	6,689.29	6,604.87	6,479.40	22.65	28.95	100.24	-56.39	1,201.57	1,007.96	962.56	45.40	22.203	
6,800.00	6,789.29	6,707.06	6,575.08	23.00	29.46	100.09	-57.39	1,221.88	1,028.59	982.45	46.14	22.295	
6,900.00	6,889.29	6,790.76	6,670.76	23.35	29.88	99.95	-58.40	1,242.19	1,049.22	1,002.42	46.88	22.417	
7,000.00	6,989.29	6,888.57	6,766.43	23.70	30.37	99.81	-59.40	1,262.50	1,069.86	1,022.33	47.53	22.511	
7,100.00	7,089.29	6,986.38	6,862.11	24.05	30.86	99.66	-60.40	1,282.82	1,090.51	1,042.26	48.25	22.601	
7,200.00	7,189.29	7,084.20	6,957.79	24.40	31.34	99.55	-61.41	1,303.13	1,111.16	1,062.19	48.97	22.689	
7,300.00	7,289.29	7,182.01	7,053.47	24.75	31.83	99.43	-62.41	1,323.44	1,131.82	1,082.12	49.70	22.774	
7,400.00	7,389.29	7,279.83	7,149.14	25.10	32.32	99.31	-63.41	1,343.75	1,152.48	1,102.06	50.42	22.857	
7,500.00	7,489.29	7,377.64	7,244.82	25.45	32.81	99.20	-64.42	1,364.06	1,173.14	1,122.00	51.15	22.937	
7,600.00	7,589.29	7,475.46	7,340.50	25.81	33.29	99.08	-65.42	1,384.38	1,193.81	1,141.94	51.87	23.015	
7,700.00	7,689.29	7,573.27	7,436.17	26.16	33.78	98.98	-66.42	1,404.69	1,214.49	1,161.89	52.60	23.091	
7,800.00	7,789.29	7,671.09	7,531.85	26.51	34.27	98.87	-67.43	1,425.00	1,235.17	1,181.85	53.32	23.164	
7,900.00	7,889.29	7,768.90	7,627.53	26.86	34.76	98.77	-68.43	1,445.31	1,255.85	1,201.80	54.05	23.236	
8,000.00	7,989.29	7,866.72	7,723.21	27.21	35.25	98.66	-69.43	1,465.62	1,276.54	1,221.76	54.77	23.305	
8,100.00	8,089.29	7,964.53	7,818.88	27.57	35.73	98.56	-70.44	1,485.94	1,297.22	1,241.72	55.50	23.373	
8,200.00	8,189.29	8,062.35	7,914.56	27.92	36.22	98.49	-71.44	1,506.25	1,317.92	1,261.69	56.23	23.439	
8,300.00	8,289.29	8,160.16	8,010.24	28.27	36.71	98.41	-72.44	1,526.56	1,338.61	1,281.66	56.95	23.503	
8,400.00	8,389.29	8,257.98	8,105.92	28.62	37.20	98.32	-73.45	1,546.87	1,359.31	1,301.63	57.68	23.568	
8,500.00	8,489.29	8,355.79	8,201.59	28.98	37.69	98.24	-74.45	1,567.18	1,380.01	1,321.60	58.41	23.627	
8,600.00	8,589.29	8,453.61	8,297.27	29.33	38.17	98.16	-75.45	1,587.50	1,400.72	1,341.58	59.14	23.686	
8,700.00	8,689.29	8,551.42	8,392.95	29.68	38.66	98.08	-76.46	1,607.81	1,421.42	1,361.56	59.86	23.744	
8,800.00	8,789.29	8,649.24	8,488.62	30.04	39.15	98.00	-77.46	1,628.12	1,442.13	1,381.54	60.59	23.800	
8,900.00	8,889.29	8,747.05	8,584.30	30.39	39.64	97.93	-78.46	1,648.43	1,462.84	1,401.52	61.32	23.855	
9,000.00	8,989.29	8,844.87	8,679.98	30.74	40.13	97.86	-79.47	1,668.74	1,483.56	1,421.51	62.05	23.908	
9,100.00	9,089.29	8,942.68	8,775.66	31.10	40.61	97.79	-80.47	1,689.06	1,504.27	1,441.49	62.78	23.962	
9,200.00	9,189.29	9,040.49	8,871.33	31.45	41.10	97.72	-81.47	1,709.37	1,524.99	1,461.48	63.51	24.013	
9,300.00	9,289.29	9,138.31	8,967.01	31.80	41.59	97.66	-82.48	1,729.68	1,545.71	1,481.47	64.24	24.063	
9,400.00	9,389.29	9,236.12	9,062.69	32.16	42.08	97.59	-83.48	1,749.99	1,566.43	1,501.46	64.97	24.111	
9,500.00	9,489.29	9,333.94	9,158.37	32.51	42.58	97.52	-84.49	1,770.29	1,587.15	1,521.45	65.69	24.159	
9,600.00	9,589.29	9,431.75	9,254.05	32.87	43.07	97.44	-85.49	1,790.59	1,607.87	1,541.44	66.42	24.207	
9,700.00	9,689.29	9,529.56	9,349.73	33.22	43.56	97.38	-86.49	1,810.89	1,628.59	1,561.43	67.15	24.254	
9,800.00	9,789.29	9,627.37	9,445.41	33.57	44.05	97.33	-87.49	1,831.19	1,649.31	1,581.42	67.88	24.301	
9,900.00	9,889.29	9,725.18	9,541.09	33.93	44.54	97.29	-88.49	1,851.49	1,670.03	1,601.41	68.61	24.348	
10,000.00	9,989.29	9,822.99	9,636.77	34.28	45.03	97.26	-89.49	1,871.79	1,690.75	1,621.40	69.34	24.394	
10,100.00	10,089.29	9,920.80	9,732.45	34.64	45.52	97.23	-90.49	1,892.09	1,711.47	1,641.39	70.07	24.441	

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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: O-MWD - OWSG, 500-MWD - OWSG, 10943-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		
10,200.00	10,189.29	10,329.72	10,148.81	34.99	46.40	97.22	-89.92	1,880.29	1,662.97	1,591.20	71.77	23.171		
10,300.00	10,289.29	10,470.46	10,287.53	35.35	46.79	97.21	-90.00	1,882.00	1,664.18	1,591.71	72.46	22.965		
10,307.19	10,288.48	10,480.57	10,297.65	35.37	46.82	97.21	-90.00	1,881.99	1,664.17	1,591.66	72.51	22.950		
10,400.00	10,389.29	10,570.21	10,387.29	35.70	47.05	97.21	-90.00	1,882.00	1,664.18	1,591.04	73.13	22.756		
10,500.00	10,489.29	10,670.21	10,487.29	36.06	47.31	97.21	-90.00	1,882.00	1,664.18	1,590.38	73.80	22.550		
10,600.00	10,589.29	10,770.21	10,587.29	36.41	47.57	97.21	-90.00	1,882.00	1,664.18	1,589.71	74.47	22.347		
10,700.00	10,689.29	10,870.21	10,687.29	36.77	47.83	97.21	-90.00	1,882.00	1,664.18	1,589.04	75.14	22.148		
10,708.24	10,697.53	10,878.45	10,695.53	36.80	47.85	97.21	-90.00	1,882.00	1,664.18	1,588.58	75.20	22.131		
10,800.00	10,789.29	10,964.66	10,781.74	37.12	47.97	97.22	-90.19	1,882.00	1,664.21	1,588.52	75.69	21.987		
10,900.00	10,889.29	11,036.54	10,883.29	37.48	47.88	97.44	-96.52	1,882.03	1,665.39	1,589.24	76.14	21.872		
11,000.00	10,989.29	11,105.78	10,920.55	37.83	47.99	97.93	-111.04	1,882.10	1,668.37	1,591.78	76.59	21.783		
11,100.00	11,089.29	11,170.67	10,982.34	38.19	48.02	98.64	-131.96	1,882.20	1,673.46	1,596.43	77.03	21.724		
11,167.81	11,157.10	11,211.62	11,019.71	38.43	48.04	99.21	-148.69	1,882.28	1,678.31	1,600.99	77.32	21.706		
11,200.00	11,189.27	11,230.39	11,036.41	38.49	48.05	-79.99	-157.24	1,882.32	1,680.90	1,603.50	77.40	21.717		
11,250.00	11,239.01	11,259.39	11,061.65	38.49	48.07	-79.20	-171.51	1,882.39	1,684.86	1,607.45	77.42	21.764		
11,300.00	11,288.12	11,288.22	11,086.00	38.49	48.08	-78.47	-186.95	1,882.47	1,688.70	1,611.28	77.42	21.813		
11,350.00	11,338.24	11,316.91	11,109.42	38.49	48.11	-77.80	-203.50	1,882.55	1,692.34	1,614.93	77.40	21.864		
11,400.00	11,382.99	11,350.00	11,135.37	38.49	48.14	-77.14	-224.03	1,882.65	1,695.73	1,618.35	77.38	21.914		
11,450.00	11,428.02	11,373.94	11,153.39	38.50	48.17	-76.63	-239.80	1,882.72	1,698.81	1,621.45	77.35	21.962		
11,500.00	11,470.99	11,400.00	11,172.23	38.51	48.20	-76.17	-257.80	1,882.81	1,701.54	1,624.22	77.32	22.007		
11,550.00	11,511.57	11,430.63	11,193.30	38.52	48.24	-75.75	-280.02	1,882.92	1,703.88	1,626.58	77.29	22.044		
11,600.00	11,549.46	11,458.88	11,211.65	38.54	48.27	-75.43	-301.50	1,883.02	1,705.79	1,628.51	77.28	22.073		
11,650.00	11,584.25	11,487.08	11,228.91	38.56	48.31	-75.18	-323.81	1,883.13	1,707.26	1,629.98	77.28	22.092		
11,700.00	11,618.00	11,515.27	11,245.02	38.59	48.36	-75.02	-346.93	1,883.24	1,709.24	1,630.94	77.30	22.098		
11,750.00	11,644.15	11,550.00	11,263.29	38.63	48.42	-74.93	-376.48	1,883.38	1,708.77	1,631.40	77.36	22.087		
11,800.00	11,668.60	11,571.59	11,273.73	38.68	48.46	-74.93	-395.35	1,883.47	1,708.75	1,631.31	77.44	22.064		
11,850.00	11,699.15	11,600.00	11,286.37	38.75	48.51	-75.01	-420.79	1,883.59	1,709.27	1,630.70	77.57	22.023		
11,900.00	11,705.66	11,627.93	11,297.55	38.83	48.57	-75.18	-446.38	1,883.72	1,707.29	1,629.55	77.74	21.962		
11,950.00	11,717.99	11,650.00	11,305.50	38.94	48.61	-75.36	-466.97	1,883.82	1,705.85	1,627.92	77.95	21.885		
12,000.00	11,728.05	11,684.39	11,316.28	39.07	48.68	-75.74	-499.62	1,883.97	1,703.94	1,625.73	78.21	21.786		
12,050.00	11,729.78	11,712.70	11,323.68	39.21	48.76	-76.14	-526.94	1,884.11	1,701.61	1,623.10	78.52	21.672		
12,067.82	11,730.06	11,722.80	11,325.99	39.27	48.78	-76.31	-536.78	1,884.15	1,700.89	1,622.05	78.64	21.628		
12,100.00	11,730.05	11,741.19	11,329.75	39.38	48.83	-76.43	-554.77	1,884.24	1,699.10	1,620.24	78.86	21.546		
12,200.00	11,730.06	11,800.00	11,337.88	39.77	48.99	-76.70	-612.99	1,884.52	1,695.85	1,616.21	79.63	21.296		
12,279.78	11,730.06	11,855.02	11,340.06	40.13	49.15	-76.77	-657.97	1,884.74	1,694.99	1,614.61	80.38	21.088		
12,300.00	11,730.06	11,865.25	11,340.06	40.23	49.18	-76.77	-678.18	1,884.83	1,694.99	1,614.48	80.51	21.053		
12,400.00	11,730.05	11,965.25	11,340.06	40.75	49.50	-76.77	-778.18	1,885.32	1,694.99	1,613.50	81.49	20.799		
12,500.00	11,730.05	12,065.25	11,340.06	41.34	49.87	-76.77	-878.18	1,885.80	1,694.99	1,612.41	82.59	20.524		
12,600.00	11,730.05	12,165.25	11,340.05	41.98	50.28	-76.77	-978.18	1,886.28	1,694.99	1,611.20	83.79	20.229		
12,700.00	11,730.05	12,265.25	11,340.05	42.68	50.74	-76.77	-1,078.18	1,886.76	1,694.99	1,609.89	85.11	19.916		
12,800.00	11,730.05	12,365.25	11,340.05	43.44	51.25	-76.77	-1,178.18	1,887.24	1,694.99	1,608.47	86.53	19.589		
12,900.00	11,730.05	12,465.25	11,340.05	44.24	51.81	-76.77	-1,278.18	1,887.72	1,695.00	1,606.95	88.05	19.251		
13,000.00	11,730.05	12,565.25	11,340.05	45.10	52.42	-76.77	-1,378.18	1,888.21	1,695.00	1,605.34	89.66	18.905		
13,100.00	11,730.04	12,665.25	11,340.05	45.99	53.07	-76.77	-1,478.17	1,888.69	1,695.00	1,603.64	91.38	18.553		
13,200.00	11,730.04	12,765.25	11,340.05	46.93	53.77	-76.77	-1,578.17	1,889.17	1,695.00	1,601.86	93.14	18.198		
13,300.00	11,730.04	12,865.25	11,340.04	47.91	54.52	-76.77	-1,678.17	1,889.65	1,695.00	1,599.99	95.01	17.840		
13,400.00	11,730.04	12,965.25	11,340.04	48.93	55.31	-76.77	-1,778.17	1,890.13	1,695.00	1,598.05	96.95	17.484		
13,500.00	11,730.04	13,065.25	11,340.04	49.98	56.14	-76.77	-1,878.17	1,890.62	1,695.00	1,596.05	98.96	17.129		
13,600.00	11,730.04	13,165.25	11,340.04	51.07	57.01	-76.77	-1,978.17	1,891.10	1,695.00	1,593.97	101.03	16.777		
13,700.00	11,730.04	13,265.25	11,340.04	52.19	57.93	-76.77	-2,078.17	1,891.58	1,695.01	1,591.84	103.17	16.429		
13,800.00	11,730.04	13,365.25	11,340.04	53.33	58.88	-76.77	-2,178.17	1,892.06	1,695.01	1,589.64	105.37	16.087		
13,900.00	11,730.03	13,465.25	11,340.04	54.50	59.86	-76.77	-2,278.17	1,892.54	1,695.01	1,587.39	107.62	15.750		

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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 (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)							
14,000.00	11,730.03	13,565.25	11,340.03	53.70	60.88	-76.77	-2,378.16	1,893.02	1,695.01	1,585.09	109.92	15.421			
14,100.00	11,730.03	13,885.25	11,340.03	56.92	61.93	-76.77	-2,478.16	1,893.51	1,695.01	1,582.74	112.27	15.088			
14,200.00	11,730.03	13,785.25	11,340.03	58.17	63.01	-76.77	-2,578.16	1,893.99	1,695.01	1,580.35	114.86	14.782			
14,300.00	11,730.03	13,865.25	11,340.03	59.43	64.12	-76.77	-2,678.16	1,894.47	1,695.01	1,577.91	117.10	14.475			
14,400.00	11,730.03	13,965.25	11,340.03	60.72	65.26	-76.77	-2,778.16	1,894.95	1,695.01	1,575.43	119.58	14.175			
14,500.00	11,730.03	14,065.25	11,340.03	62.02	66.42	-76.77	-2,878.16	1,895.43	1,695.02	1,572.92	122.10	13.883			
14,600.00	11,730.02	14,165.25	11,340.03	63.34	67.60	-76.77	-2,978.16	1,895.91	1,695.02	1,570.37	124.65	13.599			
14,700.00	11,730.02	14,265.25	11,340.02	64.68	68.81	-76.77	-3,078.16	1,896.40	1,695.02	1,567.79	127.23	13.322			
14,800.00	11,730.02	14,365.25	11,340.02	66.03	70.04	-76.77	-3,178.15	1,896.88	1,695.02	1,565.17	129.85	13.054			
14,900.00	11,730.02	14,465.25	11,340.02	67.40	71.28	-76.77	-3,278.15	1,897.36	1,695.02	1,562.53	132.49	12.784			
15,000.00	11,730.02	14,565.25	11,340.02	68.78	72.55	-76.77	-3,378.15	1,897.84	1,695.02	1,559.86	135.16	12.541			
15,100.00	11,730.02	14,665.25	11,340.02	70.17	73.83	-76.77	-3,478.15	1,898.32	1,695.02	1,557.16	137.86	12.295			
15,200.00	11,730.02	14,765.25	11,340.02	71.57	75.13	-76.77	-3,578.15	1,898.81	1,695.02	1,554.44	140.58	12.057			
15,300.00	11,730.02	14,865.25	11,340.02	72.99	76.44	-76.77	-3,678.15	1,899.29	1,695.02	1,551.70	143.33	11.826			
15,400.00	11,730.01	14,965.25	11,340.02	74.41	77.77	-76.77	-3,778.15	1,899.77	1,695.03	1,548.93	146.09	11.602			
15,500.00	11,730.01	15,065.25	11,340.01	75.85	79.11	-76.77	-3,878.15	1,900.25	1,695.03	1,546.15	148.88	11.385			
15,600.00	11,730.01	15,165.25	11,340.01	77.30	80.47	-76.77	-3,978.15	1,900.73	1,695.03	1,543.34	151.69	11.174			
15,700.00	11,730.01	15,265.25	11,340.01	78.75	81.84	-76.77	-4,078.14	1,901.21	1,695.03	1,540.52	154.51	10.970			
15,800.00	11,730.01	15,365.25	11,340.01	80.21	83.22	-76.77	-4,178.14	1,901.70	1,695.03	1,537.67	157.36	10.772			
15,900.00	11,730.01	15,465.25	11,340.01	81.69	84.61	-76.77	-4,278.14	1,902.18	1,695.03	1,534.82	160.22	10.580			
16,000.00	11,730.01	15,565.25	11,340.01	83.16	86.01	-76.77	-4,378.14	1,902.66	1,695.03	1,531.94	163.09	10.393			
16,100.00	11,730.01	15,665.25	11,340.01	84.65	87.42	-76.77	-4,478.14	1,903.14	1,695.03	1,529.05	165.98	10.212			
16,200.00	11,730.00	15,765.25	11,340.00	86.14	88.85	-76.77	-4,578.14	1,903.62	1,695.04	1,526.15	168.88	10.037			
16,300.00	11,730.00	15,865.25	11,340.00	87.64	90.28	-76.77	-4,678.14	1,904.10	1,695.04	1,523.24	171.80	9.866			
16,400.00	11,730.00	15,965.25	11,340.00	89.15	91.71	-76.77	-4,778.14	1,904.59	1,695.04	1,520.31	174.73	9.701			
16,408.91	11,730.00	16,054.17	11,340.00	90.49	93.00	-76.77	-4,867.05	1,905.01	1,695.04	1,517.70	177.34	9.558 SF			

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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:	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		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	
0.00	0.00	1.00	1.00	0.00	0.00	89.36	1.00	89.00	89.01					
100.00	100.00	101.00	101.00	0.13	0.13	89.36	1.00	89.00	89.01	88.75	0.26	342.471		
200.00	200.00	201.00	201.00	0.49	0.49	89.36	1.00	89.00	89.01	88.03	0.98	91.116		
300.00	300.00	301.00	301.00	0.85	0.85	89.36	1.00	89.00	89.01	87.31	1.69	52.549		
400.00	400.00	401.00	401.00	1.20	1.21	89.36	1.00	89.00	89.01	86.59	2.41	36.921		
500.00	500.00	501.00	501.00	1.39	1.57	89.36	1.00	89.00	89.01	86.05	2.96	30.070 CC		
600.00	599.99	599.46	599.45	1.48	1.75	26.83	1.06	89.86	89.10	85.87	3.23	27.569 ES		
700.00	699.96	697.92	697.88	1.65	1.82	27.48	1.22	92.41	89.36	85.90	3.47	25.767		
800.00	799.88	796.37	796.24	1.87	1.96	28.55	1.50	96.65	89.81	85.99	3.82	23.536		
900.00	899.68	894.80	894.49	2.13	2.15	30.03	1.89	102.57	90.48	86.23	4.26	21.258		
1,000.00	999.37	993.20	992.59	2.42	2.38	31.91	2.39	110.17	91.43	86.67	4.76	19.189		
1,100.00	1,098.99	1,091.57	1,090.52	2.74	2.65	33.85	3.00	119.45	93.45	88.12	5.32	17.553		
1,200.00	1,198.60	1,189.85	1,188.19	3.07	2.95	35.50	3.73	130.39	97.24	91.32	5.92	16.427		
1,300.00	1,298.22	1,288.00	1,285.52	3.42	3.28	36.80	4.55	142.99	102.78	96.23	6.54	15.708		
1,400.00	1,397.84	1,385.96	1,382.44	3.77	3.63	37.74	5.49	157.21	110.01	102.83	7.19	15.308		
1,500.00	1,497.46	1,483.67	1,478.85	4.12	4.00	38.35	6.53	173.05	118.92	111.07	7.84	15.160		
1,600.00	1,597.08	1,581.07	1,574.67	4.49	4.40	38.68	7.68	190.47	129.47	120.96	8.51	15.208		
1,700.00	1,696.70	1,679.98	1,671.76	4.85	4.81	38.84	8.92	209.27	141.12	131.91	9.21	15.328		
1,800.00	1,796.32	1,779.29	1,769.25	5.22	5.24	38.98	10.16	228.18	152.81	142.89	9.91	15.416		
1,900.00	1,895.94	1,878.60	1,866.74	5.59	5.68	39.09	11.41	247.09	164.49	153.87	10.63	15.481		
2,000.00	1,895.56	1,877.92	1,864.23	5.96	6.12	39.19	12.65	266.00	176.18	164.83	11.34	15.531		
2,100.00	2,095.18	2,077.23	2,061.72	6.33	6.57	39.29	13.90	284.90	187.86	175.80	12.07	15.569		
2,200.00	2,194.80	2,176.53	2,159.21	6.70	7.02	39.35	15.15	303.81	199.55	186.76	12.79	15.597		
2,300.00	2,294.42	2,275.86	2,256.70	7.08	7.47	39.42	16.39	322.72	211.24	197.71	13.52	15.619		
2,400.00	2,394.04	2,375.18	2,354.19	7.45	7.92	39.48	17.64	341.63	222.93	208.67	14.26	15.636		
2,500.00	2,493.66	2,474.49	2,451.68	7.83	8.38	39.54	18.88	360.54	234.61	219.62	14.99	15.648		
2,600.00	2,593.28	2,573.81	2,549.17	8.21	8.84	39.59	20.13	379.45	246.30	230.57	15.73	15.658		
2,700.00	2,692.90	2,673.12	2,646.66	8.58	9.30	39.63	21.37	398.36	257.99	241.52	16.47	15.664		
2,800.00	2,792.52	2,772.43	2,744.15	8.96	9.76	39.67	22.62	417.27	269.68	252.47	17.21	15.669		
2,900.00	2,892.14	2,871.75	2,841.64	9.34	10.23	39.71	23.86	436.18	281.37	263.41	17.95	15.673		
3,000.00	2,891.76	2,871.06	2,839.13	9.72	10.69	39.75	25.11	455.09	293.05	274.36	18.70	15.675		
3,100.00	3,091.37	3,070.38	3,036.62	10.10	11.16	39.78	26.35	474.00	304.74	285.30	19.44	15.676		
3,200.00	3,190.99	3,169.69	3,134.11	10.48	11.62	39.81	27.60	492.91	316.43	296.25	20.19	15.676		
3,300.00	3,290.61	3,269.01	3,231.60	10.86	12.09	39.84	28.84	511.81	328.12	307.19	20.93	15.676		
3,400.00	3,390.23	3,368.32	3,329.09	11.24	12.56	39.86	30.09	530.72	339.81	318.13	21.68	15.675		
3,481.13	3,471.05	3,448.89	3,408.18	11.54	12.93	39.88	31.10	546.06	349.29	327.01	22.29	15.674		
3,500.00	3,489.86	3,467.63	3,426.57	11.62	13.02	39.90	31.33	549.63	351.52	329.10	22.43	15.674		
3,600.00	3,589.57	3,566.83	3,523.95	11.99	13.49	39.88	32.58	568.52	364.13	340.96	23.17	15.717		
3,700.00	3,689.40	3,665.84	3,621.14	12.36	13.96	39.70	33.82	587.37	376.06	354.16	23.90	15.819		
3,800.00	3,789.32	3,764.63	3,718.11	12.71	14.42	39.39	35.06	606.18	393.34	368.72	24.62	15.976		
3,900.00	3,889.29	3,863.16	3,814.84	13.06	14.89	38.97	36.29	624.94	409.98	384.64	25.33	16.183		
3,981.13	3,970.42	3,942.80	3,893.11	13.33	15.27	101.29	37.29	640.12	424.49	398.58	25.90	16.388		
4,000.00	3,989.29	3,961.42	3,911.29	13.40	15.35	101.17	37.52	643.65	427.97	401.94	26.03	16.440		
4,100.00	4,089.29	4,059.59	4,007.65	13.73	15.82	100.54	38.75	662.34	446.45	419.73	26.73	16.704		
4,200.00	4,189.29	4,157.75	4,104.01	14.06	16.28	99.96	39.98	681.03	464.99	437.56	27.42	16.956		
4,300.00	4,289.29	4,255.91	4,200.37	14.40	16.75	99.42	41.21	699.72	483.56	455.44	28.12	17.195		
4,400.00	4,389.29	4,354.08	4,296.73	14.73	17.21	98.93	42.45	718.41	502.18	473.35	28.82	17.423		
4,500.00	4,489.29	4,452.24	4,393.09	15.07	17.68	98.47	43.68	737.10	520.82	491.30	29.52	17.840		
4,600.00	4,589.29	4,550.40	4,489.45	15.41	18.14	98.04	44.91	755.79	539.50	509.27	30.23	17.847		
4,700.00	4,689.29	4,648.56	4,585.81	15.75	18.61	97.64	46.14	774.48	558.21	527.27	30.93	18.045		
4,800.00	4,789.29	4,746.73	4,682.17	16.09	19.08	97.26	47.37	793.17	576.93	545.29	31.64	18.234		
4,900.00	4,889.29	4,844.89	4,778.53	16.43	19.54	96.91	48.60	811.86	595.89	563.34	32.35	18.414		

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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	Vertical	Offset	Vertical	Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning
Depth	Depth	Depth	Depth	Depth	Depth	Toolface	Toolface	+N-S	+E-W	Centres	Ellipses	Separation	Factor
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
5,000.00	4,989.29	4,943.05	4,874.89	16.77	20.01	55.58		49.83	830.55	614.46	581.40	33.06	18.587
5,100.00	5,089.29	5,041.21	4,971.24	17.11	20.47	56.27		51.06	849.24	633.25	598.48	33.77	18.753
5,200.00	5,189.29	5,139.38	5,067.60	17.45	20.94	55.98		52.29	867.93	652.06	617.58	34.48	18.911
5,300.00	5,289.29	5,237.54	5,163.96	17.80	21.41	55.70		53.52	886.62	670.88	635.69	35.19	19.063
5,400.00	5,389.29	5,335.70	5,260.32	18.14	21.87	55.44		54.75	905.31	689.72	653.81	35.91	19.209
5,500.00	5,489.29	5,433.86	5,358.68	18.48	22.34	55.20		55.98	924.00	708.57	671.95	36.62	19.350
5,600.00	5,589.29	5,532.03	5,453.04	18.83	22.81	54.96		57.21	942.69	727.43	690.09	37.33	19.484
5,700.00	5,689.29	5,630.19	5,549.40	19.17	23.27	54.74		58.44	961.38	746.30	708.25	38.05	19.614
5,800.00	5,789.29	5,728.35	5,645.78	19.52	23.74	54.53		59.68	980.07	765.19	726.42	38.77	19.739
5,900.00	5,889.29	5,826.52	5,742.12	19.87	24.21	54.33		60.91	998.76	784.08	744.60	39.48	19.859
6,000.00	5,989.29	5,924.68	5,838.48	20.21	24.67	54.14		62.14	1,017.45	802.98	762.78	40.20	19.975
6,100.00	6,089.29	6,022.84	5,934.84	20.56	25.14	53.95		63.37	1,036.14	821.89	780.97	40.92	20.087
6,200.00	6,189.29	6,121.00	6,031.20	20.91	25.61	53.78		64.60	1,054.83	840.81	799.17	41.64	20.194
6,300.00	6,289.29	6,219.17	6,127.55	21.26	26.08	53.61		65.83	1,073.51	859.73	817.38	42.35	20.298
6,400.00	6,389.29	6,317.33	6,223.91	21.60	26.54	53.45		67.06	1,092.20	878.67	835.59	43.07	20.399
6,500.00	6,489.29	6,415.49	6,320.27	21.95	27.01	53.30		68.29	1,110.89	897.60	853.81	43.79	20.496
6,600.00	6,589.29	6,513.65	6,416.63	22.30	27.48	53.15		69.52	1,129.58	916.55	872.03	44.51	20.590
6,700.00	6,689.29	6,611.82	6,512.99	22.65	27.95	53.01		70.75	1,148.27	935.50	890.26	45.23	20.681
6,800.00	6,789.29	6,709.98	6,609.35	23.00	28.41	52.88		71.98	1,166.96	954.45	908.50	45.96	20.769
6,900.00	6,889.29	6,808.14	6,705.71	23.35	28.88	52.75		73.21	1,185.65	973.41	926.73	46.68	20.854
7,000.00	6,989.29	6,906.31	6,802.07	23.70	29.35	52.62		74.44	1,204.34	992.38	944.98	47.40	20.937
7,100.00	7,089.29	7,004.47	6,898.43	24.05	29.82	52.50		75.67	1,223.03	1,011.35	963.22	48.12	21.017
7,200.00	7,189.29	7,102.63	6,994.79	24.40	30.28	52.38		76.90	1,241.72	1,030.32	981.47	48.84	21.094
7,300.00	7,289.29	7,200.79	7,091.15	24.75	30.75	52.27		78.14	1,260.41	1,049.30	999.73	49.57	21.170
7,400.00	7,389.29	7,301.04	7,187.51	25.10	31.23	52.17		79.37	1,279.10	1,068.28	1,017.98	50.30	21.239
7,500.00	7,489.29	7,397.12	7,283.86	25.45	31.69	52.08		80.60	1,297.79	1,087.26	1,036.25	51.01	21.314
7,600.00	7,589.29	7,495.28	7,380.22	25.81	32.15	51.98		81.83	1,316.48	1,106.25	1,054.51	51.74	21.383
7,700.00	7,689.29	7,593.44	7,476.58	26.16	32.62	51.86		83.06	1,335.17	1,125.24	1,072.73	52.51	21.429
7,800.00	7,789.29	7,691.59	7,572.94	26.51	33.17	51.77		84.29	1,353.86	1,144.23	1,090.98	53.25	21.469
7,900.00	7,889.29	7,789.77	7,669.30	26.86	33.56	51.68		85.52	1,372.55	1,163.23	1,109.32	53.91	21.578
8,000.00	7,989.29	7,887.93	7,765.66	27.21	34.03	51.59		86.75	1,391.24	1,182.23	1,127.59	54.63	21.639
8,100.00	8,089.29	7,986.10	7,862.02	27.57	34.49	51.51		87.98	1,409.93	1,201.23	1,145.87	55.36	21.699
8,200.00	8,189.29	8,084.26	7,958.38	27.92	34.96	51.42		89.21	1,428.62	1,220.23	1,164.15	56.08	21.758
8,300.00	8,289.29	8,182.42	8,054.74	28.27	35.43	51.34		90.44	1,447.31	1,239.24	1,182.43	56.81	21.814
8,400.00	8,389.29	8,280.58	8,151.10	28.62	35.90	51.27		91.67	1,466.00	1,258.25	1,200.71	57.53	21.870
8,500.00	8,489.29	8,378.75	8,247.46	28.98	36.37	51.19		92.90	1,484.69	1,277.26	1,219.00	58.26	21.924
8,600.00	8,589.29	8,476.91	8,343.82	29.33	36.83	51.12		94.13	1,503.38	1,296.27	1,237.29	58.99	21.976
8,700.00	8,689.29	8,575.07	8,440.18	29.68	37.30	51.05		95.37	1,522.07	1,315.29	1,255.58	59.71	22.027
8,800.00	8,789.29	8,673.23	8,536.53	30.04	37.77	50.98		96.60	1,540.76	1,334.30	1,273.87	60.44	22.077
8,900.00	8,889.29	8,771.40	8,632.89	30.39	38.24	50.91		97.83	1,559.45	1,353.32	1,292.16	61.16	22.126
9,000.00	8,989.29	8,869.58	8,729.25	30.74	38.71	50.85		99.06	1,578.14	1,372.34	1,310.45	61.89	22.173
9,100.00	9,089.29	8,967.72	8,825.61	31.10	39.17	50.78		100.29	1,596.83	1,391.37	1,328.75	62.62	22.220
9,200.00	9,189.29	9,065.89	8,921.97	31.45	39.64	50.72		101.52	1,615.52	1,410.39	1,347.04	63.35	22.265
9,300.00	9,289.29	9,164.05	9,018.33	31.80	40.11	50.66		102.75	1,634.21	1,429.41	1,365.34	64.07	22.309
9,400.00	9,389.29	9,262.21	9,114.69	32.16	40.58	50.61		103.98	1,652.90	1,448.44	1,383.64	64.80	22.352
9,500.00	9,489.29	9,360.37	9,211.05	32.51	41.05	50.55		105.21	1,671.59	1,467.47	1,401.94	65.53	22.395
9,600.00	9,589.29	9,458.54	9,307.41	32.87	41.52	50.49		106.44	1,690.28	1,486.50	1,420.24	66.26	22.438
9,700.00	9,689.29	9,556.70	9,403.77	33.22	41.98	50.44		107.67	1,708.97	1,505.53	1,438.55	66.98	22.476
9,800.00	9,789.29	9,654.86	9,500.13	33.57	42.45	50.39		108.90	1,727.66	1,524.56	1,456.85	67.71	22.515
9,900.00	9,889.29	9,753.02	9,596.49	33.93	42.92	50.34		110.13	1,746.35	1,543.59	1,475.15	68.44	22.554
10,000.00	9,989.29	9,851.19	9,692.84	34.28	43.39	50.29		111.36	1,765.04	1,562.63	1,493.46	69.17	22.592
10,100.00	10,089.29	9,949.35	9,789.20	34.64	43.86	50.23		112.59	1,783.73	1,581.66	1,511.77	69.90	22.629

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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:	0.00 usft
Survey Program: 0-MWD - CWSG, 500-MWD - CWSG, 11353-MWD - CWSG													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 +H-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,200.00	10,189.29	10,101.15	9,938.79	34.99	44.55	90.17	114.29	1,809.45	1,598.37	1,527.44	70.93	22.533		
10,300.00	10,289.29	10,238.48	10,074.85	35.35	45.13	90.12	115.60	1,829.44	1,612.92	1,541.08	71.84	22.451		
10,400.00	10,389.29	10,376.70	10,211.84	35.70	45.68	90.08	116.71	1,846.27	1,625.10	1,552.38	72.72	22.348		
10,500.00	10,489.29	10,515.67	10,350.14	36.06	46.20	90.05	117.61	1,859.86	1,634.88	1,561.32	73.56	22.224		
10,600.00	10,589.29	10,655.22	10,489.31	36.41	46.69	90.03	118.28	1,870.13	1,642.24	1,567.87	74.37	22.083		
10,700.00	10,689.29	10,795.20	10,629.10	36.77	47.14	90.01	118.74	1,877.04	1,647.17	1,572.04	75.14	21.922		
10,800.00	10,789.29	10,935.42	10,769.28	37.12	47.56	90.00	118.97	1,880.53	1,649.87	1,573.80	75.86	21.745		
10,900.00	10,889.29	11,056.43	10,890.29	37.48	47.89	90.00	119.00	1,881.00	1,650.00	1,573.45	76.55	21.556		
11,000.00	10,989.29	11,156.43	10,990.29	37.83	48.16	90.00	119.00	1,881.00	1,650.00	1,572.78	77.22	21.368		
11,100.00	11,089.29	11,256.43	11,090.29	38.19	48.43	90.00	119.00	1,881.00	1,650.00	1,572.11	77.89	21.183		
11,167.81	11,157.10	11,324.24	11,158.10	38.43	48.58	90.00	119.00	1,881.00	1,650.00	1,571.69	78.31	21.069		
11,200.00	11,189.27	11,356.41	11,190.27	38.48	48.63	-89.76	119.00	1,881.00	1,650.00	1,571.58	78.42	21.040		
11,250.00	11,239.01	11,405.81	11,239.60	38.49	48.62	-89.84	116.59	1,881.01	1,649.99	1,571.57	78.41	21.042		
11,300.00	11,288.12	11,455.47	11,288.78	38.49	48.62	-89.94	109.90	1,881.04	1,649.98	1,571.58	78.41	21.044		
11,334.27	11,321.23	11,489.63	11,322.21	38.49	48.63	-90.00	102.84	1,881.08	1,648.98	1,571.58	78.40	21.046		
11,350.00	11,336.24	11,506.35	11,337.43	38.49	48.63	-90.03	98.93	1,881.10	1,649.98	1,571.59	78.40	21.047		
11,400.00	11,382.99	11,555.46	11,385.14	38.49	48.63	-90.12	83.68	1,881.17	1,649.98	1,571.60	78.38	21.050		
11,450.00	11,428.02	11,605.80	11,431.56	38.50	48.64	-90.21	64.23	1,881.28	1,649.99	1,571.62	78.38	21.052		
11,500.00	11,470.99	11,656.37	11,476.29	38.51	48.64	-90.30	40.67	1,881.38	1,650.00	1,571.63	78.37	21.053		
11,550.00	11,511.57	11,707.18	11,518.95	38.52	48.68	-90.38	13.11	1,881.51	1,650.02	1,571.64	78.38	21.051		
11,600.00	11,549.46	11,758.21	11,559.18	38.54	48.68	-90.47	-18.25	1,881.66	1,650.04	1,571.63	78.41	21.045		
11,650.00	11,584.35	11,809.46	11,596.62	38.56	48.70	-90.55	-53.23	1,881.83	1,650.06	1,571.61	78.45	21.034		
11,700.00	11,616.00	11,860.93	11,630.91	38.59	48.73	-90.62	-91.59	1,882.01	1,650.08	1,571.57	78.51	21.017		
11,750.00	11,644.15	11,912.60	11,661.74	38.63	48.78	-90.70	-133.03	1,882.21	1,650.11	1,571.50	78.61	20.992		
11,800.00	11,668.60	11,964.48	11,688.81	38.68	48.82	-90.76	-177.25	1,882.43	1,650.13	1,571.40	78.73	20.960		
11,850.00	11,689.15	12,016.51	11,711.84	38.75	48.88	-90.82	-223.90	1,882.65	1,650.15	1,571.27	78.89	20.918		
11,900.00	11,705.66	12,068.71	11,730.60	38.83	48.95	-90.88	-272.60	1,882.89	1,650.18	1,571.10	79.08	20.867		
11,950.00	11,717.99	12,121.06	11,744.88	38.94	49.03	-90.92	-322.94	1,883.13	1,650.20	1,570.89	79.31	20.807		
12,000.00	11,728.05	12,173.54	11,754.52	39.07	49.12	-90.96	-374.51	1,883.38	1,650.22	1,570.64	79.58	20.737		
12,050.00	11,729.79	12,226.12	11,759.42	39.21	49.22	-91.00	-426.84	1,883.63	1,650.24	1,570.35	79.88	20.658		
12,067.82	11,730.06	12,244.88	11,760.00	39.27	49.25	-91.00	-445.59	1,883.72	1,650.24	1,570.24	80.00	20.629		
12,100.00	11,730.06	12,277.48	11,760.06	39.38	49.32	-91.01	-478.19	1,883.88	1,650.24	1,570.02	80.22	20.571		
12,200.00	11,730.06	12,377.48	11,760.06	39.77	49.56	-91.01	-578.19	1,884.36	1,650.24	1,569.24	81.01	20.372		
12,300.00	11,730.06	12,477.48	11,760.06	40.23	49.84	-91.01	-678.19	1,884.84	1,650.24	1,568.33	81.92	20.146		
12,400.00	11,730.05	12,577.48	11,760.05	40.75	50.17	-91.01	-778.19	1,885.32	1,650.25	1,567.30	82.95	19.894		
12,500.00	11,730.05	12,677.48	11,760.05	41.34	50.55	-91.01	-878.19	1,885.80	1,650.25	1,566.14	84.10	19.621		
12,600.00	11,730.05	12,777.48	11,760.05	41.98	50.97	-91.01	-978.19	1,886.28	1,650.25	1,564.87	85.37	19.329		
12,700.00	11,730.05	12,877.48	11,760.05	42.68	51.45	-91.01	-1,078.19	1,886.77	1,650.25	1,563.49	86.75	19.022		
12,800.00	11,730.05	12,977.48	11,760.05	43.44	51.98	-91.01	-1,178.19	1,887.25	1,650.25	1,562.01	88.24	18.702		
12,900.00	11,730.05	13,077.48	11,760.05	44.24	52.55	-91.01	-1,278.18	1,887.73	1,650.25	1,560.43	89.82	18.372		
13,000.00	11,730.05	13,177.48	11,760.05	45.10	53.18	-91.01	-1,378.18	1,888.21	1,650.25	1,558.75	91.50	18.035		
13,100.00	11,730.04	13,277.48	11,760.04	45.99	53.85	-91.01	-1,478.18	1,888.69	1,650.25	1,556.98	93.27	17.693		
13,200.00	11,730.04	13,377.48	11,760.04	46.93	54.58	-91.01	-1,578.18	1,889.17	1,650.25	1,555.13	95.13	17.348		
13,300.00	11,730.04	13,477.48	11,760.04	47.91	55.35	-91.01	-1,678.18	1,889.66	1,650.25	1,553.19	97.06	17.002		
13,400.00	11,730.04	13,577.48	11,760.04	48.93	56.16	-91.01	-1,778.18	1,890.14	1,650.26	1,551.19	99.07	16.658		
13,500.00	11,730.04	13,677.48	11,760.04	49.98	57.01	-91.01	-1,878.18	1,890.62	1,650.26	1,549.11	101.15	16.315		
13,600.00	11,730.04	13,777.48	11,760.04	51.07	57.91	-91.01	-1,978.18	1,891.10	1,650.26	1,546.97	103.29	15.976		
13,700.00	11,730.04	13,877.48	11,760.04	52.19	58.84	-91.01	-2,078.18	1,891.58	1,650.26	1,544.76	105.50	15.642		
13,800.00	11,730.04	13,977.48	11,760.04	53.33	59.81	-91.01	-2,178.17	1,892.06	1,650.26	1,542.49	107.77	15.313		
13,900.00	11,730.03	14,077.48	11,760.03	54.50	60.82	-91.01	-2,278.17	1,892.55	1,650.26	1,540.17	110.09	14.991		
14,000.00	11,730.03	14,177.48	11,760.03	55.70	61.85	-91.01	-2,378.17	1,893.03	1,650.26	1,537.80	112.46	14.674		
14,100.00	11,730.03	14,277.48	11,760.03	56.92	62.92	-91.01	-2,478.17	1,893.51	1,650.26	1,535.38	114.88	14.365		

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 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	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:	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			Distance		Minimum		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)			
14,200.00	11,730.03	14,377.48	11,760.03	58.17	84.02	-91.01	-2,578.17	1,893.99	1,850.28	1,532.92	117.34	14.063	
14,300.00	11,730.03	14,477.48	11,760.03	59.43	85.14	-91.01	-2,678.17	1,894.47	1,850.27	1,530.41	119.85	13.769	
14,400.00	11,730.03	14,577.48	11,760.03	60.72	86.29	-91.01	-2,778.17	1,894.95	1,850.27	1,527.87	122.40	13.483	
14,500.00	11,730.03	14,677.48	11,760.03	62.02	87.46	-91.01	-2,878.17	1,895.44	1,850.27	1,525.28	124.99	13.204	
14,600.00	11,730.02	14,777.48	11,760.02	63.34	88.65	-91.01	-2,978.17	1,895.92	1,850.27	1,522.66	127.61	12.933	
14,700.00	11,730.02	14,877.48	11,760.02	64.68	89.87	-91.01	-3,078.16	1,896.40	1,850.27	1,520.01	130.25	12.669	
14,800.00	11,730.02	14,977.48	11,760.02	66.03	91.10	-91.01	-3,178.16	1,896.88	1,850.27	1,517.33	132.94	12.413	
14,900.00	11,730.02	15,077.48	11,760.02	67.40	92.35	-91.01	-3,278.16	1,897.36	1,850.27	1,514.61	135.68	12.165	
15,000.00	11,730.02	15,177.48	11,760.02	68.78	93.63	-91.01	-3,378.16	1,897.84	1,850.27	1,511.87	138.40	11.924	
15,100.00	11,730.02	15,277.48	11,760.02	70.17	94.91	-91.01	-3,478.16	1,898.33	1,850.27	1,509.11	141.16	11.690	
15,200.00	11,730.02	15,377.48	11,760.02	71.57	96.22	-91.01	-3,578.16	1,898.81	1,850.28	1,506.32	143.96	11.464	
15,300.00	11,730.02	15,477.48	11,760.02	72.99	97.54	-91.01	-3,678.16	1,899.29	1,850.28	1,503.51	146.77	11.244	
15,400.00	11,730.01	15,577.48	11,760.01	74.41	98.87	-91.01	-3,778.16	1,899.77	1,850.28	1,500.67	149.61	11.031	
15,500.00	11,730.01	15,677.48	11,760.01	75.85	100.22	-91.01	-3,878.15	1,900.25	1,850.28	1,497.82	152.48	10.824	
15,600.00	11,730.01	15,777.48	11,760.01	77.30	101.57	-91.01	-3,978.15	1,900.73	1,850.28	1,494.94	155.34	10.624	
15,700.00	11,730.01	15,877.48	11,760.01	78.75	102.95	-91.01	-4,078.15	1,901.22	1,850.28	1,492.05	158.23	10.429	
15,800.00	11,730.01	15,977.48	11,760.01	80.21	104.33	-91.01	-4,178.15	1,901.70	1,850.28	1,489.14	161.14	10.241	
15,900.00	11,730.01	16,077.48	11,760.01	81.69	105.72	-91.01	-4,278.15	1,902.18	1,850.28	1,486.21	164.07	10.058	
16,000.00	11,730.01	16,177.48	11,760.01	83.16	107.12	-91.01	-4,378.15	1,902.66	1,850.28	1,483.27	167.02	9.881	
16,100.00	11,730.01	16,277.48	11,760.01	84.65	108.54	-91.01	-4,478.15	1,903.14	1,850.28	1,480.31	169.97	9.709	
16,200.00	11,730.00	16,377.48	11,760.00	86.14	109.96	-91.01	-4,578.15	1,903.62	1,850.29	1,477.34	172.95	9.542	
16,300.00	11,730.00	16,477.48	11,760.00	87.64	111.39	-91.01	-4,678.15	1,904.10	1,850.29	1,474.36	175.93	9.380	
16,400.00	11,730.00	16,577.48	11,760.00	89.15	112.83	-91.01	-4,778.14	1,904.59	1,850.29	1,471.36	178.93	9.223	
16,488.91	11,730.00	16,666.39	11,760.00	90.49	114.11	-91.01	-4,867.05	1,905.01	1,850.29	1,468.68	181.80	9.087 SF	

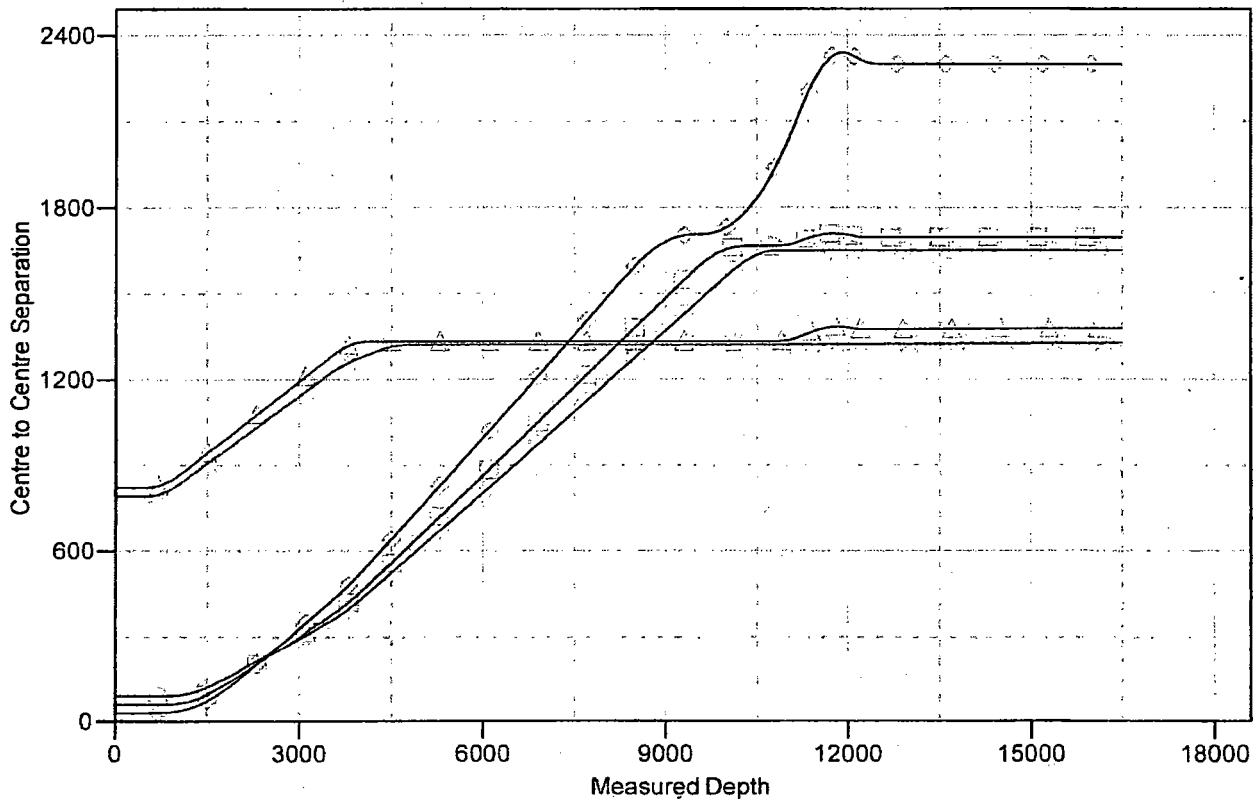
Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RIG @ 3691.50usft (GL:3663'+KB:28.5').
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 233H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

233H, OH, Prelim Plan A V0
 234H, OH, Prelim Plan A V0
 228H, OH, Prelim Plan A V0

Pro Directional Anticollision Report

Company:	Matador Resources	Local Co-ordinate Reference:	Well 233H
Project:	Lea County, NM	TVD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Reference Site:	MJ Federal Slots 3 & 4	MD Reference:	RIG @ 3691.50usft (GL:3663'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	233H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RIG @ 3691.50usft (GL:3663'+KB:28.5').

Offset Depths are relative to Offset Datum

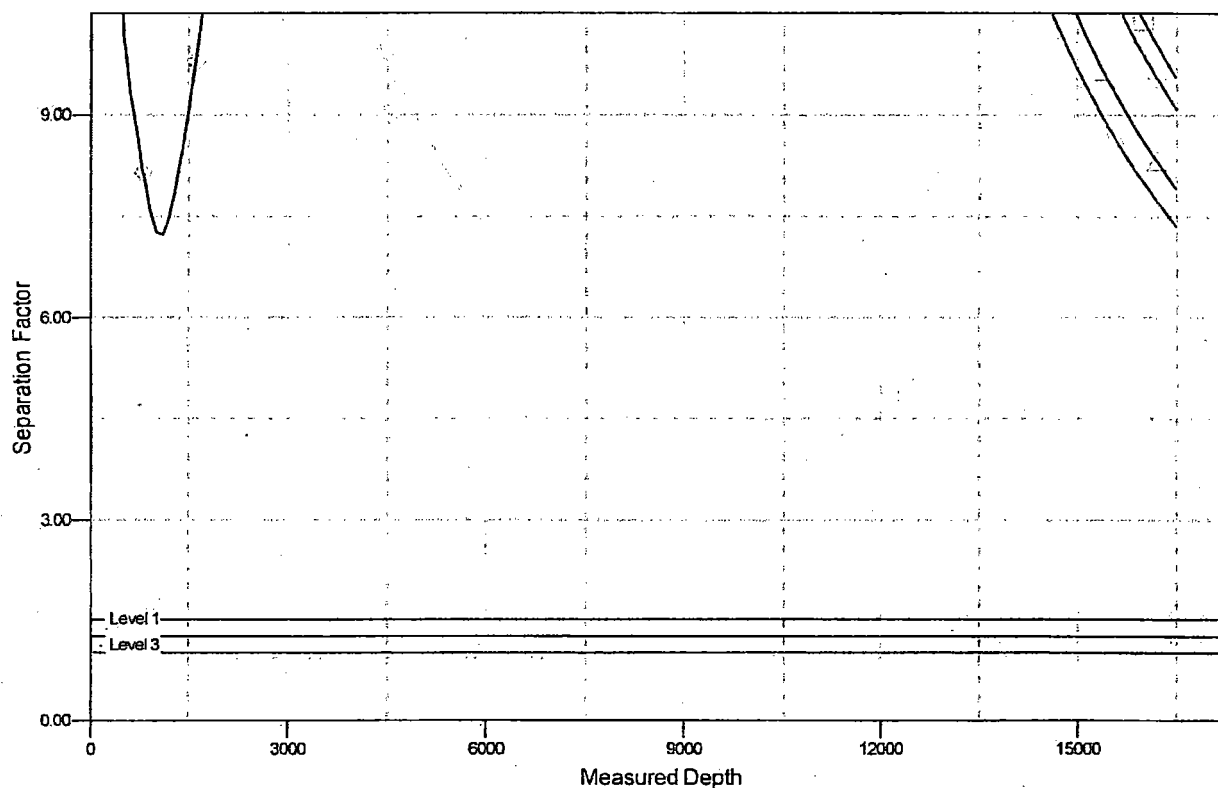
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 233H

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

Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

233H, OH, Prelim Plan A V0
 233H, OH, Prelim Plan A V0
 233H, OH, Prelim Plan A V0

SCALE: 1" = 1000'

0' 500' 1000'



SECTION 23, TOWNSHIP 19-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

15 14
22 23

14 23
FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

14 13
23 24
FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

23 24
FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

23 24
FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

FND. BRASS CAP,
U.S. G.L.O. SUR.
1912

**SURFACE LOCATION
NEW MEXICO EAST**
NAD 1927
X=715894
Y=801758
LAT.: N 32.6523754
LONG.: W 103.6318855
NAD 1983
X=757074
Y=801822
LAT.: N 32.6524978
LONG.: W 103.6323813

**FIRST PERFORATION POINT
NEW MEXICO EAST**
NAD 1927
X=716125
Y=601599
LAT.: N 32.6519327
LONG.: W 103.6311362
NAD 1983
X=757305
Y=601662
LAT.: N 32.6520551
LONG.: W 103.6316320

**LAST PERFORATION POINT
NEW MEXICO EAST**
NAD 1927
X=716148
Y=596973
LAT.: N 32.6392176
LONG.: W 103.6311617
NAD 1983
X=757328
Y=597036
LAT.: N 32.6393401
LONG.: W 103.6316570

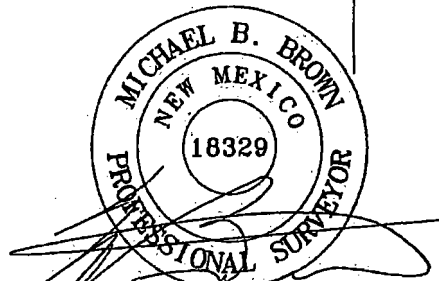
**BOTTOM HOLE LOCATION
NEW MEXICO EAST**
NAD 1927
X=716149
Y=596883
LAT.: N 32.6389703
LONG.: W 103.6311622
NAD 1983
X=757329
Y=596946
LAT.: N 32.6390927
LONG.: W 103.6316575

LEASE NAME & WELL NO.: MJ FEDERAL #233H
SECTION 23 TWP 19-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 169' FNL & 2211' FEL

DISTANCE & DIRECTION
FROM INT. OF NM-176 W. & US-180 E/US-62 E. GO NORTHEAST ON
US-180 E/US-62 E ±7.6 MILES. THENCE NORTHWEST (LEFT) ON SMITH
RANCH ROAD ±2.2 MILES. THENCE WEST (LEFT) ON LEASE ROAD ±2.5
MILES, THENCE EAST (RIGHT) ON A PROPOSED ROAD ±2941 FEET TO A
POINT ±350 FEET SOUTHEAST OF THIS LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW
MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY
SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA
PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS
OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR
THIS TRANSACTION ONLY.

AS OF THE DATE OF SURVEY, ALL ABOVE GROUND APPURTENANCES WITHIN 300' OF THE STAKED
LOCATION ARE SHOWN HEREON.



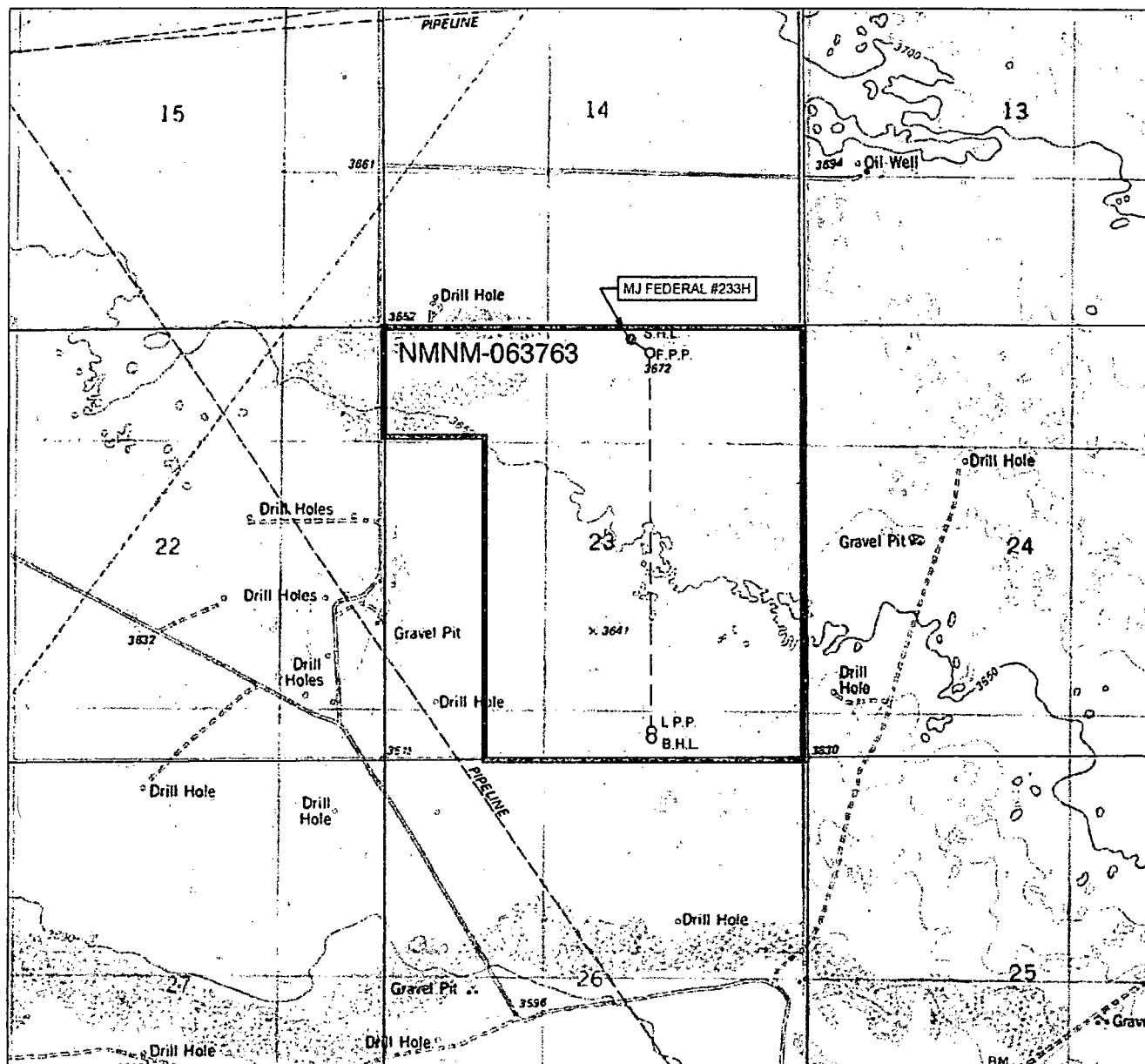
Michael Blake Brown, P.S. No. 18329
APRIL 26, 2017



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 882-1653 OR (800) 787-1653 • FAX (432) 882-1743
WWW.TOPOGRAPHIC.COM

LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: MJ FEDERAL #233H

SECTION 23 TWP 19-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3663'
 DESCRIPTION 169' FNL & 2211' FEL

LATITUDE N 32.6524978 LONGITUDE W 103.6323813



SCALE: 1" = 2000'
 0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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



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Matador requests the option to run a DV tool with annular packer as contingency in the intermediate 1 section on 9-5/8" casing if lost circulation is encountered. If losses occur the DV tool with packer will be placed at least 100' above loss zone to give the option to pump cement as either a single stage or two stage.

Matador DV Tool Specifications

Example:

Assuming DV tool set at 4500' MD but if the setting depth changes, cement volumes will be adjusted proportionately.

Stage 1:

Lead	1262	1.81	13.5	Class C + Bentonite + 1% CaCL ₂ + 8% NaCl + LCM
Tail	490	1.38	14.8	Class C + 5% NaCl + LCM
100% excess, TOC = 0' MD				

Stage 2:

Lead	1324	1.81	13.5	Class C + Bentonite + 1% CaCL ₂ + 8% NaCl + LCM
100% excess, TOC = 0' MD				

For the latest performance data, always visit our website: www.tenaris.com

December 31 2015



Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 4.500 in.
Wall: 0.290 in.
Weight: 13.50 lbs/ft
Grade: P110-ICY
Min. Wall Thickness: 87.5 %

Nominal OD	4.500 in.	Nominal Weight	13.50 lbs/ft	Standard Drift Diameter	3.795 in.
Nominal ID	3.920 in.	Wall Thickness	0.290 in.	Special Drift Diameter	N/A
Plain End Weight	13.05 lbs/ft				
Body Yield Strength	479 x 1000 lbs	Internal Yield	14100 psi	SMYS	125000 psi
Collapse	11620 psi				
Connection OD	5.000 in.	Coupling Length	9.075 in.	Connection ID	3.908 in.
Critical Section Area	3.836 sq. in.	Threads per in.	5.00	Make-Up Loss	4.016 in.
Tension Efficiency	100 %	Joint Yield Strength	479 x 1000 lbs	Internal Pressure Capacity ⁽¹⁾	14100 psi
Structural Compression Efficiency	100 %	Structural Compression Strength	479 x 1000 lbs	Structural Bending ⁽²⁾	127 °/100 ft
External Pressure Capacity	11620 psi				
Minimum	6950 ft-lbs	Optimum	7720 ft-lbs	Maximum	8490 ft-lbs
Operating Torque	10500 ft-lbs	Yield Torque	12200 ft-lbs		

Blanking Dimensions

BLANKING DIMENSIONS

Blanking Dimensions

- (1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.
 - (2) Structural rating, pure bending to yield (i.e no other loads applied)
 - (3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.
- For additional information, please contact us at contact-tenarishydril@tenaris.com

For the latest performance data, always visit our website: www.tenaris.com

July 15 2015



Connection: TenarisXP™ BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

PIPE BODY DATA

GEOMETRY

Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft	Standard Drift Diameter	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Special Drift Diameter	N/A
Plain End Weight	19.83 lbs/ft				

PERFORMANCE

Body Yield Strength	641 x 1000 lbs	Internal Yield	12630 psi	SMYS	110000 psi
Collapse	12100 psi				

TENARISXP™ BTC CONNECTION DATA

GEOMETRY

Connection OD	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00	Make-Up Loss	4.204 in.

PERFORMANCE

Tension Efficiency	100 %	Joint Yield Strength	641 x 1000 lbs	Internal Pressure Capacity ⁽¹⁾	12630 psi
Structural Compression Efficiency	100 %	Structural Compression Strength	641 x 1000 lbs	Structural Bending ⁽²⁾	92 °/100 ft
External Pressure Capacity	12100 psi				

ESTIMATED MAKE-UP TORQUES⁽³⁾

Minimum	11270 ft-lbs	Optimum	12520 ft-lbs	Maximum	13770 ft-lbs
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OPERATIONAL LIMIT TORQUES

Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs		
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Issued on: 12 Janv. 2017 by T. DELBOSCO

VRCC 16-1177 Rev02 for Houston Field Service

**DATA ARE INFORMATIVE ONLY.
BASED ON SI_PD-101836 P&B**

VAM® HTF-NR™
Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
7 5/8 in.	29.70 lb/ft	0.375 in.	P110 EC	6.750 in.	VAM® HTF NR

PIPE PROPERTIES	
Nominal OD	7.625 in.
Nominal ID	6.875 in.
Nominal Cross Section Area	8.541 sqin.
Grade Type	Enhanced API
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi
Tensile Yield Strength	1 068 klb
Internal Yield Pressure	10 760 psi
Collapse pressure	7 360 psi

CONNECTION PROPERTIES	
Connection Type	Premium Integral Flush
Connection OD (nom)	— 7.701 in.
Connection ID (nom)	6.782 in.
Make-Up Loss	4.657 in.
Critical Cross Section	4.971 sqin.
Tension Efficiency	58 % of pipe
Compression Efficiency	72.7 % of pipe
Compression Efficiency with Sealability	34.8 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

CONNECTION PERFORMANCES	
Tensile Yield Strength	619 klb
Compression Resistance	778 klb
Compression with Sealability	372 klb
Internal Yield Pressure	10 760 psi
External Pressure Resistance	7 360 psi
Max. Bending	44 °/100ft
Max. Bending with Sealability	17 °/100ft

TORQUE VALUES	
Min. Make-up torque	9 600 ft.lb
Opti. Make-up torque	11 300 ft.lb
Max. Make-up torque	13 000 ft.lb
Max. Torque with Sealability	58 500 ft.lb
Max. Torsional Value	73 000 ft.lb

VAM® HTF™ (High Torque Flush) is a flush OD integral connection providing maximum clearance along with torque strength for challenging applications such as extended reach and slim hole wells, drilling liner / casing, liner rotation to achieve better cementation in highly deviated and critical High Pressure / High Temperature wells.

Looking ahead on the upcoming testing industry standards, VAM® decided to create an upgraded design and launch on the market the VAM® HTF-NR as the new standard version of VAM® extreme high torque flush connection. The VAM® HTF-NR has extensive tests as per API RP 5C5:2015 CAL II which include the gas sealability having load points with bending, internal pressure and high temperature at 135°C.

Do you need help on this product? - Remember no one knows VAM® like VAM®

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singapore@vamfieldservice.com
australia@vamfieldservice.com

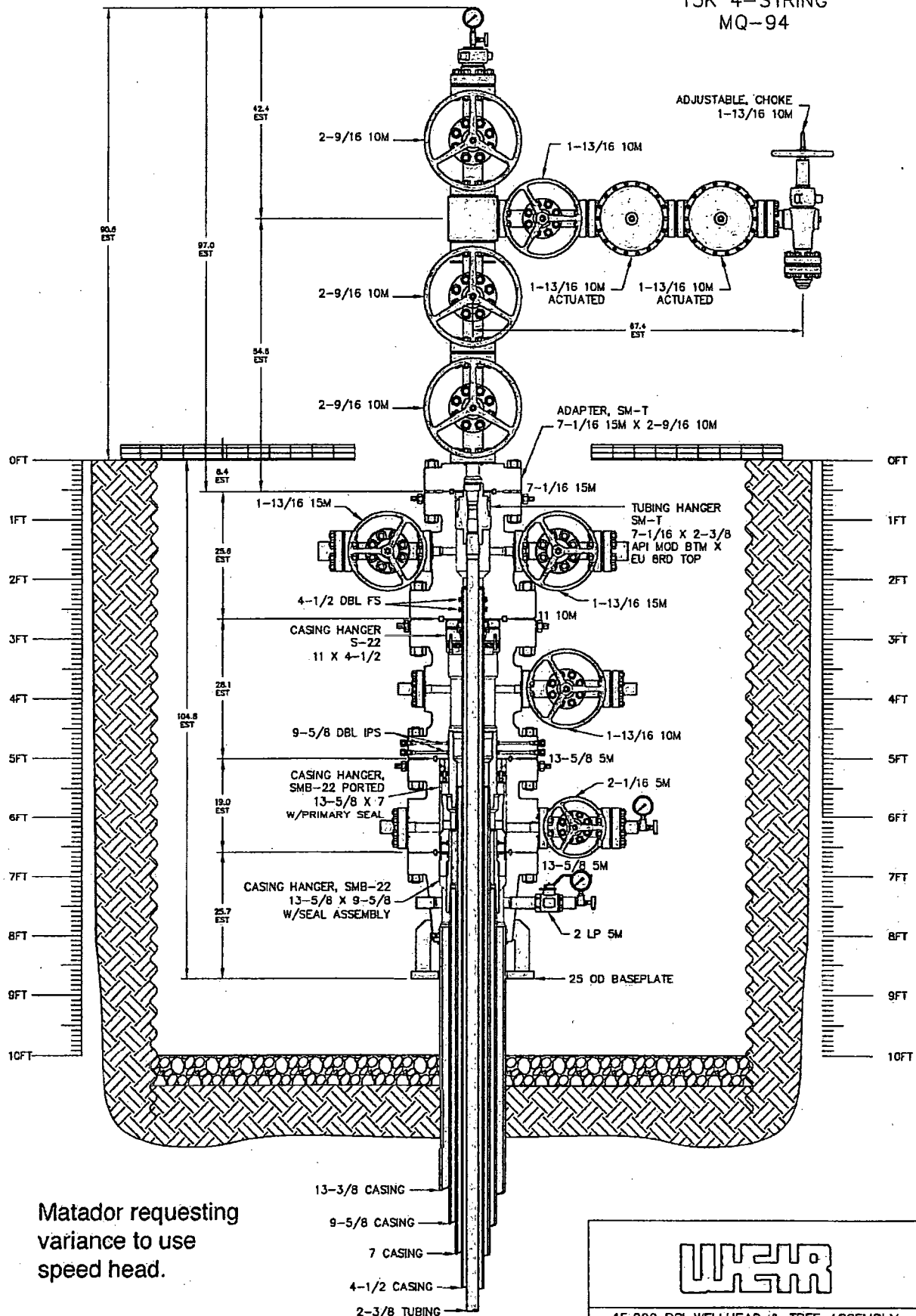
Over 180 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

Other Connection Data Sheets are available at www.vamservices.com

Vallourec Group

 **vallourec**

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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CONSENT OF SEABOARD INTERNATIONAL INC.

WER

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

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

Matador Production Company
MJ Federal 233H
SHL 169' FNL & 2211' FEL
BHL 240' FSL & 1980' FEL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

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.

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DRILL PLAN PAGE 5

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' - 11975'	9.0	30-31	NC
OBM	production	11975' - 16489'	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 ≈ 8211 psi. Expected bottom hole temperature is $\approx 180^\circ$ 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 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	1164	1.81	2106	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	837	2.36	1975	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	224	1.38	309	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	414	1.38	571	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 10975'		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.

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

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' - 11117'	4889' - 11106'		7.625"		29.7	P-110	VAM HTF-NR
	11117' - 11975'	11106' - 11721'		7"		29	P-110	BTC
6.125"	0' - 11017'	0' - 11006'	Production	5.5"	10975'	20	P-110	Tenaris XP
	11017' - 16489'	11006' - 11730'		4.5"		13.5	P-110	Tenaris XP

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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 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	9180'	9191'	hydrocarbons
2 nd Bone Spring sandstone	9705'	9716'	hydrocarbons
3 rd Bone Spring sandstone	10575'	10586'	hydrocarbons
Wolfcamp carbonates	10770'	10781'	hydrocarbons
(KOP	11189'	11200'	hydrocarbons
Wolfcamp D sandstone	11512'	11550'	hydrocarbons & goal
TD	11730'	16489'	hydrocarbons

2. NOTABLE ZONES

Wolfcamp D 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 8314' SSE. Depth to water is unknown in this 100' deep inactive well.

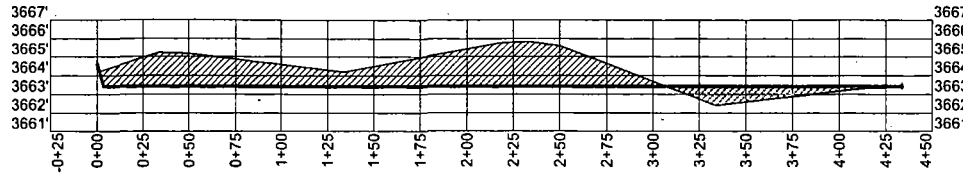
TOP OF PAD ELEVATION: 3663.4527
 CUT SLOPE: 33.33% 3.000:1 18.43°
 FILL SLOPE: 33.33% 3.000:1 18.43°
 BALANCE TOLERANCE (C.Y.): 0.00
 CUT SWELL FACTOR: 1.00
 FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
 CUT : 95,625.8 C.F., 3,541.70 C.Y.
 FILL: 95,625.8 C.F., 3,541.70 C.Y.
 AREA: 165586.2 SQ.FT., 3.801 ACRES

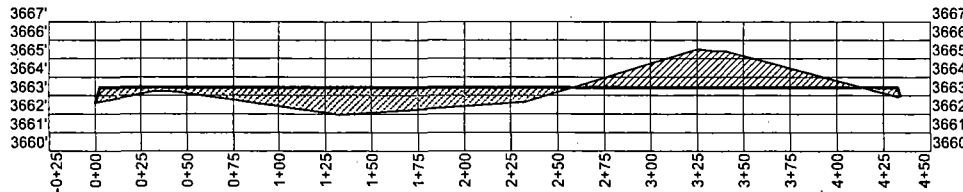
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 EDDY COUNTY, NEW MEXICO



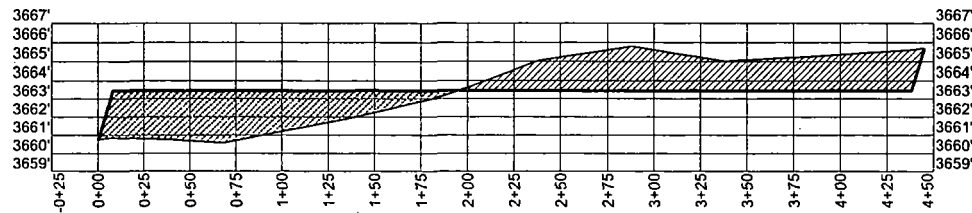
A-A'



B-B'



C-C'



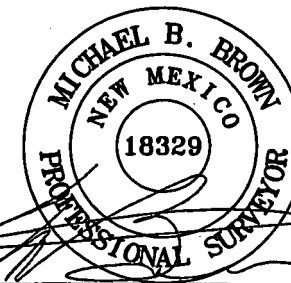
Horizontal Scale = 1:100
 Vertical Scale = 1:10



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MJ FEDERAL #223H SURFACE PAD SITE PROFILE	REVISION:		NOTES:
	MML	05/01/17	
DATE: 03/03/17			1. ORIGINAL DOCUMENT SIZE: 8.5" X 11" 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927. 3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR RESOURCE COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
FILE: CD_MJ_FEDERAL_223H_SURFACE_PAD_SITE_REV1			
DRAWN BY: EAH			
SHEET: 2 OF 2			

MAP 9



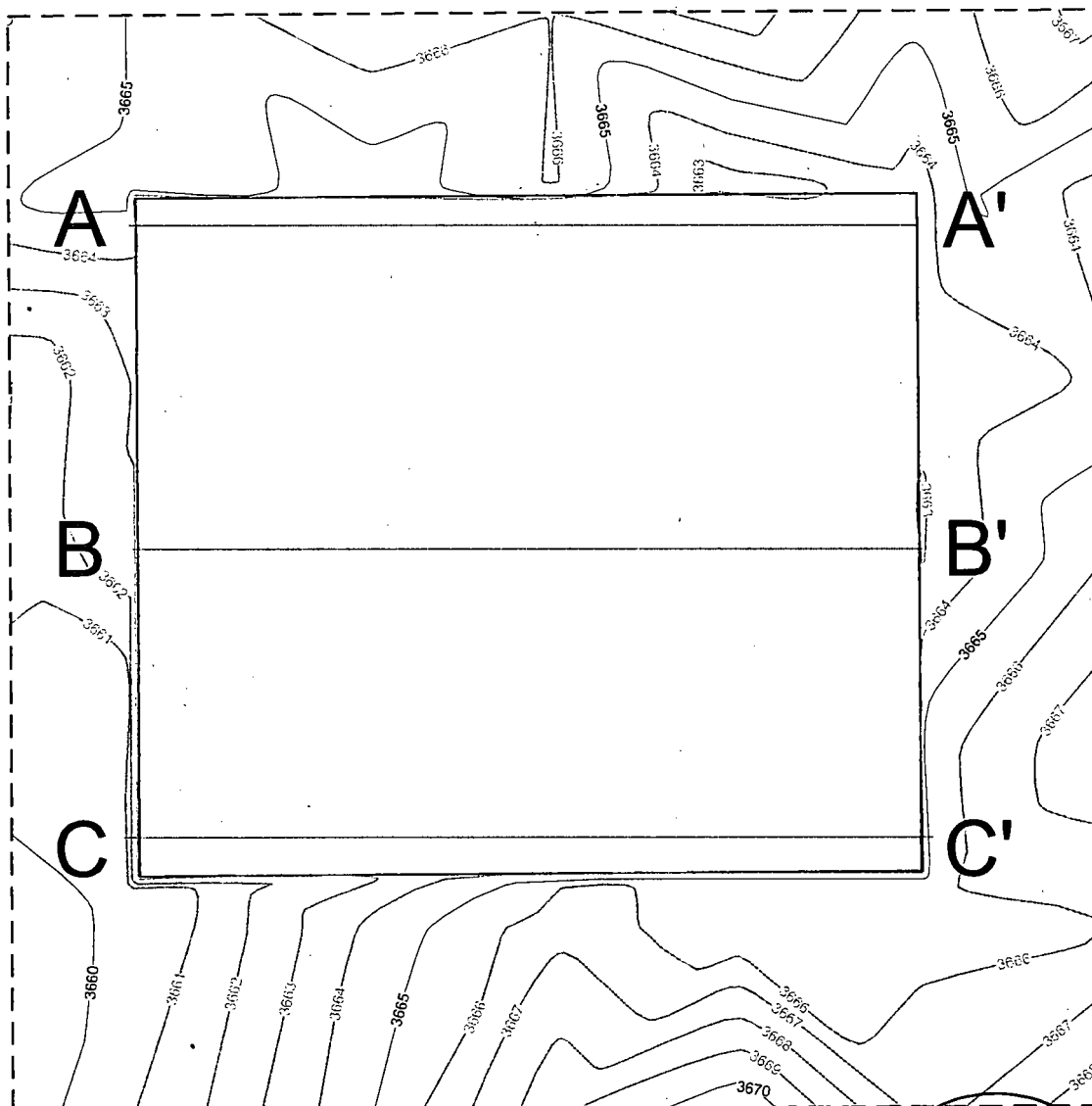
Michael Blake Brown, P.S. No. 18329
 MAY 01, 2017

Field note description of even date accompanies this plat.

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

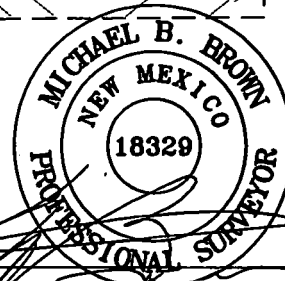
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MAP 8



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Michael Blake Brown, P.S. No. 18329

MAY 01, 2017

Field note description of even date accompanies this plat.

MJ FEDERAL #223H
SURFACE PAD SITE PROFILE

REVISION:

MML

05/01/17

DATE: 03/03/17.

FILE: CD MJ FEDERAL 223H SURFACE PAD SITE REV1

DRAWN BY: EAH

SHEET: 1 OF 2

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
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Matador Production Company
MJ Federal 233H
SHL 169' FNL & 2211' FEL
BHL 240' FSL & 1980' FEL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

SURFACE 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 233H 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.

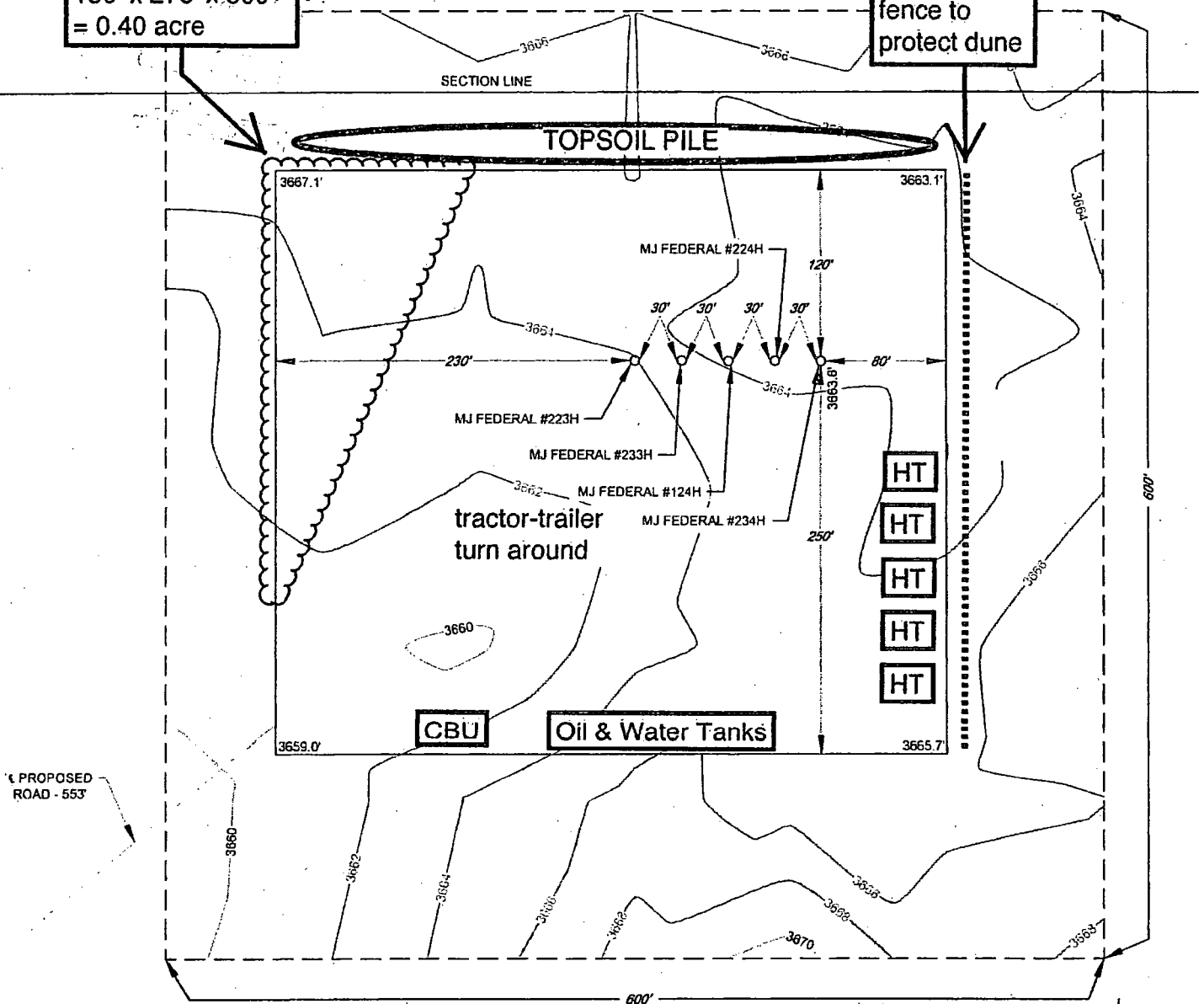


SECTION 23, TOWNSHIP 19-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

interim reclaim
130' x 270' x 300'
= 0.40 acre

DETAIL VIEW
SCALE: 1" = 100'

fence to
protect dune



LEGEND

SECTION LINE
PROPOSED ROAD

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

N

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

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



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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 ≈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)

Matador Production Company

MJ Federal 233H

SHL 169' FNL & 2211' FEL

BHL 240' FSL & 1980' FEL

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

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.



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:



Hydrogen Sulfide Drilling

Operations Plan

1 H2S safety instructions to the following:

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

2 H2S Detection and Alarm Systems:

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

3 Windsocks and / Wind Streamers:

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

4 Condition Flags and Signs:

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

5 Well Control Equipment:

- See attachments

6 Communication:

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

Casing Design Criteria and Load Case Assumptions

Production Casing

Collapse: $DF_c=1.125$

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

Burst: $DF_b=1.125$

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

Tensile: $DF_t=1.8$

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



7 Drilling Stem Testing:

- No DSTs or cores are planned at this time.

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

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

11 Emergency Contacts

- See following page

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

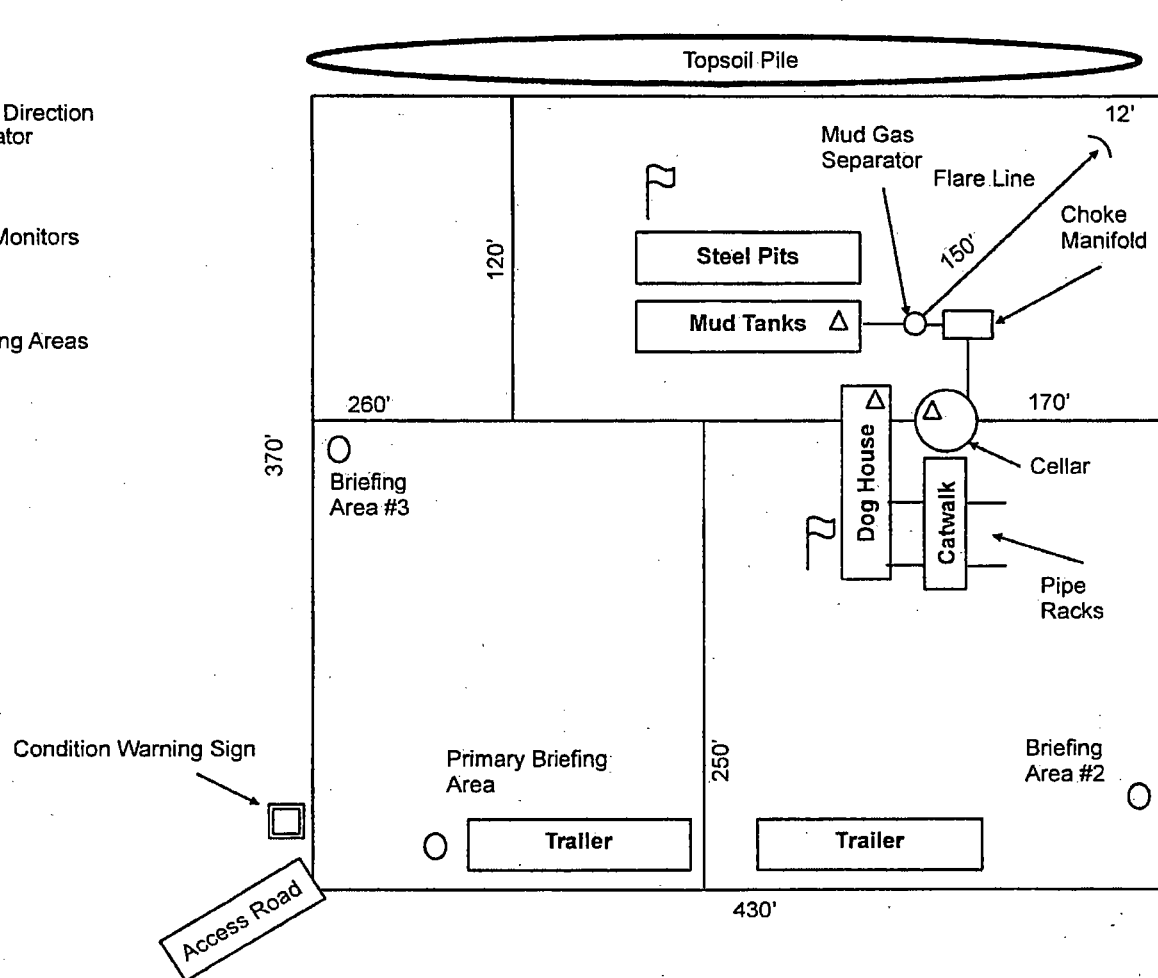
<u>Company Office</u>			
Matador Production Company		(972)-371-5200	
<u>Key Personnel</u>			
Name	Title	Office	Mobile
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Patrick Walsh	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>			575-390-3186
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	
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

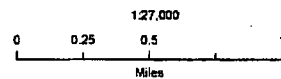
MJ Federal 233H
SHL 169' FNL & 2211' FEL
23-19S-33E Lea County, NM



**MJ Federal #233H
H₂S Contingency Plan:
2 Mile Radius Map**

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

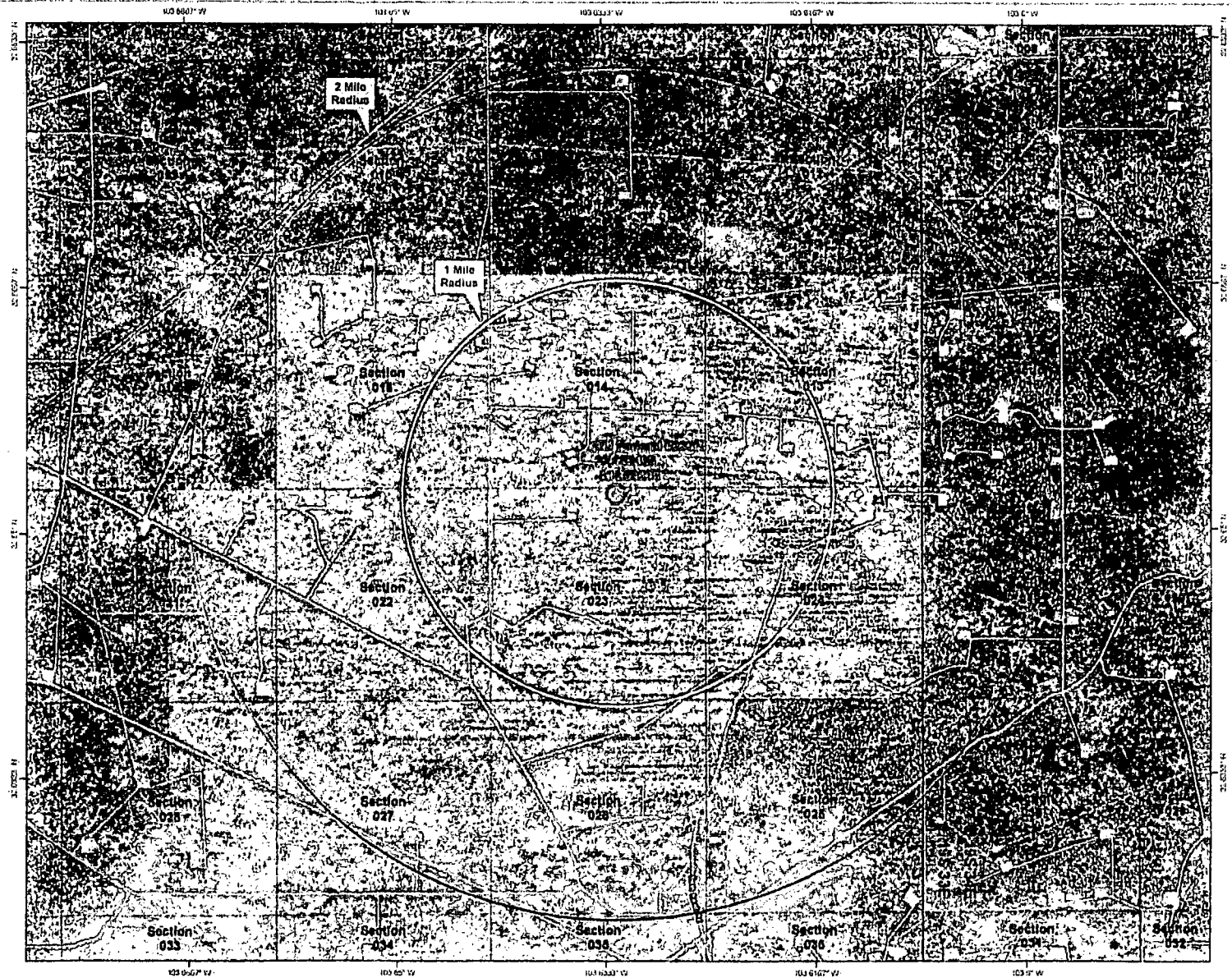
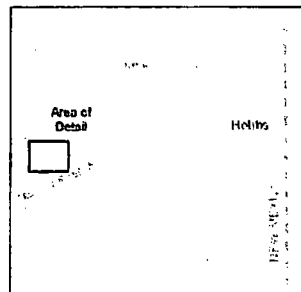
 Surface Hole Location



NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PLUMETS WEST

Prepared by Permian West, Inc., July 19, 2017
for Malador Production Company



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

Drilling Plan Data Report

02/01/2018

APD ID: 10400019973

Submission Date: 08/17/2017

Highlighted data
reflects the most
recent changes

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: MJ FEDERAL

Well Number: 233H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	---	3662	0	0	OTHER : Quaternary	USEABLE WATER	No
2	RUSTLER ANHYDRITE	2172	1490	1493		NONE	No
3	TOP SALT	2067	1595	1598		NONE	No
4	BASE OF SALT	462	3200	3209		NONE	No
5	YATES	272	3390	3400	GYPSUM	NONE	No
6	SEVEN RIVERS	-138	3800	3811	DOLOMITE	NONE	No
7	QUEEN	-673	4335	4346	SANDSTONE	NONE	No
8	GRAYBURG	-1163	4825	4836	SANDSTONE	NONE	No
9	DELAWARE SAND	-1888	5550	5561		NATURAL GAS,CO2,OIL	No
10	BRUSHY CANYON	-2488	6150	6161	SANDSTONE	NATURAL GAS,CO2,OIL	No
11	BONE SPRING LIME	-4313	7975	7986		NATURAL GAS,CO2,OIL	No
12	BONE SPRING 1ST	-5518	9180	9191	SANDSTONE	NATURAL GAS,CO2,OIL	No
13	BONE SPRING 2ND	-6043	9705	9716	SANDSTONE	NATURAL GAS,CO2,OIL	No
14	BONE SPRING 3RD	-6913	10575	10586	SANDSTONE	NATURAL GAS,CO2,OIL	No
15	WOLFCAMP	-7108	10770	10781	OTHER : Carbonate	NATURAL GAS,CO2,OIL	No
16	WOLFCAMP	-7850	11512	11550	SANDSTONE	NATURAL GAS,CO2,OIL	Yes

Section 2 - Blowout Prevention