

HOBBS OCD

FEB 06 2018

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

RECEIVED

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM-63763
WELL NAME & NO.:	MJ Fed Com 221H
SURFACE HOLE FOOTAGE:	0188' FNL & 0599' FWL
BOTTOM HOLE FOOTAGE:	0240' FSL & 0330' FWL
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

Communitization Agreement

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

If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.

In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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 1535 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.

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HOBBS OCD

FEB 06 2018

RECEIVED

**PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
LEASE NO.:	NMNM63763
WELL NAME & NO.:	221H -MJ FEDERAL
SURFACE HOLE FOOTAGE:	188'/N & 599'/W
BOTTOM HOLE FOOTAGE:	240'/S & 330'/W
LOCATION:	Section 23 T.19 S., R.33E., NMP
COUNTY:	LEA County, New Mexico

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

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I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

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

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

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

Tank Battery:

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

Watershed/Water Quality:

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

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

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

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

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

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

Surfacing

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

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

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

Crowning

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

Ditching

Ditching shall be required on both sides of the road.

Turnouts

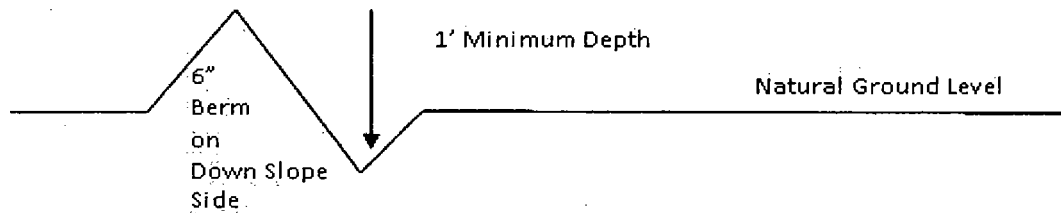
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

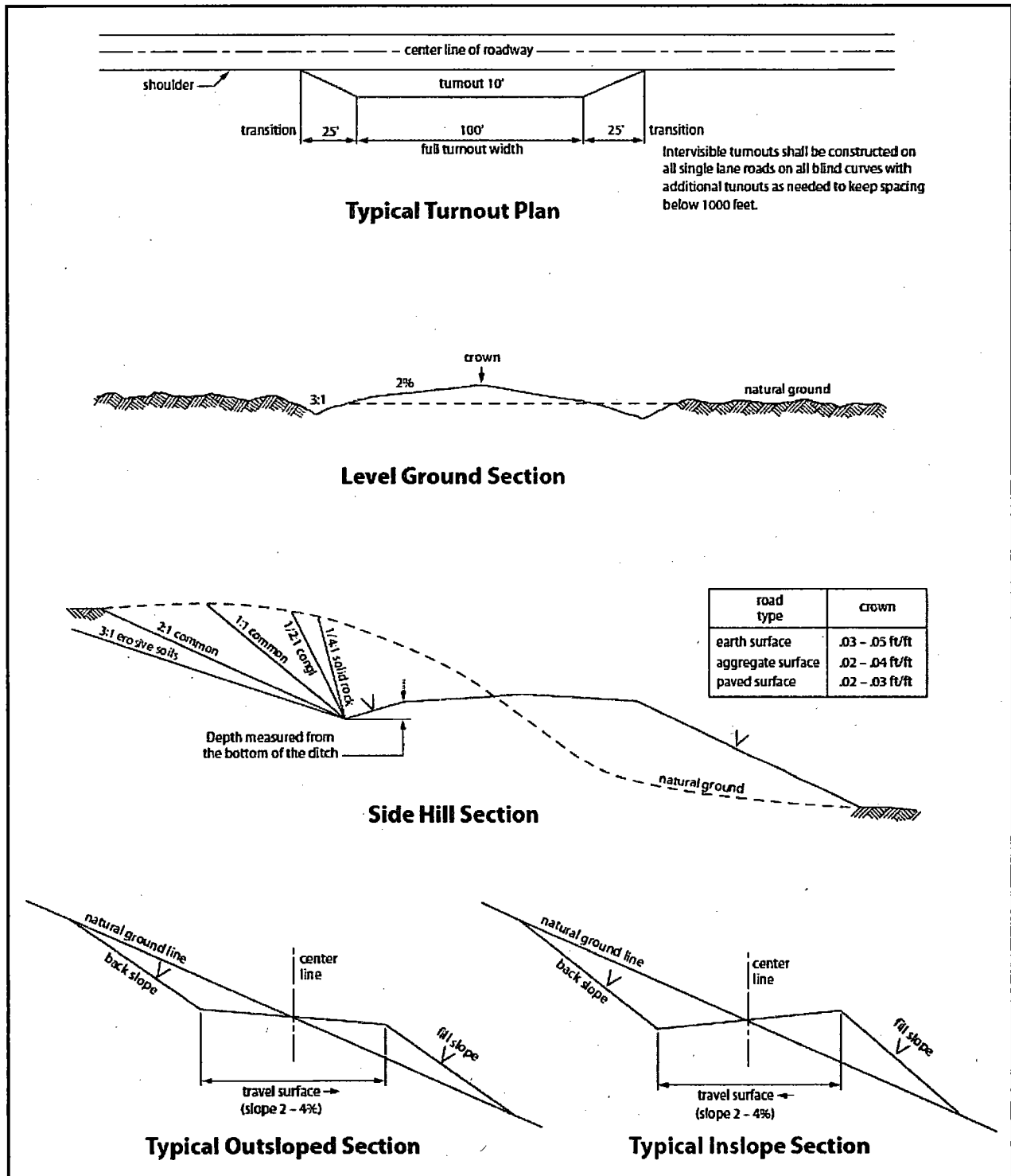


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

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

Open-Vent Exhaust Stack Exclosures

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

Containment Structures

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

Painting Requirement

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

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

*Pounds of pure live seed:

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



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.



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

HOBBS OCD

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H2S Contingency Plan Emergency Contacts
MJ Fed Com 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	

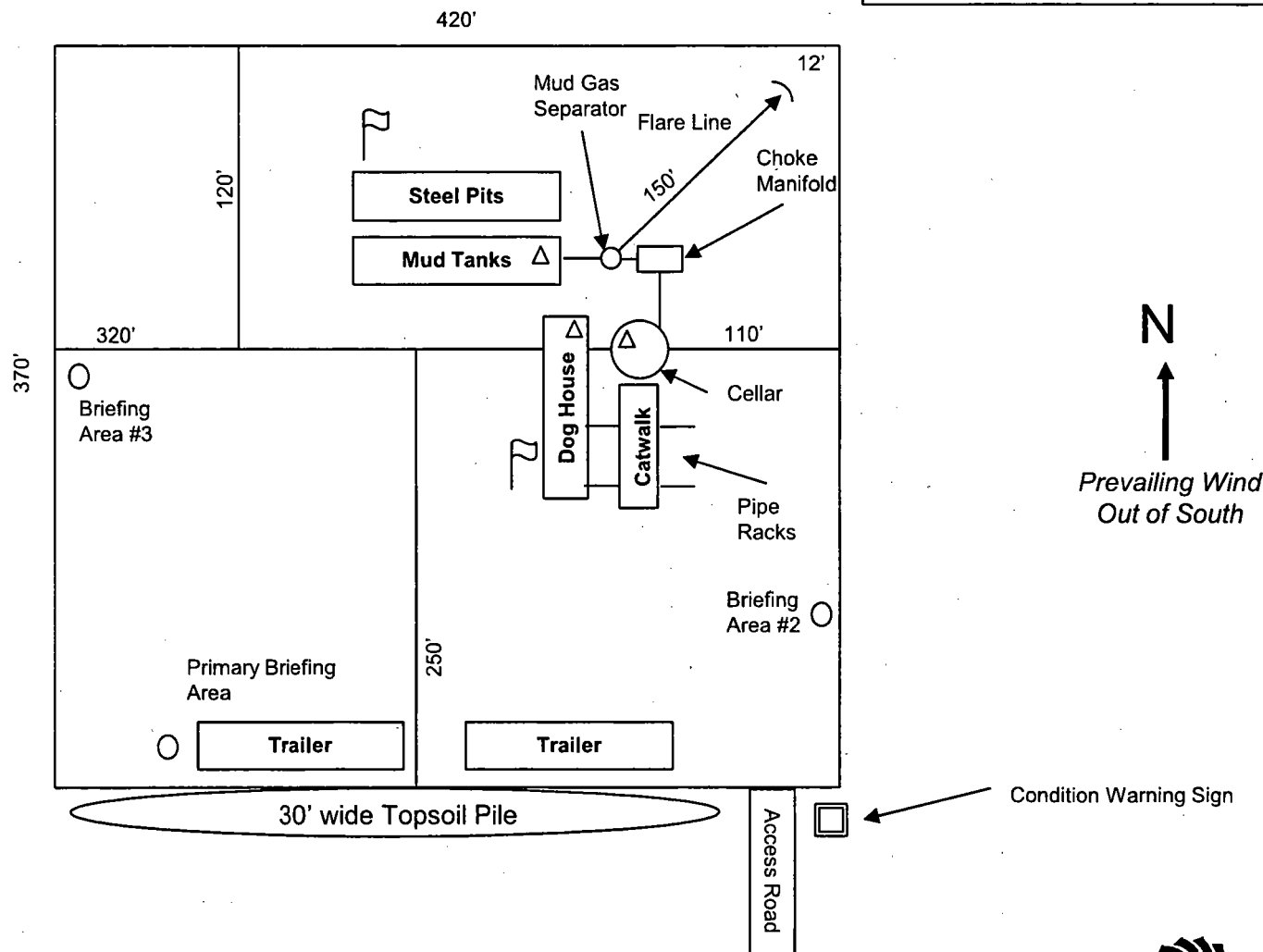
H2S Rig Diagram

MJ Fed Com 221H
SHL 188' FNL & 599' FWL
23-19S-33E Lea County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas

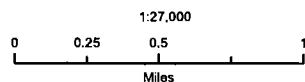


Matador Production Company

MJ Federal #221H
H₂S Contingency Plan:
2 Mile Radius Map

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

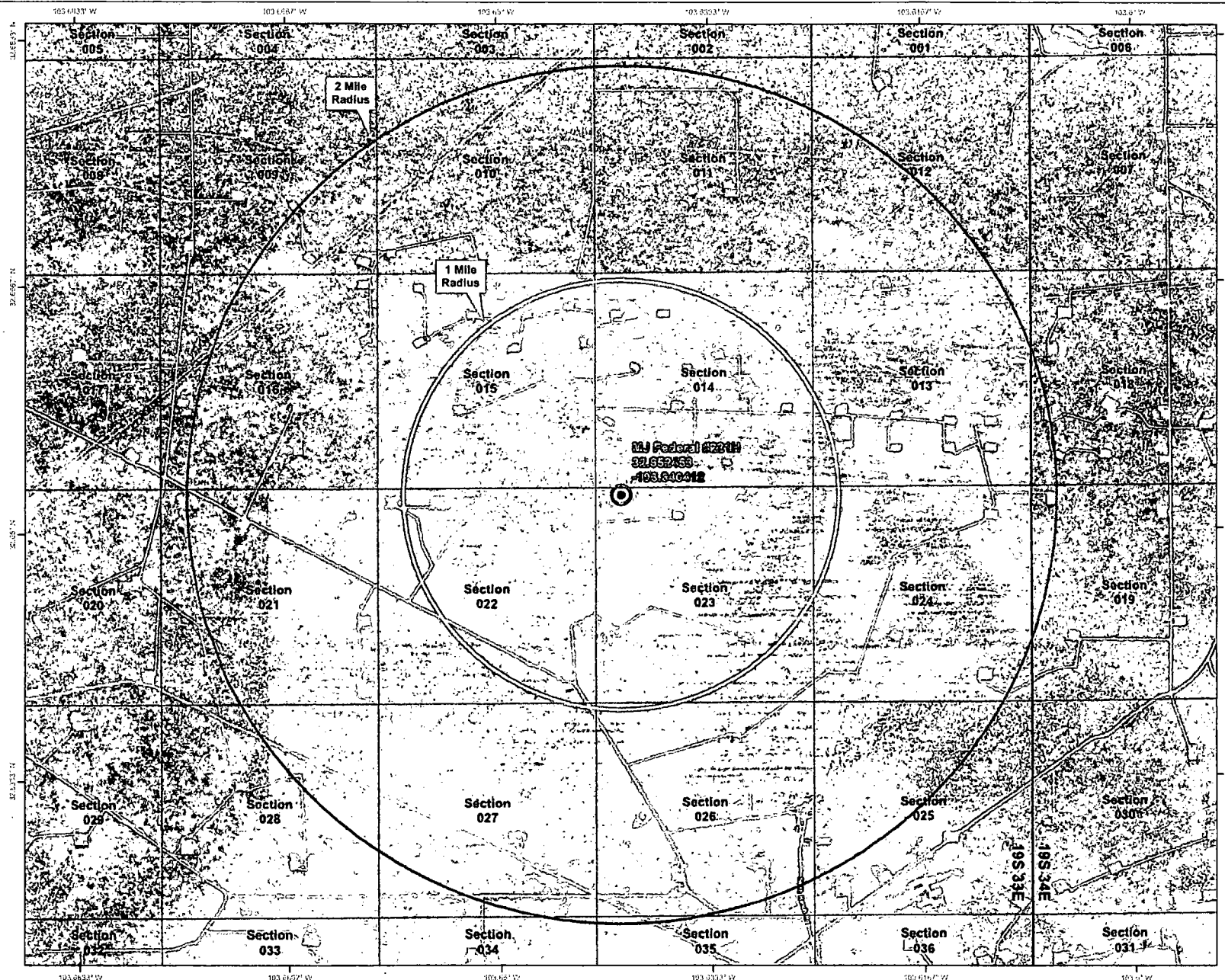
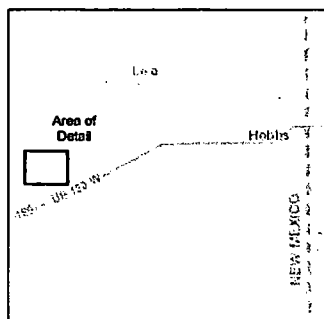
⊙ Surface Hole Location



NAD 1983 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST
PROVIDING PERMITS BY LAND SURVEY

Prepared by Permits West, Inc., July 19, 2017
for Matador Production Company



Pro Directional
Survey Report

FEB 06 2018

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Company:	Matador Resources	Local Co-ordinate Reference:	Well 221H
Project:	Lea County, NM	TVD Reference:	Rig @ 3679.50usft (GL:3651'+KB:28.5')
Site:	MJ Federal Slot 1	MD Reference:	Rig @ 3679.50usft (GL:3651'+KB:28.5')
Well:	221H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

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

Site		MJ Federal Slot 1			
Site Position:		Northing:	601,726.00 usft	Latitude:	32° 39' 8.3911 N
From:	Map	Easting:	713,422.00 usft	Longitude:	103° 38' 23.6994 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.37 °

Well	221H					
Well Position	+N/-S	0.00 usft	Northing:	601,726.00 usft	Latitude:	32° 39' 8.3911 N
	+E/-W	0.00 usft	Easting:	713,422.00 usft	Longitude:	103° 38' 23.6994 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,651.00 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/30/2017	6.85	60.70	48,419.70

Design	Prelim Plan A			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.78

Survey Tool Program		Date	6/2/2017	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	500.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG
500.00	10,798.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG
10,798.00	15,955.19	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.00	264.68	599.99	-0.08	-0.87	0.08	1.00	1.00	0.00
700.00	2.00	264.68	699.96	-0.32	-3.48	0.31	1.00	1.00	0.00
800.00	3.00	264.68	799.86	-0.73	-7.82	0.70	1.00	1.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slot 1
Well: 221H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well 221H
Rig @ 3679.50usft (GL:3651'+KB:28.5')
Rig @ 3679.50usft (GL:3651'+KB:28.5')
Grid
Minimum Curvature
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	264.68	899.68	-1.29	-13.90	1.24	1.00	1.00	0.00
1,000.00	5.00	264.68	999.37	-2.02	-21.71	1.94	1.00	1.00	0.00
1,100.00	5.00	264.68	1,098.99	-2.83	-30.39	2.71	0.00	0.00	0.00
1,200.00	5.00	264.68	1,198.60	-3.64	-39.06	3.49	0.00	0.00	0.00
1,300.00	5.00	264.68	1,298.22	-4.45	-47.74	4.26	0.00	0.00	0.00
1,400.00	5.00	264.68	1,397.84	-5.25	-56.42	5.04	0.00	0.00	0.00
1,500.00	5.00	264.68	1,497.46	-6.06	-65.10	5.81	0.00	0.00	0.00
1,600.00	5.00	264.68	1,597.08	-6.87	-73.78	6.59	0.00	0.00	0.00
1,700.00	5.00	264.68	1,696.70	-7.68	-82.46	7.36	0.00	0.00	0.00
1,800.00	5.00	264.68	1,796.32	-8.49	-91.13	8.14	0.00	0.00	0.00
1,900.00	5.00	264.68	1,895.94	-9.29	-99.81	8.91	0.00	0.00	0.00
2,000.00	5.00	264.68	1,995.56	-10.10	-108.49	9.68	0.00	0.00	0.00
2,100.00	5.00	264.68	2,095.18	-10.91	-117.17	10.46	0.00	0.00	0.00
2,200.00	5.00	264.68	2,194.80	-11.72	-125.85	11.23	0.00	0.00	0.00
2,300.00	5.00	264.68	2,294.42	-12.53	-134.52	12.01	0.00	0.00	0.00
2,400.00	5.00	264.68	2,394.04	-13.33	-143.20	12.78	0.00	0.00	0.00
2,500.00	5.00	264.68	2,493.66	-14.14	-151.88	13.56	0.00	0.00	0.00
2,600.00	5.00	264.68	2,593.28	-14.95	-160.56	14.33	0.00	0.00	0.00
2,700.00	5.00	264.68	2,692.90	-15.76	-169.24	15.11	0.00	0.00	0.00
2,800.00	5.00	264.68	2,792.52	-16.57	-177.91	15.88	0.00	0.00	0.00
2,900.00	5.00	264.68	2,892.14	-17.37	-186.59	16.66	0.00	0.00	0.00
3,000.00	5.00	264.68	2,991.76	-18.18	-195.27	17.43	0.00	0.00	0.00
3,100.00	5.00	264.68	3,091.37	-18.99	-203.95	18.21	0.00	0.00	0.00
3,200.00	5.00	264.68	3,190.99	-19.80	-212.63	18.98	0.00	0.00	0.00
3,300.00	5.00	264.68	3,290.61	-20.61	-221.30	19.76	0.00	0.00	0.00
3,400.00	5.00	264.68	3,390.23	-21.41	-229.98	20.53	0.00	0.00	0.00
3,500.00	5.00	264.68	3,489.85	-22.22	-238.66	21.31	0.00	0.00	0.00
3,593.70	5.00	264.68	3,583.20	-22.98	-246.79	22.03	0.00	0.00	0.00
3,600.00	4.94	264.68	3,589.47	-23.03	-247.33	22.08	1.00	-1.00	0.00
3,700.00	3.94	264.68	3,689.17	-23.75	-255.04	22.77	1.00	-1.00	0.00
3,800.00	2.94	264.68	3,788.99	-24.30	-261.01	23.30	1.00	-1.00	0.00
3,900.00	1.94	264.68	3,888.90	-24.70	-265.24	23.68	1.00	-1.00	0.00
4,000.00	0.94	264.68	3,988.87	-24.93	-267.74	23.90	1.00	-1.00	0.00
4,093.70	0.00	0.00	4,082.56	-25.00	-268.50	23.97	1.00	-1.00	0.00
4,100.00	0.00	0.00	4,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,200.00	0.00	0.00	4,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,300.00	0.00	0.00	4,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,400.00	0.00	0.00	4,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,500.00	0.00	0.00	4,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,600.00	0.00	0.00	4,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,700.00	0.00	0.00	4,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,800.00	0.00	0.00	4,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
4,900.00	0.00	0.00	4,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slot 1
Well: 221H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.00	0.00	0.00	4,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,100.00	0.00	0.00	5,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,200.00	0.00	0.00	5,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,300.00	0.00	0.00	5,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,400.00	0.00	0.00	5,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,500.00	0.00	0.00	5,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,600.00	0.00	0.00	5,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,700.00	0.00	0.00	5,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,800.00	0.00	0.00	5,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
5,900.00	0.00	0.00	5,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,000.00	0.00	0.00	5,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,100.00	0.00	0.00	6,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,200.00	0.00	0.00	6,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,300.00	0.00	0.00	6,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,400.00	0.00	0.00	6,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,500.00	0.00	0.00	6,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,600.00	0.00	0.00	6,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,700.00	0.00	0.00	6,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,800.00	0.00	0.00	6,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
6,900.00	0.00	0.00	6,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,000.00	0.00	0.00	6,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,100.00	0.00	0.00	7,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,200.00	0.00	0.00	7,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,300.00	0.00	0.00	7,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,400.00	0.00	0.00	7,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,500.00	0.00	0.00	7,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,600.00	0.00	0.00	7,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,700.00	0.00	0.00	7,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,800.00	0.00	0.00	7,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
7,900.00	0.00	0.00	7,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,000.00	0.00	0.00	7,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,100.00	0.00	0.00	8,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,200.00	0.00	0.00	8,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,300.00	0.00	0.00	8,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,400.00	0.00	0.00	8,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,500.00	0.00	0.00	8,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,600.00	0.00	0.00	8,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,700.00	0.00	0.00	8,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,800.00	0.00	0.00	8,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
8,900.00	0.00	0.00	8,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,000.00	0.00	0.00	8,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,100.00	0.00	0.00	9,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,200.00	0.00	0.00	9,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00

Pro Directional Survey Report

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Project: Lea County, NM
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Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,300.00	0.00	0.00	9,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,400.00	0.00	0.00	9,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,500.00	0.00	0.00	9,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,600.00	0.00	0.00	9,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,700.00	0.00	0.00	9,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,800.00	0.00	0.00	9,788.86	-25.00	-268.50	23.97	0.00	0.00	0.00
9,900.00	0.00	0.00	9,888.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,000.00	0.00	0.00	9,988.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,100.00	0.00	0.00	10,088.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,200.00	0.00	0.00	10,188.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,300.00	0.00	0.00	10,288.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,400.00	0.00	0.00	10,388.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,500.00	0.00	0.00	10,488.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,600.00	0.00	0.00	10,588.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,700.00	0.00	0.00	10,688.86	-25.00	-268.50	23.97	0.00	0.00	0.00
10,798.14	0.00	0.00	10,787.00	-25.00	-268.50	23.97	0.00	0.00	0.00
10,800.00	0.19	179.78	10,788.86	-25.00	-268.50	23.97	10.00	10.00	0.00
10,850.00	5.19	179.78	10,838.79	-27.35	-268.49	26.31	10.00	10.00	0.00
10,900.00	10.19	179.78	10,888.33	-34.03	-268.47	33.00	10.00	10.00	0.00
10,950.00	15.19	179.78	10,937.09	-45.01	-268.42	43.98	10.00	10.00	0.00
11,000.00	20.19	179.78	10,984.71	-60.19	-268.37	59.16	10.00	10.00	0.00
11,050.00	25.19	179.78	11,030.83	-79.47	-268.29	78.44	10.00	10.00	0.00
11,100.00	30.19	179.78	11,075.09	-102.69	-268.20	101.66	10.00	10.00	0.00
11,150.00	35.19	179.78	11,117.16	-129.69	-268.10	128.66	10.00	10.00	0.00
11,200.00	40.19	179.78	11,156.71	-160.24	-267.98	159.21	10.00	10.00	0.00
11,250.00	45.19	179.78	11,193.46	-194.13	-267.85	193.10	10.00	10.00	0.00
11,300.00	50.19	179.78	11,227.11	-231.09	-267.71	230.06	10.00	10.00	0.00
11,350.00	55.19	179.78	11,257.40	-270.85	-267.56	269.82	10.00	10.00	0.00
11,400.00	60.19	179.78	11,284.12	-313.09	-267.40	312.06	10.00	10.00	0.00
11,450.00	65.19	179.78	11,307.06	-357.50	-267.23	356.47	10.00	10.00	0.00
11,500.00	70.19	179.78	11,326.04	-403.74	-267.05	402.71	10.00	10.00	0.00
11,550.00	75.19	179.78	11,340.91	-451.46	-266.87	450.43	10.00	10.00	0.00
11,600.00	80.19	179.78	11,351.57	-500.29	-266.68	499.27	10.00	10.00	0.00
11,650.00	85.19	179.78	11,357.94	-549.87	-266.49	548.84	10.00	10.00	0.00
11,698.13	90.00	179.78	11,359.96	-597.95	-266.31	596.92	10.00	10.00	0.00
11,700.00	90.00	179.78	11,359.96	-599.82	-266.30	598.79	0.00	0.00	0.00
11,800.00	90.00	179.78	11,359.96	-699.81	-265.92	698.79	0.00	0.00	0.00
11,900.00	90.00	179.78	11,359.96	-799.81	-265.53	798.79	0.00	0.00	0.00
12,000.00	90.00	179.78	11,359.96	-899.81	-265.15	898.79	0.00	0.00	0.00
12,100.00	90.00	179.78	11,359.96	-999.81	-264.77	998.79	0.00	0.00	0.00
12,200.00	90.00	179.78	11,359.96	-1,099.81	-264.38	1,098.79	0.00	0.00	0.00
12,300.00	90.00	179.78	11,359.96	-1,199.81	-264.00	1,198.79	0.00	0.00	0.00
12,400.00	90.00	179.78	11,359.97	-1,299.81	-263.62	1,298.79	0.00	0.00	0.00
12,500.00	90.00	179.78	11,359.97	-1,399.81	-263.23	1,398.79	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slot 1
Well: 221H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,600.00	90.00	179.78	11,359.97	-1,499.81	-262.85	1,498.79	0.00	0.00	0.00
12,700.00	90.00	179.78	11,359.97	-1,599.81	-262.47	1,598.79	0.00	0.00	0.00
12,800.00	90.00	179.78	11,359.97	-1,699.81	-262.09	1,698.79	0.00	0.00	0.00
12,900.00	90.00	179.78	11,359.97	-1,799.81	-261.70	1,798.79	0.00	0.00	0.00
13,000.00	90.00	179.78	11,359.97	-1,899.81	-261.32	1,898.79	0.00	0.00	0.00
13,100.00	90.00	179.78	11,359.97	-1,999.80	-260.94	1,998.79	0.00	0.00	0.00
13,200.00	90.00	179.78	11,359.97	-2,099.80	-260.55	2,098.79	0.00	0.00	0.00
13,300.00	90.00	179.78	11,359.97	-2,199.80	-260.17	2,198.79	0.00	0.00	0.00
13,400.00	90.00	179.78	11,359.97	-2,299.80	-259.79	2,298.79	0.00	0.00	0.00
13,500.00	90.00	179.78	11,359.98	-2,399.80	-259.40	2,398.79	0.00	0.00	0.00
13,600.00	90.00	179.78	11,359.98	-2,499.80	-259.02	2,498.79	0.00	0.00	0.00
13,700.00	90.00	179.78	11,359.98	-2,599.80	-258.64	2,598.79	0.00	0.00	0.00
13,800.00	90.00	179.78	11,359.98	-2,699.80	-258.25	2,698.79	0.00	0.00	0.00
13,900.00	90.00	179.78	11,359.98	-2,799.80	-257.87	2,798.79	0.00	0.00	0.00
14,000.00	90.00	179.78	11,359.98	-2,899.80	-257.49	2,898.79	0.00	0.00	0.00
14,100.00	90.00	179.78	11,359.98	-2,999.80	-257.11	2,998.79	0.00	0.00	0.00
14,200.00	90.00	179.78	11,359.98	-3,099.80	-256.72	3,098.79	0.00	0.00	0.00
14,300.00	90.00	179.78	11,359.98	-3,199.80	-256.34	3,198.79	0.00	0.00	0.00
14,400.00	90.00	179.78	11,359.98	-3,299.80	-255.96	3,298.79	0.00	0.00	0.00
14,500.00	90.00	179.78	11,359.99	-3,399.79	-255.57	3,398.79	0.00	0.00	0.00
14,600.00	90.00	179.78	11,359.99	-3,499.79	-255.19	3,498.79	0.00	0.00	0.00
14,700.00	90.00	179.78	11,359.99	-3,599.79	-254.81	3,598.79	0.00	0.00	0.00
14,800.00	90.00	179.78	11,359.99	-3,699.79	-254.42	3,698.79	0.00	0.00	0.00
14,900.00	90.00	179.78	11,359.99	-3,799.79	-254.04	3,798.79	0.00	0.00	0.00
15,000.00	90.00	179.78	11,359.99	-3,899.79	-253.66	3,898.79	0.00	0.00	0.00
15,100.00	90.00	179.78	11,359.99	-3,999.79	-253.28	3,998.79	0.00	0.00	0.00
15,200.00	90.00	179.78	11,359.99	-4,099.79	-252.89	4,098.79	0.00	0.00	0.00
15,300.00	90.00	179.78	11,359.99	-4,199.79	-252.51	4,198.79	0.00	0.00	0.00
15,400.00	90.00	179.78	11,359.99	-4,299.79	-252.13	4,298.79	0.00	0.00	0.00
15,500.00	90.00	179.78	11,360.00	-4,399.79	-251.74	4,398.79	0.00	0.00	0.00
15,600.00	90.00	179.78	11,360.00	-4,499.79	-251.36	4,498.79	0.00	0.00	0.00
15,700.00	90.00	179.78	11,360.00	-4,599.79	-250.98	4,598.79	0.00	0.00	0.00
15,800.00	90.00	179.78	11,360.00	-4,699.79	-250.59	4,698.79	0.00	0.00	0.00
15,900.00	90.00	179.78	11,360.00	-4,799.78	-250.21	4,798.79	0.00	0.00	0.00
15,955.22	90.00	179.78	11,360.00	-4,855.00	-250.00	4,854.00	0.00	0.00	0.00

Pro Directional Survey Report

Company: Matador Resources
Project: Lea County, NM
Site: MJ Federal Slot 1
Well: 221H
Wellbore: OH
Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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
[MJ221H]FPP	0.00	0.00	0.00	-144.00	-268.00	601,582.00	713,154.00	32° 39' 6.9836 N	103° 38' 26.8449 W
- plan misses target center by 304.24usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point									
[MJ221H]LPP	0.00	0.00	0.00	-4,765.00	-250.00	596,961.00	713,172.00	32° 38' 21.2577 N	103° 38' 26.9868 W
- plan misses target center by 4771.55usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point									
[MJ221H]PBHL	0.00	0.00	11,360.00	-4,855.00	-250.00	596,871.00	713,172.00	32° 38' 20.3671 N	103° 38' 26.9936 W
- plan hits target center - Point									

Checked By: _____ Approved By: _____ Date: _____

FEB 06 2018

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Pro Directional
Anticollision Report

Company: Matador Resources
 Project: Lea County, NM
 Reference Site: MJ Federal Slot 1
 Site Error: 0.00 usft
 Reference Well: 221H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
 TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
 MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: WellPlanner1
 Offset TVD Reference: Offset Datum

Reference: Prelim Plan A

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

Survey Tool Program Date: 6/2/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	500.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG
500.00	10,798.00	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG
10,798.00	15,955.19	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 1						
231H - OH - Prelim Plan A	500.00	500.00	30.00	26.88	9.603	CC
231H - OH - Prelim Plan A	600.00	600.48	30.07	26.57	8.588	ES
231H - OH - Prelim Plan A	10,800.00	10,802.46	155.00	81.72	2.115	SF
MJ Federal Slot 2						
222H - OH - Prelim Plan A	3,426.65	3,574.90	1,643.37	1,621.65	75.648	CC
222H - OH - Prelim Plan A	15,955.22	15,950.00	1,650.08	1,472.63	9.299	ES, SF
232H - OH - Prelim Plan A	10,798.14	10,806.69	1,658.34	1,585.28	22.699	CC
232H - OH - Prelim Plan A	15,955.22	16,522.60	1,696.40	1,521.05	9.674	ES, SF

Offset Design MJ Federal Slot 1 - 231H - OH - Prelim Plan A

Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11230-MWD - OWSG

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference	Offset	Semi Major Axis	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)							
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	30.03	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	1.55	1.56	90.00	0.00	30.00	30.00	26.88	3.12	9.603 CC
600.00	599.99	600.48	600.48	1.75	1.75	-175.50	0.35	29.19	30.07	26.57	3.50	8.588 ES
700.00	699.95	700.95	700.91	1.82	1.83	-177.95	1.40	26.77	30.31	26.66	3.65	8.313
800.00	799.88	801.40	801.26	1.96	1.96	178.07	3.16	22.73	30.83	26.91	3.92	7.866
900.00	899.83	901.81	901.48	2.16	2.16	172.76	5.62	17.08	31.79	27.49	4.30	7.394
1,000.00	999.37	1,002.17	1,001.53	2.40	2.40	166.46	8.77	9.83	33.41	28.64	4.77	7.010
1,100.00	1,098.99	1,102.07	1,101.05	2.68	2.68	160.29	12.24	1.85	35.84	30.34	5.30	6.726
1,200.00	1,198.50	1,201.97	1,200.57	2.98	2.98	154.90	15.71	-6.14	38.24	32.36	5.88	6.501
1,300.00	1,298.22	1,301.88	1,300.10	3.30	3.30	150.24	19.18	-14.12	41.14	34.63	6.50	6.325
1,400.00	1,397.84	1,401.79	1,399.62	3.63	3.63	146.21	22.66	-22.11	44.27	37.11	7.15	6.188
1,500.00	1,497.46	1,501.69	1,499.15	3.97	3.97	142.72	26.13	-30.09	47.59	39.76	7.83	6.081

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

Pro Directional Anticollision Report

Company: Malador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 1 - 231H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSC, 500-MWD - OWSC, 11230-MWD - OWSC													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
1,600.00	1,597.08	1,601.60	1,598.67	4.32	4.31	139.70	29.60	-38.08	51.06	42.54	8.51	5.997	
1,700.00	1,696.70	1,701.50	1,698.20	4.67	4.66	137.07	33.07	-46.06	54.65	45.44	9.22	5.930	
1,800.00	1,795.32	1,801.41	1,797.73	5.03	5.02	134.77	38.54	-54.05	58.35	48.42	9.93	5.877	
1,900.00	1,895.94	1,901.32	1,897.25	5.39	5.38	132.74	40.02	-62.03	62.13	51.48	10.85	5.835	
2,000.00	1,995.56	2,001.22	1,996.78	5.76	5.75	130.95	43.49	-70.02	65.98	54.60	11.37	5.800	
2,100.00	2,095.18	2,101.13	2,096.30	6.13	6.11	129.36	46.96	-78.01	69.88	57.78	12.11	5.772	
2,200.00	2,194.80	2,201.03	2,195.83	6.50	6.48	127.94	50.43	-85.99	73.84	60.99	12.84	5.749	
2,300.00	2,294.42	2,300.94	2,295.35	6.87	6.85	126.66	53.90	-93.98	77.83	64.25	13.58	5.730	
2,400.00	2,394.04	2,400.85	2,394.88	7.24	7.22	125.51	57.37	-101.96	81.85	67.54	14.32	5.715	
2,500.00	2,493.66	2,500.75	2,494.41	7.62	7.59	124.47	60.85	-109.95	85.92	70.85	15.07	5.701	
2,600.00	2,593.28	2,600.66	2,593.93	7.99	7.97	123.52	64.32	-117.93	90.00	74.19	15.82	5.690	
2,700.00	2,692.90	2,700.56	2,693.46	8.37	8.34	122.65	67.79	-125.92	94.11	77.55	16.57	5.681	
2,800.00	2,792.52	2,800.47	2,792.98	8.74	8.72	121.86	71.26	-133.90	98.24	80.92	17.32	5.673	
2,900.00	2,892.14	2,900.38	2,892.51	9.12	9.09	121.13	74.73	-141.89	102.38	84.31	18.07	5.666	
3,000.00	2,991.76	3,000.28	2,992.04	9.50	9.47	120.45	78.21	-149.87	106.54	87.72	18.82	5.660	
3,100.00	3,091.37	3,100.19	3,091.56	9.88	9.85	119.83	81.68	-157.86	110.72	91.14	19.58	5.655	
3,200.00	3,190.99	3,200.09	3,191.09	10.26	10.23	119.26	85.15	-165.84	114.90	94.57	20.33	5.651	
3,300.00	3,290.61	3,300.00	3,290.61	10.64	10.60	118.72	88.62	-173.83	119.10	98.01	21.09	5.648	
3,400.00	3,390.23	3,400.10	3,390.14	11.02	10.98	118.22	92.09	-181.81	123.30	101.46	21.85	5.644	
3,500.00	3,489.85	3,499.81	3,489.86	11.40	11.36	117.75	95.56	-189.80	127.52	104.92	22.60	5.642	
3,593.70	3,583.20	3,606.58	3,582.92	11.76	11.77	117.34	98.82	-197.28	131.48	108.11	23.35	5.628	
3,600.00	3,589.47	3,600.28	3,589.19	11.78	11.74	117.32	99.04	-197.78	131.74	108.38	23.36	5.639	
3,700.00	3,689.17	3,700.37	3,688.72	12.16	12.12	116.57	102.51	-205.77	135.53	111.41	24.12	5.619	
3,800.00	3,788.99	3,800.48	3,788.24	12.52	12.50	115.21	105.98	-213.75	138.59	113.71	24.88	5.571	
3,900.00	3,888.90	3,900.62	3,887.71	12.88	12.88	113.26	109.45	-221.74	141.03	115.40	25.63	5.502	
4,000.00	3,988.87	4,000.85	3,987.11	13.23	13.26	110.73	112.92	-229.71	143.01	116.63	26.38	5.422	
4,093.70	4,082.56	4,107.45	4,080.15	13.54	13.67	12.51	116.16	-237.18	144.62	117.51	27.11	5.334	
4,100.00	4,088.86	4,101.17	4,086.40	13.56	13.65	12.30	116.38	-237.68	144.72	117.62	27.11	5.339	
4,200.00	4,188.86	4,201.55	4,185.64	13.88	14.03	8.97	119.64	-245.64	146.97	118.85	27.82	5.272	
4,300.00	4,288.86	4,298.53	4,285.37	14.20	14.40	5.83	123.20	-253.37	149.02	120.50	28.51	5.226	
4,400.00	4,388.86	4,399.15	4,385.75	14.52	14.77	3.35	125.95	-259.67	151.24	122.03	29.21	5.178	
4,500.00	4,488.86	4,499.99	4,486.46	14.85	15.13	1.55	127.99	-264.37	153.06	123.17	29.89	5.120	
4,600.00	4,588.86	4,600.97	4,587.39	15.17	15.49	0.39	129.32	-267.44	154.33	123.76	30.57	5.048	
4,700.00	4,688.86	4,702.04	4,688.44	15.50	15.84	-0.14	129.95	-268.88	154.95	123.70	31.25	4.959	
4,800.00	4,788.86	4,802.46	4,788.86	15.83	16.17	-0.18	130.00	-269.00	155.00	123.09	31.91	4.858	
4,900.00	4,888.86	4,902.46	4,888.86	16.16	16.50	-0.18	130.00	-269.00	155.00	122.43	32.57	4.759	
5,000.00	4,988.86	5,002.46	4,988.86	16.49	16.83	-0.18	130.00	-269.00	155.00	121.77	33.23	4.664	
5,100.00	5,088.86	5,102.46	5,088.86	16.83	17.16	-0.18	130.00	-269.00	155.00	121.10	33.90	4.572	
5,200.00	5,188.86	5,202.46	5,188.86	17.16	17.49	-0.18	130.00	-269.00	155.00	120.43	34.57	4.484	
5,300.00	5,288.86	5,302.46	5,288.86	17.50	17.82	-0.18	130.00	-269.00	155.00	119.76	35.24	4.399	
5,400.00	5,388.86	5,402.46	5,388.86	17.83	18.16	-0.18	130.00	-269.00	155.00	119.09	35.91	4.316	
5,500.00	5,488.86	5,502.46	5,488.86	18.17	18.49	-0.18	130.00	-269.00	155.00	118.42	36.58	4.237	
5,600.00	5,588.86	5,602.46	5,588.86	18.50	18.83	-0.18	130.00	-269.00	155.00	117.74	37.26	4.160	
5,700.00	5,688.86	5,702.46	5,688.86	18.84	19.17	-0.18	130.00	-269.00	155.00	117.07	37.94	4.086	
5,800.00	5,788.86	5,802.46	5,788.86	19.18	19.51	-0.18	130.00	-269.00	155.00	116.39	38.61	4.014	
5,900.00	5,888.86	5,902.46	5,888.86	19.52	19.84	-0.18	130.00	-269.00	155.00	115.71	39.29	3.945	
6,000.00	5,988.86	6,002.46	5,988.86	19.86	20.18	-0.18	130.00	-269.00	155.00	115.03	39.97	3.878	
6,100.00	6,088.86	6,102.46	6,088.86	20.20	20.52	-0.18	130.00	-269.00	155.00	114.34	40.66	3.813	
6,200.00	6,188.86	6,202.46	6,188.86	20.54	20.86	-0.18	130.00	-269.00	155.00	113.66	41.34	3.749	
6,300.00	6,288.86	6,302.46	6,288.86	20.89	21.21	-0.18	130.00	-269.00	155.00	112.98	42.02	3.688	
6,400.00	6,388.86	6,402.46	6,388.86	21.23	21.55	-0.18	130.00	-269.00	155.00	112.29	42.71	3.629	
6,500.00	6,488.86	6,502.46	6,488.86	21.57	21.89	-0.18	130.00	-269.00	155.00	111.61	43.40	3.572	

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 Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 1 - 231H - OH - Prelim Plan A														Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11230-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	Warning	
6,600.00	6,588.88	6,502.46	6,589.86	21.92	22.23	-0.18	130.00	-269.00	155.00	110.92	44.08	3.516		
6,700.00	6,688.86	6,702.46	6,689.86	22.26	22.57	-0.18	130.00	-269.00	155.00	110.23	44.77	3.462		
6,800.00	6,788.86	6,802.46	6,789.86	22.60	22.92	-0.18	130.00	-269.00	155.00	109.54	45.46	3.410		
6,900.00	6,888.86	6,902.46	6,889.86	22.95	23.26	-0.18	130.00	-269.00	155.00	108.85	46.15	3.359		
7,000.00	6,988.86	7,002.46	6,989.86	23.29	23.61	-0.18	130.00	-269.00	155.00	108.16	46.84	3.309		
7,100.00	7,088.86	7,102.46	7,089.86	23.64	23.95	-0.18	130.00	-269.00	155.00	107.47	47.53	3.261		
7,200.00	7,188.86	7,202.46	7,189.86	23.99	24.30	-0.18	130.00	-269.00	155.00	106.78	48.23	3.214		
7,300.00	7,288.86	7,302.46	7,289.86	24.33	24.64	-0.18	130.00	-269.00	155.00	106.08	48.92	3.169		
7,400.00	7,388.86	7,402.46	7,389.86	24.68	24.99	-0.18	130.00	-269.00	155.00	105.39	49.61	3.124		
7,500.00	7,488.86	7,502.46	7,489.86	25.03	25.34	-0.18	130.00	-269.00	155.00	104.69	50.31	3.081		
7,600.00	7,588.86	7,602.46	7,589.86	25.37	25.68	-0.18	130.00	-269.00	155.00	104.00	51.00	3.039		
7,700.00	7,688.86	7,702.46	7,689.86	25.72	26.03	-0.18	130.00	-269.00	155.00	103.30	51.70	2.998		
7,800.00	7,788.86	7,802.46	7,789.86	26.07	26.38	-0.18	130.00	-269.00	155.00	102.61	52.39	2.958		
7,900.00	7,888.86	7,902.46	7,889.86	26.42	26.72	-0.18	130.00	-269.00	155.00	101.91	53.09	2.920		
8,000.00	7,988.86	8,002.46	7,989.86	26.77	27.07	-0.18	130.00	-269.00	155.00	101.21	53.79	2.882		
8,100.00	8,088.86	8,102.46	8,089.86	27.12	27.42	-0.18	130.00	-269.00	155.00	100.52	54.49	2.845		
8,200.00	8,188.86	8,202.46	8,189.86	27.47	27.77	-0.18	130.00	-269.00	155.00	99.82	55.18	2.809		
8,300.00	8,288.86	8,302.46	8,289.86	27.82	28.12	-0.18	130.00	-269.00	155.00	99.12	55.88	2.774		
8,400.00	8,388.86	8,402.46	8,389.86	28.16	28.47	-0.18	130.00	-269.00	155.00	98.42	56.58	2.739		
8,500.00	8,488.86	8,502.46	8,489.86	28.51	28.82	-0.18	130.00	-269.00	155.00	97.72	57.28	2.706		
8,600.00	8,588.86	8,602.46	8,589.86	28.86	29.17	-0.18	130.00	-269.00	155.00	97.02	57.98	2.673		
8,700.00	8,688.86	8,702.46	8,689.86	29.21	29.52	-0.18	130.00	-269.00	155.00	96.32	58.68	2.641		
8,800.00	8,788.86	8,802.46	8,789.86	29.57	29.87	-0.18	130.00	-269.00	155.00	95.62	59.38	2.610		
8,900.00	8,888.86	8,902.46	8,889.86	29.92	30.22	-0.18	130.00	-269.00	155.00	94.92	60.08	2.580		
9,000.00	8,988.86	9,002.46	8,989.86	30.27	30.57	-0.18	130.00	-269.00	155.00	94.22	60.79	2.550		
9,100.00	9,088.86	9,102.46	9,089.86	30.62	30.92	-0.18	130.00	-269.00	155.00	93.51	61.49	2.521		
9,200.00	9,188.86	9,202.46	9,189.86	30.97	31.27	-0.18	130.00	-269.00	155.00	92.81	62.19	2.492		
9,300.00	9,288.86	9,302.46	9,289.86	31.32	31.62	-0.18	130.00	-269.00	155.00	92.11	62.89	2.465		
9,400.00	9,388.86	9,402.46	9,389.86	31.67	31.97	-0.18	130.00	-269.00	155.00	91.41	63.60	2.437		
9,500.00	9,488.86	9,502.46	9,489.86	32.02	32.32	-0.18	130.00	-269.00	155.00	90.70	64.30	2.411		
9,600.00	9,588.86	9,602.46	9,589.86	32.38	32.67	-0.18	130.00	-269.00	155.00	90.00	65.00	2.385		
9,700.00	9,688.86	9,702.46	9,689.86	32.73	33.02	-0.18	130.00	-269.00	155.00	89.29	65.71	2.359		
9,800.00	9,788.86	9,802.46	9,789.86	33.08	33.37	-0.18	130.00	-269.00	155.00	88.59	66.41	2.334		
9,900.00	9,888.86	9,902.46	9,889.86	33.43	33.73	-0.18	130.00	-269.00	155.00	87.89	67.12	2.309		
10,000.00	9,988.86	10,002.46	9,989.86	33.78	34.08	-0.18	130.00	-269.00	155.00	87.18	67.82	2.285		
10,100.00	10,088.86	10,102.46	10,089.86	34.14	34.43	-0.18	130.00	-269.00	155.00	86.48	68.52	2.262		
10,200.00	10,188.86	10,202.46	10,189.86	34.49	34.78	-0.18	130.00	-269.00	155.00	85.77	69.23	2.239		
10,300.00	10,288.86	10,302.46	10,289.86	34.84	35.13	-0.18	130.00	-269.00	155.00	85.07	69.94	2.216		
10,400.00	10,388.86	10,402.46	10,389.86	35.19	35.49	-0.18	130.00	-269.00	155.00	84.36	70.64	2.194		
10,500.00	10,488.86	10,502.46	10,489.86	35.55	35.84	-0.18	130.00	-269.00	155.00	83.65	71.35	2.172		
10,600.00	10,588.86	10,602.46	10,589.86	35.90	36.19	-0.18	130.00	-269.00	155.00	82.95	72.05	2.151		
10,700.00	10,688.86	10,702.46	10,689.86	36.25	36.54	-0.18	130.00	-269.00	155.00	82.24	72.76	2.130		
10,798.14	10,787.00	10,800.60	10,787.00	36.43	36.89	-0.18	130.00	-269.00	155.00	81.72	73.28	2.115		
10,800.00	10,788.86	10,802.46	10,789.86	36.43	36.90	-179.97	130.00	-269.00	155.00	81.72	73.29	2.115 SF		
10,850.00	10,839.79	10,852.39	10,839.79	36.43	37.07	-179.97	130.00	-269.00	157.35	83.88	73.46	2.142		
10,900.00	10,889.33	10,901.93	10,889.33	36.43	37.25	-179.97	130.00	-269.00	164.03	90.39	73.64	2.227		
10,950.00	10,937.09	10,950.69	10,937.09	36.44	37.42	-179.97	130.00	-269.00	175.01	101.19	73.82	2.371		
11,000.00	10,984.71	11,001.69	10,984.71	36.45	37.60	-179.97	130.00	-269.00	190.19	116.18	74.01	2.570		
11,050.00	11,030.83	11,044.43	11,030.83	36.47	37.75	-179.97	130.00	-269.00	209.47	135.30	74.17	2.824		
11,100.00	11,075.09	11,088.69	11,075.09	36.49	37.91	-179.97	130.00	-269.00	232.70	158.36	74.34	3.130		
11,150.00	11,117.16	11,130.73	11,117.16	36.52	38.06	-179.97	130.00	-269.00	259.69	185.19	74.50	3.486		
11,200.00	11,156.71	11,170.31	11,156.71	36.56	38.20	-179.98	130.00	-269.00	290.25	215.59	74.68	3.888		

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

Pro Directional Anticollision Report

Company: Malador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 1 - 231H - OH - Prelim Plan A														Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11230-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)						
11,250.00	11,193.46	11,207.06	11,193.46	36.60	38.31	-179.98	130.00	-269.00	324.13	249.34	74.79	4.334		
11,300.00	11,227.11	11,257.74	11,244.13	36.65	38.36	-179.98	129.36	-269.00	360.88	286.10	74.76	4.827		
11,350.00	11,257.40	11,350.00	11,322.29	36.72	38.35	-179.98	119.83	-268.96	396.03	321.92	74.11	5.344		
11,400.00	11,284.12	11,503.69	11,479.87	36.81	38.36	-179.99	88.19	-268.76	426.82	357.30	69.52	6.140		
11,450.00	11,307.08	11,695.42	11,632.51	36.91	38.41	-179.99	-48.35	-268.32	448.88	387.55	61.33	7.319		
11,500.00	11,326.04	11,932.74	11,756.20	37.03	38.62	-179.99	-248.91	-267.56	457.18	405.95	51.22	8.925		
11,550.00	11,340.91	12,139.21	11,790.08	37.17	39.10	-179.99	-451.47	-266.78	449.14	400.83	48.51	9.258		
11,600.00	11,351.57	12,188.05	11,790.06	37.34	39.27	-179.99	-500.30	-266.60	438.48	389.85	48.64	9.016		
11,650.00	11,357.94	12,237.62	11,790.06	37.52	39.46	-179.99	-549.88	-266.41	432.12	383.36	48.76	8.862		
11,698.13	11,359.96	12,285.70	11,790.06	37.71	39.66	-179.99	-597.95	-266.23	430.10	381.21	48.89	8.798		
11,700.00	11,359.96	12,287.57	11,790.06	37.72	39.67	-179.99	-599.82	-266.22	430.10	381.21	48.89	8.797		
11,800.00	11,359.96	12,387.57	11,790.05	38.18	40.13	-179.99	-699.82	-265.84	430.10	380.91	49.18	8.745		
11,900.00	11,359.96	12,487.57	11,790.05	38.71	40.67	-179.99	-799.82	-265.46	430.09	380.57	49.52	8.685		
12,000.00	11,359.96	12,587.57	11,790.05	39.31	41.26	-179.99	-899.82	-265.07	430.09	380.19	49.91	8.618		
12,100.00	11,359.96	12,687.57	11,790.05	39.97	41.92	-179.99	-999.82	-264.69	430.09	379.75	50.34	8.544		
12,200.00	11,359.96	12,787.57	11,790.05	40.69	42.63	-179.99	-1,099.82	-264.31	430.09	379.27	50.81	8.464		
12,300.00	11,359.96	12,887.57	11,790.05	41.46	43.39	-179.99	-1,199.82	-263.93	430.08	378.75	51.33	8.378		
12,400.00	11,359.97	12,987.57	11,790.05	42.29	44.21	-179.99	-1,299.82	-263.55	430.08	378.19	51.90	8.287		
12,500.00	11,359.97	13,087.57	11,790.05	43.16	45.07	-179.99	-1,399.81	-263.17	430.08	377.58	52.50	8.192		
12,600.00	11,359.97	13,187.57	11,790.04	44.09	45.97	-179.99	-1,499.81	-262.79	430.08	376.94	53.14	8.093		
12,700.00	11,359.97	13,287.57	11,790.04	45.05	46.92	-179.99	-1,599.81	-262.41	430.07	376.25	53.82	7.991		
12,800.00	11,359.97	13,387.57	11,790.04	46.06	47.91	-179.99	-1,699.81	-262.03	430.07	375.53	54.54	7.885		
12,900.00	11,359.97	13,487.57	11,790.04	47.10	48.94	-179.99	-1,799.81	-261.64	430.07	374.78	55.29	7.778		
13,000.00	11,359.97	13,587.57	11,790.04	48.18	50.00	-179.99	-1,899.81	-261.26	430.07	373.99	56.08	7.669		
13,100.00	11,359.97	13,687.57	11,790.04	49.29	51.09	-179.99	-1,999.81	-260.88	430.07	373.17	56.90	7.558		
13,200.00	11,359.97	13,787.57	11,790.04	50.43	52.21	-179.99	-2,099.81	-260.50	430.06	372.31	57.75	7.447		
13,300.00	11,359.97	13,887.57	11,790.04	51.60	53.36	-179.99	-2,199.81	-260.12	430.06	371.43	58.63	7.335		
13,400.00	11,359.97	13,987.57	11,790.03	52.80	54.54	-179.99	-2,299.81	-259.74	430.06	370.52	59.54	7.223		
13,500.00	11,359.98	14,087.57	11,790.03	54.03	55.75	-179.99	-2,399.81	-259.36	430.06	369.58	60.47	7.111		
13,600.00	11,359.98	14,187.57	11,790.03	55.27	56.97	-179.99	-2,499.81	-258.98	430.05	368.62	61.44	7.000		
13,700.00	11,359.98	14,287.57	11,790.03	56.54	58.22	-179.99	-2,599.81	-258.60	430.05	367.63	62.42	6.889		
13,800.00	11,359.98	14,387.57	11,790.03	57.83	59.49	-179.99	-2,699.81	-258.21	430.05	366.62	63.43	6.780		
13,900.00	11,359.98	14,487.57	11,790.03	59.14	60.78	-179.99	-2,799.80	-257.83	430.05	365.58	64.46	6.671		
14,000.00	11,359.98	14,587.57	11,790.03	60.46	62.09	-180.00	-2,899.80	-257.45	430.05	364.53	65.52	6.564		
14,100.00	11,359.98	14,687.57	11,790.02	61.81	63.42	-180.00	-2,999.80	-257.07	430.04	363.45	66.59	6.458		
14,200.00	11,359.98	14,787.57	11,790.02	63.17	64.76	-180.00	-3,099.80	-256.69	430.04	362.35	67.69	6.354		
14,300.00	11,359.98	14,887.57	11,790.02	64.54	66.11	-180.00	-3,199.80	-256.31	430.04	361.24	68.80	6.251		
14,400.00	11,359.98	14,987.57	11,790.02	65.93	67.48	-180.00	-3,299.80	-255.93	430.04	360.11	69.93	6.150		
14,500.00	11,359.99	15,087.57	11,790.02	67.33	68.87	-180.00	-3,399.80	-255.55	430.03	358.96	71.07	6.051		
14,600.00	11,359.99	15,187.57	11,790.02	68.74	70.26	-180.00	-3,499.80	-255.17	430.03	357.80	72.23	5.953		
14,700.00	11,359.99	15,287.57	11,790.02	70.16	71.67	-180.00	-3,599.80	-254.78	430.03	356.62	73.41	5.858		
14,800.00	11,359.99	15,387.57	11,790.02	71.60	73.09	-180.00	-3,699.80	-254.40	430.03	355.42	74.60	5.764		
14,900.00	11,359.99	15,487.57	11,790.01	73.04	74.52	-180.00	-3,799.80	-254.02	430.02	354.22	75.81	5.672		
15,000.00	11,359.99	15,587.57	11,790.01	74.49	75.96	-180.00	-3,899.80	-253.64	430.02	352.99	77.03	5.583		
15,100.00	11,359.99	15,687.57	11,790.01	75.96	77.41	-180.00	-3,999.80	-253.26	430.02	351.76	78.26	5.495		
15,200.00	11,359.99	15,787.57	11,790.01	77.43	78.86	-180.00	-4,099.80	-252.88	430.02	350.52	79.50	5.409		
15,300.00	11,359.99	15,887.57	11,790.01	78.91	80.33	-180.00	-4,199.79	-252.50	430.02	349.26	80.76	5.325		
15,400.00	11,359.99	15,987.57	11,790.01	80.39	81.80	-180.00	-4,299.79	-252.12	430.01	347.99	82.02	5.243		
15,500.00	11,360.00	16,087.57	11,790.01	81.89	83.28	-180.00	-4,399.79	-251.73	430.01	346.71	83.30	5.162		
15,600.00	11,360.00	16,187.57	11,790.00	83.39	84.77	-180.00	-4,499.79	-251.35	430.01	345.43	84.58	5.084		
15,700.00	11,360.00	16,287.57	11,790.00	84.89	86.26	-180.00	-4,599.79	-250.97	430.01	344.13	85.88	5.007		
15,800.00	11,360.00	16,387.57	11,790.00	86.41	87.77	-180.00	-4,699.79	-250.59	430.00	342.82	87.18	4.932		

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 Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 1 - 231H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11230-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		
15,900.00	11,360.00	16,487.57	11,790.00	87.92	89.27	-180.00	-4,799.79	-250.21	430.00	341.51	88.49	4.859		
15,955.22	11,360.00	16,542.78	11,790.00	88.76	90.11	180.00	-4,855.01	-250.00	430.00	340.78	89.22	4.819		

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 2 - 222H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - QWSG, 500-MWD - QWSG, 10780-MWD - QWSG													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	5.00	5.00	0.00	0.01	89.62	11.00	1,650.00	1,650.04				
100.00	100.00	105.00	105.00	0.13	0.15	89.62	11.00	1,650.00	1,650.04	1,649.78	0.27	6,016.957	
200.00	200.00	205.00	205.00	0.49	0.50	89.62	11.00	1,650.00	1,650.04	1,649.05	0.99	1,664.729	
300.00	300.00	305.00	305.00	0.85	0.86	89.62	11.00	1,650.00	1,650.04	1,648.33	1.71	985.997	
400.00	400.00	405.00	405.00	1.20	1.22	89.62	11.00	1,650.00	1,650.04	1,647.61	2.43	680.411	
500.00	500.00	507.01	507.01	1.56	1.58	89.62	11.00	1,650.00	1,650.03	1,646.90	3.14	525.938	
600.00	599.99	647.24	647.22	1.75	1.79	-175.06	10.82	1,648.12	1,649.56	1,646.03	3.54	468.615	
700.00	699.96	787.43	787.31	1.82	1.95	-175.06	10.33	1,642.82	1,648.39	1,644.83	3.76	438.004	
800.00	799.86	927.58	927.16	1.96	2.22	-175.05	9.52	1,634.12	1,646.52	1,642.35	4.17	395.100	
900.00	899.68	1,048.26	1,047.44	2.16	2.53	-175.04	8.59	1,624.10	1,644.24	1,639.59	4.65	353.823	
1,000.00	999.37	1,148.26	1,147.06	2.40	2.82	-175.04	7.78	1,615.43	1,643.37	1,638.22	5.15	319.172	
1,100.00	1,098.99	1,248.26	1,246.68	2.68	3.13	-175.04	6.97	1,606.75	1,643.37	1,637.67	5.70	288.255	
1,200.00	1,198.60	1,348.26	1,346.30	2.98	3.46	-175.04	6.16	1,598.07	1,643.37	1,637.08	6.29	261.290	
1,300.00	1,298.22	1,448.26	1,445.92	3.30	3.79	-175.04	5.36	1,589.39	1,643.37	1,636.47	6.90	238.015	
1,400.00	1,397.84	1,548.26	1,545.54	3.63	4.14	-175.04	4.55	1,580.71	1,643.37	1,635.83	7.54	217.937	
1,500.00	1,497.46	1,648.26	1,645.16	3.97	4.49	-175.04	3.74	1,572.04	1,643.37	1,635.16	8.19	200.602	
1,600.00	1,597.08	1,748.26	1,744.78	4.32	4.84	-175.04	2.93	1,563.36	1,643.37	1,634.51	8.88	185.569	
1,700.00	1,696.70	1,848.26	1,844.40	4.67	5.21	-175.04	2.12	1,554.68	1,643.37	1,633.84	9.53	172.459	
1,800.00	1,796.32	1,948.26	1,944.01	5.03	5.57	-175.04	1.32	1,546.00	1,643.37	1,633.16	10.21	160.958	
1,900.00	1,895.94	2,048.26	2,043.63	5.39	5.94	-175.04	0.51	1,537.32	1,643.37	1,632.47	10.90	150.810	
2,000.00	1,895.56	2,148.26	2,143.25	5.76	6.31	-175.04	-0.30	1,528.64	1,643.37	1,631.78	11.59	141.803	
2,100.00	2,095.18	2,248.26	2,242.87	6.13	6.68	-175.04	-1.11	1,519.97	1,643.37	1,631.08	12.29	133.765	
2,200.00	2,194.80	2,348.26	2,342.49	6.50	7.05	-175.04	-1.92	1,511.29	1,643.37	1,630.38	12.99	126.556	
2,300.00	2,294.42	2,448.26	2,442.11	6.87	7.42	-175.04	-2.72	1,502.61	1,643.37	1,629.68	13.69	120.057	
2,400.00	2,394.04	2,548.26	2,541.73	7.24	7.80	-175.04	-3.53	1,493.93	1,643.37	1,628.98	14.39	114.173	
2,500.00	2,493.66	2,648.26	2,641.35	7.62	8.17	-175.04	-4.34	1,485.25	1,643.37	1,628.27	15.10	108.823	
2,600.00	2,593.28	2,748.26	2,740.97	7.99	8.55	-175.04	-5.15	1,476.58	1,643.37	1,627.56	15.81	103.940	
2,700.00	2,692.90	2,848.26	2,840.59	8.37	8.93	-175.04	-5.96	1,467.90	1,643.37	1,626.85	16.52	99.466	
2,800.00	2,792.52	2,948.26	2,940.21	8.74	9.31	-175.04	-6.76	1,459.22	1,643.37	1,626.14	17.23	95.353	
2,900.00	2,892.14	3,048.26	3,039.83	9.12	9.68	-175.04	-7.57	1,450.54	1,643.37	1,625.42	17.95	91.561	
3,000.00	2,891.76	3,148.26	3,139.45	9.50	10.06	-175.04	-8.38	1,441.86	1,643.37	1,624.71	18.66	88.053	
3,100.00	3,091.37	3,248.26	3,239.07	9.88	10.44	-175.04	-9.19	1,433.19	1,643.37	1,623.99	19.38	84.800	
3,200.00	3,190.99	3,348.26	3,338.69	10.26	10.82	-175.04	-10.00	1,424.51	1,643.37	1,623.27	20.10	81.775	
3,300.00	3,290.61	3,448.26	3,438.31	10.64	11.20	-175.04	-10.80	1,415.83	1,643.37	1,622.56	20.81	78.955	
3,400.00	3,390.23	3,548.26	3,537.93	11.02	11.58	-175.04	-11.61	1,407.15	1,643.37	1,621.84	21.53	76.321	
3,426.65	3,416.78	3,574.90	3,564.47	11.12	11.68	-175.04	-11.83	1,404.84	1,643.37	1,621.65	21.72	75.848 CC	
3,500.00	3,489.85	3,636.13	3,625.48	11.40	11.92	-175.04	-12.31	1,399.68	1,643.57	1,621.36	22.21	74.009	
3,593.70	3,583.20	3,708.99	3,698.14	11.76	12.19	-175.05	-12.80	1,394.35	1,644.86	1,622.05	22.80	72.130	
3,680.00	3,589.47	3,713.89	3,703.03	11.78	12.21	-175.05	-12.83	1,394.03	1,644.98	1,622.14	22.84	72.009	
3,700.00	3,689.17	3,791.63	3,780.63	12.16	12.49	-175.05	-13.26	1,389.43	1,646.77	1,623.29	23.47	70.151	
3,800.00	3,788.99	3,869.35	3,858.27	12.52	12.77	-175.06	-13.59	1,385.87	1,648.17	1,624.07	24.10	68.394	
3,900.00	3,888.90	3,947.07	3,935.94	12.88	13.04	-175.06	-13.83	1,383.37	1,649.18	1,624.47	24.71	66.728	
4,000.00	3,988.87	4,024.77	4,013.64	13.23	13.31	-175.06	-13.96	1,381.91	1,649.80	1,624.48	25.32	65.152	
4,093.70	4,082.56	4,101.30	4,087.56	13.54	13.56	89.62	-14.00	1,381.50	1,650.04	1,624.15	25.88	63.748	
4,100.00	4,088.86	4,105.00	4,093.86	13.56	13.57	89.62	-14.00	1,381.50	1,650.04	1,624.12	25.92	63.666	
4,200.00	4,188.86	4,205.00	4,193.86	13.88	13.89	89.62	-14.00	1,381.50	1,650.04	1,623.45	26.38	62.079	
4,300.00	4,288.86	4,305.00	4,293.86	14.20	14.22	89.62	-14.00	1,381.50	1,650.04	1,622.79	27.24	60.563	
4,400.00	4,388.86	4,405.00	4,393.86	14.52	14.54	89.62	-14.00	1,381.50	1,650.04	1,622.12	27.91	59.114	
4,500.00	4,488.86	4,505.00	4,493.86	14.85	14.86	89.62	-14.00	1,381.50	1,650.04	1,621.45	28.58	57.728	
4,600.00	4,588.86	4,605.00	4,593.86	15.17	15.19	89.62	-14.00	1,381.50	1,650.04	1,620.78	29.26	56.401	
4,700.00	4,688.86	4,705.00	4,693.86	15.50	15.52	89.62	-14.00	1,381.50	1,650.04	1,620.11	29.93	55.130	
4,800.00	4,788.86	4,805.00	4,793.86	15.83	15.85	89.62	-14.00	1,381.50	1,650.04	1,619.43	30.61	53.912	

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 Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 2 - 222H - OH - Prelim Plan A												Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSC, 500-MWD - OWSC, 10789-MWD - OWSC												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	
4,900.00	4,888.86	4,905.00	4,893.86	18.18	16.18	89.62	-14.00	1,381.50	1,650.04	1,618.75	31.28	52.743	
5,000.00	4,988.86	5,005.00	4,993.86	16.49	18.51	89.62	-14.00	1,381.50	1,650.04	1,618.07	31.96	51.621	
5,100.00	5,088.86	5,105.00	5,093.86	16.83	16.84	89.62	-14.00	1,381.50	1,650.04	1,617.39	32.65	50.544	
5,200.00	5,188.86	5,205.00	5,193.86	17.16	17.16	89.62	-14.00	1,381.50	1,650.04	1,616.71	33.33	49.508	
5,300.00	5,288.86	5,305.00	5,293.86	17.50	17.51	89.62	-14.00	1,381.50	1,650.04	1,616.02	34.01	48.512	
5,400.00	5,388.86	5,405.00	5,393.86	17.83	17.85	89.62	-14.00	1,381.50	1,650.04	1,615.34	34.70	47.553	
5,500.00	5,488.86	5,505.00	5,493.86	18.17	18.18	89.62	-14.00	1,381.50	1,650.04	1,614.65	35.39	46.630	
5,600.00	5,588.86	5,605.00	5,593.86	18.50	18.52	89.62	-14.00	1,381.50	1,650.04	1,613.96	36.07	45.741	
5,700.00	5,688.86	5,705.00	5,693.86	18.84	18.86	89.62	-14.00	1,381.50	1,650.04	1,613.27	36.76	44.893	
5,800.00	5,788.86	5,805.00	5,793.86	19.18	19.20	89.62	-14.00	1,381.50	1,650.04	1,612.58	37.45	44.056	
5,900.00	5,888.86	5,905.00	5,893.86	19.52	19.54	89.62	-14.00	1,381.50	1,650.04	1,611.89	38.14	43.257	
6,000.00	5,988.86	6,005.00	5,993.86	19.86	19.88	89.62	-14.00	1,381.50	1,650.04	1,611.20	38.84	42.497	
6,100.00	6,088.86	6,105.00	6,093.86	20.20	20.22	89.62	-14.00	1,381.50	1,650.04	1,610.51	39.53	41.742	
6,200.00	6,188.86	6,205.00	6,193.86	20.54	20.55	89.62	-14.00	1,381.50	1,650.04	1,609.81	40.22	41.022	
6,300.00	6,288.86	6,305.00	6,293.86	20.89	20.90	89.62	-14.00	1,381.50	1,650.04	1,609.12	40.92	40.325	
6,400.00	6,388.86	6,405.00	6,393.86	21.23	21.25	89.62	-14.00	1,381.50	1,650.04	1,608.42	41.61	39.651	
6,500.00	6,488.86	6,505.00	6,493.86	21.57	21.59	89.62	-14.00	1,381.50	1,650.04	1,607.73	42.31	38.999	
6,600.00	6,588.86	6,605.00	6,593.86	21.92	21.93	89.62	-14.00	1,381.50	1,650.04	1,607.03	43.01	38.367	
6,700.00	6,688.86	6,705.00	6,693.86	22.26	22.28	89.62	-14.00	1,381.50	1,650.04	1,606.33	43.70	37.755	
6,800.00	6,788.86	6,805.00	6,793.86	22.60	22.62	89.62	-14.00	1,381.50	1,650.04	1,605.63	44.40	37.161	
6,900.00	6,888.86	6,905.00	6,893.86	22.95	22.97	89.62	-14.00	1,381.50	1,650.04	1,604.94	45.10	36.585	
7,000.00	6,988.86	7,005.00	6,993.86	23.29	23.31	89.62	-14.00	1,381.50	1,650.04	1,604.24	45.80	36.027	
7,100.00	7,088.86	7,105.00	7,093.86	23.64	23.66	89.62	-14.00	1,381.50	1,650.04	1,603.54	46.50	35.485	
7,200.00	7,188.86	7,205.00	7,193.86	23.99	24.00	89.62	-14.00	1,381.50	1,650.04	1,602.84	47.20	34.958	
7,300.00	7,288.86	7,305.00	7,293.86	24.33	24.35	89.62	-14.00	1,381.50	1,650.04	1,602.14	47.90	34.447	
7,400.00	7,388.86	7,405.00	7,393.86	24.68	24.70	89.62	-14.00	1,381.50	1,650.04	1,601.43	48.60	33.950	
7,500.00	7,488.86	7,505.00	7,493.86	25.03	25.04	89.62	-14.00	1,381.50	1,650.04	1,600.73	49.30	33.466	
7,600.00	7,588.86	7,605.00	7,593.86	25.37	25.39	89.62	-14.00	1,381.50	1,650.04	1,600.03	50.01	32.997	
7,700.00	7,688.86	7,705.00	7,693.86	25.72	25.74	89.62	-14.00	1,381.50	1,650.04	1,599.33	50.71	32.539	
7,800.00	7,788.86	7,805.00	7,793.86	26.07	26.09	89.62	-14.00	1,381.50	1,650.04	1,598.62	51.41	32.094	
7,900.00	7,888.86	7,905.00	7,893.86	26.42	26.44	89.62	-14.00	1,381.50	1,650.04	1,597.92	52.12	31.661	
8,000.00	7,988.86	8,005.00	7,993.86	26.77	26.79	89.62	-14.00	1,381.50	1,650.04	1,597.22	52.82	31.239	
8,100.00	8,088.86	8,105.00	8,093.86	27.12	27.13	89.62	-14.00	1,381.50	1,650.04	1,596.51	53.52	30.829	
8,200.00	8,188.86	8,205.00	8,193.86	27.47	27.48	89.62	-14.00	1,381.50	1,650.04	1,595.81	54.23	30.428	
8,300.00	8,288.86	8,305.00	8,293.86	27.82	27.83	89.62	-14.00	1,381.50	1,650.04	1,595.10	54.93	30.038	
8,400.00	8,388.86	8,405.00	8,393.86	28.16	28.18	89.62	-14.00	1,381.50	1,650.04	1,594.40	55.64	29.657	
8,500.00	8,488.86	8,505.00	8,493.86	28.51	28.53	89.62	-14.00	1,381.50	1,650.04	1,593.69	56.34	29.286	
8,600.00	8,588.86	8,605.00	8,593.86	28.86	28.88	89.62	-14.00	1,381.50	1,650.04	1,592.99	57.05	28.924	
8,700.00	8,688.86	8,705.00	8,693.86	29.21	29.23	89.62	-14.00	1,381.50	1,650.04	1,592.28	57.75	28.570	
8,800.00	8,788.86	8,805.00	8,793.86	29.57	29.58	89.62	-14.00	1,381.50	1,650.04	1,591.58	58.46	28.225	
8,900.00	8,888.86	8,905.00	8,893.86	29.92	29.93	89.62	-14.00	1,381.50	1,650.04	1,590.87	59.17	27.888	
9,000.00	8,988.86	9,005.00	8,993.86	30.27	30.28	89.62	-14.00	1,381.50	1,650.04	1,590.16	59.87	27.559	
9,100.00	9,088.86	9,105.00	9,093.86	30.62	30.64	89.62	-14.00	1,381.50	1,650.04	1,589.45	60.58	27.237	
9,200.00	9,188.86	9,205.00	9,193.86	30.97	30.99	89.62	-14.00	1,381.50	1,650.04	1,588.75	61.29	26.923	
9,300.00	9,288.86	9,305.00	9,293.86	31.32	31.34	89.62	-14.00	1,381.50	1,650.04	1,588.04	61.99	26.616	
9,400.00	9,388.86	9,405.00	9,393.86	31.67	31.69	89.62	-14.00	1,381.50	1,650.04	1,587.33	62.70	26.315	
9,500.00	9,488.86	9,505.00	9,493.86	32.02	32.04	89.62	-14.00	1,381.50	1,650.04	1,586.63	63.41	26.022	
9,600.00	9,588.86	9,605.00	9,593.86	32.38	32.39	89.62	-14.00	1,381.50	1,650.04	1,585.92	64.12	25.734	
9,700.00	9,688.86	9,705.00	9,693.86	32.73	32.74	89.62	-14.00	1,381.50	1,650.04	1,585.21	64.83	25.453	
9,800.00	9,788.86	9,805.00	9,793.86	33.08	33.10	89.62	-14.00	1,381.50	1,650.04	1,584.50	65.53	25.178	
9,900.00	9,888.86	9,905.00	9,893.86	33.43	33.45	89.62	-14.00	1,381.50	1,650.04	1,583.79	66.24	24.909	
10,000.00	9,988.86	10,005.00	9,993.86	33.78	33.80	89.62	-14.00	1,381.50	1,650.04	1,583.08	66.95	24.645	

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 Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 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							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		
10,100.00	10,088.86	10,105.00	10,093.86	34.14	34.15	89.62	-14.00	1,381.50	1,650.04	1,582.38	67.66	24.387		
10,200.00	10,188.86	10,205.00	10,193.86	34.49	34.51	89.62	-14.00	1,381.50	1,650.04	1,581.67	68.37	24.134		
10,300.00	10,288.86	10,305.00	10,293.86	34.84	34.86	89.62	-14.00	1,381.50	1,650.04	1,580.96	69.08	23.886		
10,400.00	10,388.86	10,405.00	10,393.86	35.19	35.21	89.62	-14.00	1,381.50	1,650.04	1,580.25	69.79	23.643		
10,500.00	10,488.86	10,505.00	10,493.86	35.55	35.57	89.62	-14.00	1,381.50	1,650.04	1,579.54	70.50	23.405		
10,600.00	10,588.86	10,605.00	10,593.86	35.90	35.92	89.62	-14.00	1,381.50	1,650.04	1,578.83	71.21	23.172		
10,700.00	10,688.86	10,705.00	10,693.86	36.25	36.26	89.62	-14.00	1,381.50	1,650.04	1,578.13	71.91	22.946		
10,798.14	10,787.00	10,803.26	10,792.12	36.43	36.41	89.62	-14.20	1,381.50	1,650.04	1,577.80	72.23	22.843		
10,800.00	10,788.86	10,805.13	10,793.99	36.43	36.41	-90.15	-14.25	1,381.50	1,650.04	1,577.80	72.23	22.843		
10,850.00	10,838.79	10,855.45	10,844.16	36.43	36.41	-90.11	-17.94	1,381.52	1,650.03	1,577.80	72.24	22.842		
10,900.00	10,888.33	10,905.64	10,893.69	36.43	36.42	-90.06	-25.99	1,381.55	1,650.03	1,577.79	72.24	22.840		
10,950.00	10,937.09	10,955.72	10,942.21	36.44	36.43	-90.01	-38.30	1,381.59	1,650.03	1,577.77	72.26	22.836		
10,967.49	10,953.90	10,973.21	10,958.88	36.45	36.43	-90.00	-43.50	1,381.61	1,650.03	1,577.77	72.26	22.834		
11,000.00	10,984.71	11,005.68	10,989.36	36.45	36.44	-89.97	-54.77	1,381.66	1,650.03	1,577.75	72.28	22.830		
11,050.00	11,030.83	11,055.52	11,034.79	36.47	36.46	-89.92	-75.22	1,381.73	1,650.03	1,577.73	72.30	22.821		
11,100.00	11,075.09	11,105.24	11,078.18	36.49	36.48	-89.87	-99.48	1,381.83	1,650.03	1,577.69	72.34	22.808		
11,150.00	11,117.16	11,154.85	11,119.20	36.52	36.51	-89.83	-127.34	1,381.93	1,650.04	1,577.63	72.40	22.790		
11,200.00	11,156.71	11,204.35	11,157.59	36.56	36.55	-89.78	-158.58	1,382.05	1,650.04	1,577.56	72.48	22.765		
11,250.00	11,193.46	11,253.75	11,193.06	36.60	36.60	-89.74	-192.93	1,382.19	1,650.05	1,577.46	72.58	22.734		
11,300.00	11,227.11	11,303.05	11,225.38	36.65	36.65	-89.70	-230.13	1,382.33	1,650.05	1,577.34	72.71	22.693		
11,350.00	11,257.40	11,352.25	11,254.34	36.72	36.72	-89.66	-269.90	1,382.48	1,650.06	1,577.19	72.87	22.643		
11,400.00	11,284.12	11,401.36	11,279.73	36.81	36.81	-89.63	-311.92	1,382.64	1,650.06	1,577.00	73.07	22.583		
11,450.00	11,307.06	11,450.40	11,301.40	36.91	36.91	-89.60	-359.89	1,382.81	1,650.07	1,576.77	73.30	22.512		
11,500.00	11,328.04	11,499.36	11,319.21	37.03	37.04	-89.57	-401.48	1,382.96	1,650.08	1,576.51	73.57	22.429		
11,550.00	11,340.91	11,548.25	11,333.04	37.17	37.18	-89.54	-448.36	1,383.16	1,650.08	1,576.20	73.88	22.336		
11,600.00	11,351.57	11,597.09	11,342.82	37.34	37.34	-89.52	-496.19	1,383.35	1,650.09	1,575.86	74.22	22.231		
11,650.00	11,357.94	11,645.87	11,348.49	37.52	37.52	-89.50	-544.63	1,383.53	1,650.09	1,575.48	74.61	22.117		
11,698.13	11,359.96	11,692.92	11,350.06	37.71	37.72	-89.48	-591.63	1,383.71	1,650.10	1,575.09	75.01	21.998		
11,700.00	11,359.96	11,705.21	11,350.06	37.72	37.77	-89.48	-593.50	1,383.72	1,650.10	1,575.02	75.07	21.979		
11,800.00	11,359.96	11,805.21	11,350.06	38.18	38.24	-89.48	-693.50	1,384.10	1,650.09	1,574.06	76.03	21.702		
11,900.00	11,359.96	11,905.21	11,350.06	38.71	38.78	-89.48	-793.50	1,384.48	1,650.09	1,572.97	77.13	21.395		
12,000.00	11,359.96	12,005.21	11,350.05	39.31	39.39	-89.48	-893.50	1,384.87	1,650.09	1,571.75	78.35	21.062		
12,100.00	11,359.96	12,105.21	11,350.05	39.97	40.06	-89.48	-993.50	1,385.25	1,650.09	1,570.41	79.69	20.707		
12,200.00	11,359.96	12,205.21	11,350.05	40.69	40.79	-89.48	-1,093.50	1,385.63	1,650.09	1,568.95	81.14	20.336		
12,300.00	11,359.96	12,305.21	11,350.05	41.46	41.57	-89.48	-1,193.50	1,386.01	1,650.09	1,567.38	82.71	19.951		
12,400.00	11,359.97	12,405.21	11,350.05	42.29	42.40	-89.48	-1,293.50	1,386.40	1,650.09	1,565.71	84.38	19.556		
12,500.00	11,359.97	12,505.21	11,350.05	43.16	43.29	-89.48	-1,393.50	1,386.78	1,650.09	1,563.95	86.14	19.155		
12,600.00	11,359.97	12,605.21	11,350.05	44.09	44.21	-89.48	-1,493.49	1,387.16	1,650.09	1,562.09	88.00	18.750		
12,700.00	11,359.97	12,705.21	11,350.04	45.05	45.19	-89.48	-1,593.49	1,387.54	1,650.09	1,560.14	89.95	18.345		
12,800.00	11,359.97	12,805.21	11,350.04	46.06	46.20	-89.48	-1,693.49	1,387.93	1,650.09	1,558.12	91.97	17.941		
12,900.00	11,359.97	12,905.21	11,350.04	47.10	47.25	-89.48	-1,793.49	1,388.31	1,650.09	1,556.02	94.07	17.541		
13,000.00	11,359.97	13,005.21	11,350.04	48.18	48.33	-89.48	-1,893.49	1,388.69	1,650.09	1,553.85	96.24	17.146		
13,100.00	11,359.97	13,094.79	11,350.04	49.29	49.33	-89.48	-1,993.49	1,389.07	1,650.09	1,551.73	98.36	16.777		
13,200.00	11,359.97	13,194.79	11,350.04	50.43	50.47	-89.48	-2,093.49	1,389.46	1,650.09	1,549.44	100.65	16.394		
13,300.00	11,359.97	13,294.79	11,350.04	51.60	51.65	-89.48	-2,193.49	1,389.84	1,650.09	1,547.09	103.00	16.020		
13,400.00	11,359.97	13,405.21	11,350.03	52.80	52.97	-89.48	-2,293.49	1,390.22	1,650.09	1,544.58	105.53	15.636		
13,500.00	11,359.98	13,505.21	11,350.03	54.03	54.20	-89.48	-2,393.49	1,390.60	1,650.09	1,542.10	107.99	15.280		
13,600.00	11,359.98	13,605.21	11,350.03	55.27	55.45	-89.48	-2,493.49	1,390.99	1,650.09	1,539.60	110.49	14.934		
13,700.00	11,359.98	13,705.21	11,350.03	56.54	56.72	-89.48	-2,593.49	1,391.37	1,650.09	1,537.05	113.04	14.598		
13,800.00	11,359.98	13,805.21	11,350.03	57.83	58.02	-89.48	-2,693.49	1,391.75	1,650.09	1,534.46	115.62	14.271		
13,900.00	11,359.98	13,905.21	11,350.03	59.14	59.33	-89.48	-2,793.49	1,392.14	1,650.09	1,531.84	118.25	13.954		
14,000.00	11,359.98	14,005.21	11,350.03	60.46	60.66	-89.48	-2,893.48	1,392.52	1,650.09	1,529.18	120.91	13.647		

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 Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 2 - 222H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 10750-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		
14,100.00	11,359.98	14,105.21	11,350.03	61.81	62.00	-89.48	-2,993.48	1,392.50	1,650.09	1,526.48	123.60	13.350		
14,200.00	11,359.98	14,205.21	11,350.02	63.17	63.36	-89.48	-3,093.48	1,393.28	1,650.09	1,523.76	126.33	13.062		
14,300.00	11,359.98	14,305.21	11,350.02	64.54	64.74	-89.48	-3,193.48	1,393.67	1,650.09	1,521.01	129.08	12.783		
14,400.00	11,359.98	14,405.21	11,350.02	65.93	66.13	-89.48	-3,293.48	1,394.05	1,650.08	1,518.22	131.86	12.514		
14,500.00	11,359.99	14,505.21	11,350.02	67.33	67.53	-89.48	-3,393.48	1,394.43	1,650.08	1,515.42	134.67	12.253		
14,600.00	11,359.99	14,605.21	11,350.02	68.74	68.94	-89.48	-3,493.48	1,394.81	1,650.08	1,512.59	137.50	12.001		
14,700.00	11,359.99	14,705.21	11,350.02	70.16	70.37	-89.48	-3,593.48	1,395.20	1,650.08	1,509.74	140.35	11.757		
14,800.00	11,359.99	14,805.21	11,350.02	71.60	71.80	-89.48	-3,693.48	1,395.58	1,650.08	1,506.86	143.22	11.521		
14,900.00	11,359.99	14,905.21	11,350.01	73.04	73.25	-89.48	-3,793.48	1,395.96	1,650.08	1,503.97	146.12	11.293		
15,000.00	11,359.99	15,005.21	11,350.01	74.49	74.71	-89.48	-3,893.48	1,396.34	1,650.08	1,501.06	149.03	11.072		
15,100.00	11,359.99	15,105.21	11,350.01	75.96	76.17	-89.48	-3,993.48	1,396.73	1,650.08	1,498.13	151.96	10.859		
15,200.00	11,359.99	15,205.21	11,350.01	77.43	77.64	-89.48	-4,093.48	1,397.11	1,650.08	1,495.18	154.90	10.652		
15,300.00	11,359.99	15,305.21	11,350.01	78.91	79.12	-89.48	-4,193.48	1,397.49	1,650.08	1,492.22	157.87	10.452		
15,400.00	11,359.99	15,405.21	11,350.01	80.39	80.61	-89.48	-4,293.47	1,397.87	1,650.08	1,489.24	160.84	10.259		
15,500.00	11,360.00	15,505.21	11,350.01	81.89	82.10	-89.48	-4,393.47	1,398.26	1,650.08	1,486.25	163.83	10.072		
15,600.00	11,360.00	15,605.21	11,350.01	83.39	83.61	-89.48	-4,493.47	1,398.64	1,650.08	1,483.24	166.84	9.890		
15,700.00	11,360.00	15,705.21	11,350.00	84.89	85.11	-89.48	-4,593.47	1,399.02	1,650.08	1,480.22	169.86	9.715		
15,800.00	11,360.00	15,805.21	11,350.00	86.41	86.63	-89.48	-4,693.47	1,399.40	1,650.08	1,477.20	172.88	9.544		
15,900.00	11,360.00	15,894.79	11,350.00	87.92	87.99	-89.48	-4,793.47	1,399.79	1,650.08	1,474.31	175.77	9.388		
15,955.22	11,360.00	15,950.00	11,350.00	88.76	88.83	-89.48	-4,848.69	1,400.00	1,650.08	1,472.63	177.45	9.299 ES, SF		

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 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		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
0.00	0.00	6.00	6.00	0.00	0.01	89.82	11.00	1,680.00	1,680.04				
100.00	100.00	108.00	108.00	0.13	0.15	89.82	11.00	1,680.00	1,680.04	1,679.76	0.28	6,047.302	
200.00	200.00	206.00	206.00	0.49	0.51	89.82	11.00	1,680.00	1,680.04	1,679.04	0.99	1,688.888	
300.00	300.00	306.00	306.00	0.85	0.87	89.82	11.00	1,680.00	1,680.04	1,678.32	1.71	981.500	
400.00	400.00	406.00	406.00	1.20	1.22	89.82	11.00	1,680.00	1,680.04	1,677.62	2.42	694.636	
500.00	500.00	508.18	508.18	1.56	1.40	89.82	11.00	1,679.99	1,680.03	1,677.07	2.96	566.884	
600.00	599.99	644.49	644.48	1.75	1.56	-175.09	11.75	1,678.34	1,679.69	1,676.39	3.31	508.204	
700.00	699.96	780.75	780.64	1.82	1.82	-175.17	13.83	1,673.73	1,678.93	1,675.29	3.64	460.923	
800.00	799.85	916.90	916.54	1.96	2.18	-175.31	17.24	1,666.18	1,677.75	1,673.63	4.13	406.687	
900.00	899.68	1,038.88	1,038.10	2.16	2.55	-175.47	21.37	1,657.04	1,676.33	1,671.66	4.67	359.023	
954.16	953.68	1,092.98	1,092.00	2.29	2.72	-175.55	23.31	1,652.74	1,676.07	1,671.11	4.96	337.974	
1,000.00	999.37	1,138.78	1,137.62	2.40	2.87	-175.62	24.95	1,649.10	1,676.26	1,671.05	5.21	321.729	
1,100.00	1,098.99	1,238.68	1,237.14	2.68	3.21	-175.77	28.53	1,641.17	1,677.07	1,671.27	5.79	289.449	
1,200.00	1,198.60	1,338.59	1,336.86	2.98	3.56	-175.92	32.12	1,633.23	1,677.89	1,671.48	6.41	261.877	
1,300.00	1,298.22	1,438.49	1,436.18	3.30	3.91	-176.07	35.70	1,625.30	1,678.72	1,671.67	7.04	238.289	
1,400.00	1,397.84	1,538.39	1,535.70	3.63	4.27	-176.22	39.28	1,617.36	1,679.56	1,671.86	7.70	216.151	
1,500.00	1,497.46	1,638.29	1,635.22	3.97	4.63	-176.37	42.86	1,609.43	1,680.41	1,672.05	8.37	200.856	
1,600.00	1,597.08	1,738.19	1,734.75	4.32	5.00	-176.51	46.45	1,601.49	1,681.28	1,672.24	9.04	185.510	
1,700.00	1,696.70	1,838.09	1,834.27	4.67	5.37	-176.66	50.03	1,593.56	1,682.16	1,672.43	9.73	172.507	
1,800.00	1,796.32	1,937.99	1,933.79	5.03	5.74	-176.81	53.61	1,585.62	1,683.05	1,672.62	10.42	161.518	
1,900.00	1,895.94	2,037.89	2,033.31	5.39	6.11	-176.96	57.20	1,577.68	1,683.94	1,672.83	11.12	151.476	
2,000.00	1,995.56	2,137.79	2,132.83	5.76	6.48	-177.11	60.78	1,569.75	1,684.86	1,673.04	11.82	142.569	
2,100.00	2,095.18	2,237.69	2,232.35	6.13	6.86	-177.26	64.36	1,561.81	1,685.78	1,673.26	12.52	134.623	
2,200.00	2,194.80	2,337.59	2,331.87	6.50	7.23	-177.40	67.94	1,553.88	1,686.71	1,673.48	13.23	127.495	
2,300.00	2,294.42	2,437.49	2,431.39	6.87	7.61	-177.55	71.53	1,545.94	1,687.66	1,673.72	13.94	121.070	
2,400.00	2,394.04	2,537.39	2,530.91	7.24	7.98	-177.70	75.11	1,538.01	1,688.61	1,673.96	14.65	115.251	
2,500.00	2,493.66	2,637.30	2,630.43	7.62	8.36	-177.85	78.69	1,530.07	1,689.58	1,674.21	15.37	109.959	
2,600.00	2,593.28	2,737.20	2,729.95	7.99	8.74	-177.99	82.28	1,522.14	1,690.56	1,674.48	16.08	105.127	
2,700.00	2,692.90	2,837.10	2,829.47	8.37	9.12	-178.14	85.86	1,514.20	1,691.55	1,674.75	16.80	100.700	
2,800.00	2,792.52	2,937.00	2,928.99	8.74	9.50	-178.29	89.44	1,506.26	1,692.55	1,675.03	17.52	96.628	
2,900.00	2,892.14	3,036.90	3,028.51	9.12	9.88	-178.43	93.03	1,498.33	1,693.56	1,675.32	18.24	92.872	
3,000.00	2,991.76	3,136.80	3,128.03	9.50	10.26	-178.58	96.61	1,490.39	1,694.58	1,675.63	18.96	89.397	
3,100.00	3,091.37	3,236.70	3,227.55	9.88	10.64	-178.73	100.19	1,482.46	1,695.62	1,675.94	19.68	86.173	
3,200.00	3,190.99	3,336.60	3,327.07	10.26	11.02	-178.87	103.77	1,474.52	1,696.66	1,676.26	20.40	83.175	
3,300.00	3,290.61	3,436.50	3,426.60	10.64	11.40	-179.02	107.36	1,466.59	1,697.72	1,676.60	21.12	80.379	
3,400.00	3,390.23	3,536.40	3,526.12	11.02	11.78	-179.16	110.94	1,458.65	1,698.78	1,676.94	21.84	77.766	
3,500.00	3,489.85	3,636.30	3,625.64	11.40	12.16	-179.31	114.52	1,450.72	1,699.86	1,677.29	22.57	75.319	
3,593.70	3,583.20	3,729.91	3,718.89	11.78	12.51	-179.45	117.88	1,443.28	1,700.88	1,677.64	23.25	73.164	
3,680.00	3,589.47	3,736.20	3,725.16	11.78	12.54	-179.46	118.11	1,442.78	1,700.95	1,677.65	23.29	73.023	
3,700.00	3,689.17	3,836.11	3,824.88	12.16	12.92	-179.60	121.69	1,434.84	1,701.07	1,677.05	24.02	70.827	
3,800.00	3,788.99	3,936.00	3,924.20	12.52	13.30	-179.75	125.27	1,426.91	1,699.45	1,674.71	24.74	68.694	
3,900.00	3,888.80	4,035.85	4,023.67	12.88	13.68	-179.89	128.85	1,418.98	1,696.10	1,670.64	25.46	66.618	
4,000.00	3,988.87	4,135.63	4,123.06	13.23	14.06	-179.96	132.43	1,411.05	1,691.01	1,664.84	26.18	64.595	
4,093.70	4,082.56	4,229.03	4,216.10	13.54	14.42	84.51	135.78	1,403.63	1,684.68	1,657.84	26.84	62.766	
4,100.00	4,088.86	4,235.30	4,222.36	13.56	14.44	84.50	136.01	1,403.13	1,684.20	1,657.32	26.88	62.645	
4,200.00	4,188.86	4,320.52	4,307.28	13.88	14.77	84.38	138.95	1,396.62	1,676.94	1,649.42	27.53	60.919	
4,300.00	4,288.88	4,400.00	4,386.58	14.20	15.06	84.28	141.25	1,391.52	1,670.84	1,642.70	28.15	59.364	
4,400.00	4,388.86	4,479.88	4,466.28	14.52	15.35	84.20	143.11	1,387.41	1,665.95	1,637.19	28.76	57.924	
4,500.00	4,488.88	4,559.70	4,546.06	14.85	15.64	84.14	144.50	1,384.31	1,662.27	1,632.90	29.37	56.594	
4,600.00	4,588.88	4,639.83	4,625.95	15.17	15.92	84.10	145.45	1,382.23	1,659.79	1,629.82	29.98	55.356	
4,700.00	4,688.86	4,719.80	4,705.92	15.50	16.20	84.08	145.93	1,381.16	1,658.52	1,627.94	30.58	54.236	
4,774.48	4,763.34	4,783.03	4,769.34	15.75	16.41	84.08	146.00	1,381.00	1,658.34	1,627.30	31.04	53.428	

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

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error:	0.00 usft
Survey Program: 04-MWD - QWGS, 500-MWD - QWGS, 11200-MWD - QWGS													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		
4,800.00	4,788.86	4,808.55	4,794.86	15.83	16.49	84.08	146.00	1,381.00	1,658.34	1,627.13	31.21	53.132		
4,900.00	4,888.86	4,908.55	4,894.86	16.16	16.82	84.08	146.00	1,381.00	1,658.34	1,626.45	31.89	52.001		
5,000.00	4,988.86	5,008.55	4,994.86	16.49	17.16	84.08	146.00	1,381.00	1,658.34	1,625.77	32.57	50.914		
5,100.00	5,088.86	5,108.55	5,094.86	16.83	17.49	84.08	146.00	1,381.00	1,658.34	1,625.09	33.25	49.870		
5,200.00	5,188.86	5,208.55	5,194.86	17.16	17.82	84.08	146.00	1,381.00	1,658.34	1,624.40	33.94	48.865		
5,300.00	5,288.86	5,308.55	5,294.86	17.50	18.16	84.08	146.00	1,381.00	1,658.34	1,623.72	34.62	47.899		
5,400.00	5,388.86	5,408.55	5,394.86	17.83	18.49	84.08	146.00	1,381.00	1,658.34	1,623.03	35.31	46.968		
5,500.00	5,488.86	5,508.55	5,494.86	18.17	18.83	84.08	146.00	1,381.00	1,658.34	1,622.34	36.00	46.071		
5,600.00	5,588.86	5,608.55	5,594.86	18.50	19.17	84.08	146.00	1,381.00	1,658.34	1,621.66	36.68	45.206		
5,700.00	5,688.86	5,708.55	5,694.86	18.84	19.51	84.08	146.00	1,381.00	1,658.34	1,620.97	37.37	44.372		
5,800.00	5,788.86	5,808.55	5,794.86	19.18	19.85	84.08	146.00	1,381.00	1,658.34	1,620.28	38.06	43.567		
5,900.00	5,888.86	5,908.55	5,894.86	19.52	20.19	84.08	146.00	1,381.00	1,658.34	1,619.59	38.75	42.789		
6,000.00	5,988.86	6,008.55	5,994.86	19.86	20.53	84.08	146.00	1,381.00	1,658.34	1,618.89	39.45	42.038		
6,100.00	6,088.86	6,108.55	6,094.86	20.20	20.87	84.08	146.00	1,381.00	1,658.34	1,618.20	40.14	41.312		
6,200.00	6,188.86	6,208.55	6,194.86	20.54	21.21	84.08	146.00	1,381.00	1,658.34	1,617.50	40.84	40.610		
6,300.00	6,288.86	6,308.55	6,294.86	20.89	21.55	84.08	146.00	1,381.00	1,658.34	1,616.81	41.53	39.930		
6,400.00	6,388.86	6,408.55	6,394.86	21.23	21.89	84.08	146.00	1,381.00	1,658.34	1,616.11	42.23	39.272		
6,500.00	6,488.86	6,508.55	6,494.86	21.57	22.24	84.08	146.00	1,381.00	1,658.34	1,615.42	42.92	38.635		
6,600.00	6,588.86	6,608.55	6,594.86	21.92	22.58	84.08	146.00	1,381.00	1,658.34	1,614.72	43.62	38.018		
6,700.00	6,688.86	6,708.55	6,694.86	22.26	22.92	84.08	146.00	1,381.00	1,658.34	1,614.02	44.32	37.419		
6,800.00	6,788.86	6,808.55	6,794.86	22.60	23.27	84.08	146.00	1,381.00	1,658.34	1,613.32	45.02	36.839		
6,900.00	6,888.86	6,908.55	6,894.86	22.95	23.61	84.08	146.00	1,381.00	1,658.34	1,612.62	45.71	36.276		
7,000.00	6,988.86	7,008.55	6,994.86	23.29	23.96	84.08	146.00	1,381.00	1,658.34	1,611.93	46.41	35.729		
7,100.00	7,088.86	7,108.55	7,094.86	23.64	24.30	84.08	146.00	1,381.00	1,658.34	1,611.23	47.11	35.198		
7,200.00	7,188.86	7,208.55	7,194.86	23.99	24.65	84.08	146.00	1,381.00	1,658.34	1,610.53	47.81	34.683		
7,300.00	7,288.86	7,308.55	7,294.86	24.33	25.00	84.08	146.00	1,381.00	1,658.34	1,609.82	48.52	34.181		
7,400.00	7,388.86	7,408.55	7,394.86	24.68	25.34	84.08	146.00	1,381.00	1,658.34	1,609.12	49.22	33.694		
7,500.00	7,488.86	7,508.55	7,494.86	25.03	25.69	84.08	146.00	1,381.00	1,658.34	1,608.42	49.92	33.221		
7,600.00	7,588.86	7,608.55	7,594.86	25.37	26.04	84.08	146.00	1,381.00	1,658.34	1,607.72	50.62	32.760		
7,700.00	7,688.86	7,708.55	7,694.86	25.72	26.39	84.08	146.00	1,381.00	1,658.34	1,607.02	51.32	32.311		
7,800.00	7,788.86	7,808.55	7,794.86	26.07	26.73	84.08	146.00	1,381.00	1,658.34	1,606.31	52.03	31.875		
7,900.00	7,888.86	7,908.55	7,894.86	26.42	27.08	84.08	146.00	1,381.00	1,658.34	1,605.61	52.73	31.449		
8,000.00	7,988.86	8,008.55	7,994.86	26.77	27.43	84.08	146.00	1,381.00	1,658.34	1,604.91	53.43	31.035		
8,100.00	8,088.86	8,108.55	8,094.86	27.12	27.78	84.08	146.00	1,381.00	1,658.34	1,604.20	54.14	30.632		
8,200.00	8,188.86	8,208.55	8,194.86	27.47	28.13	84.08	146.00	1,381.00	1,658.34	1,603.50	54.84	30.238		
8,300.00	8,288.86	8,308.55	8,294.86	27.82	28.48	84.08	146.00	1,381.00	1,658.34	1,602.79	55.55	29.854		
8,400.00	8,388.86	8,408.55	8,394.86	28.16	28.83	84.08	146.00	1,381.00	1,658.34	1,602.09	56.25	29.480		
8,500.00	8,488.86	8,508.55	8,494.86	28.51	29.18	84.08	146.00	1,381.00	1,658.34	1,601.38	56.96	29.115		
8,600.00	8,588.86	8,608.55	8,594.86	28.86	29.53	84.08	146.00	1,381.00	1,658.34	1,600.68	57.66	28.759		
8,700.00	8,688.86	8,708.55	8,694.86	29.21	29.88	84.08	146.00	1,381.00	1,658.34	1,599.97	58.37	28.411		
8,800.00	8,788.86	8,808.55	8,794.86	29.57	30.23	84.08	146.00	1,381.00	1,658.34	1,599.26	59.08	28.071		
8,900.00	8,888.86	8,908.55	8,894.86	29.92	30.58	84.08	146.00	1,381.00	1,658.34	1,598.56	59.78	27.740		
9,000.00	8,988.86	9,008.55	8,994.86	30.27	30.93	84.08	146.00	1,381.00	1,658.34	1,597.85	60.49	27.416		
9,100.00	9,088.86	9,108.55	9,094.86	30.62	31.28	84.08	146.00	1,381.00	1,658.34	1,597.14	61.20	27.099		
9,200.00	9,188.86	9,208.55	9,194.86	30.97	31.63	84.08	146.00	1,381.00	1,658.34	1,596.44	61.90	26.789		
9,300.00	9,288.86	9,308.55	9,294.86	31.32	31.98	84.08	146.00	1,381.00	1,658.34	1,595.73	62.61	26.487		
9,400.00	9,388.86	9,408.55	9,394.86	31.67	32.33	84.08	146.00	1,381.00	1,658.34	1,595.02	63.32	26.191		
9,500.00	9,488.86	9,508.55	9,494.86	32.02	32.68	84.08	146.00	1,381.00	1,658.34	1,594.31	64.03	25.901		
9,600.00	9,588.86	9,608.55	9,594.86	32.38	33.04	84.08	146.00	1,381.00	1,658.34	1,593.61	64.73	25.618		
9,700.00	9,688.86	9,708.55	9,694.86	32.73	33.39	84.08	146.00	1,381.00	1,658.34	1,592.90	65.44	25.340		
9,800.00	9,788.86	9,808.55	9,794.86	33.08	33.74	84.08	146.00	1,381.00	1,658.34	1,592.19	66.15	25.069		
9,900.00	9,888.86	9,908.55	9,894.86	33.43	34.09	84.08	146.00	1,381.00	1,658.34	1,591.48	66.86	24.803		

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 221H
Project:	Lea County, NM	TVD Reference:	Rig @ 3679.50usft (GL:3651'+KB:28.5')
Reference Site:	MJ Federal Slot 1	MD Reference:	Rig @ 3679.50usft (GL:3651'+KB:28.5')
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	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: O-MWD - OWSG, 500-MWD - OWSG, 11200-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)	
10,000.00	9,988.86	10,008.55	9,994.86	33.78	34.44	84.08	146.00	1,381.00	1,658.34	1,590.77	67.57	24.543		
10,100.00	10,088.86	10,108.55	10,094.86	34.14	34.80	84.08	146.00	1,381.00	1,658.34	1,590.06	68.28	24.288		
10,200.00	10,188.86	10,208.55	10,194.86	34.49	35.15	84.08	146.00	1,381.00	1,658.34	1,589.35	68.99	24.039		
10,300.00	10,288.86	10,308.55	10,294.86	34.84	35.50	84.08	146.00	1,381.00	1,658.34	1,588.64	69.70	23.794		
10,400.00	10,388.86	10,408.55	10,394.86	35.19	35.85	84.08	146.00	1,381.00	1,658.34	1,587.94	70.40	23.554		
10,500.00	10,488.86	10,508.55	10,494.86	35.55	36.21	84.08	146.00	1,381.00	1,658.34	1,587.23	71.11	23.319		
10,600.00	10,588.86	10,608.55	10,594.86	35.90	36.56	84.08	146.00	1,381.00	1,658.34	1,586.52	71.82	23.089		
10,700.00	10,688.86	10,708.55	10,694.86	36.25	36.91	84.08	146.00	1,381.00	1,658.34	1,585.81	72.53	22.863		
10,798.14	10,787.00	10,806.69	10,793.00	36.43	37.26	84.08	146.00	1,381.00	1,658.34	1,585.28	73.06	22.699 CC		
10,800.00	10,788.88	10,808.55	10,794.86	36.43	37.27	-95.70	146.00	1,381.00	1,658.34	1,585.28	73.06	22.697		
10,850.00	10,838.79	10,858.46	10,844.79	36.43	37.44	-95.76	146.00	1,381.00	1,658.57	1,585.33	73.24	22.645		
10,900.00	10,888.33	10,908.01	10,894.33	36.43	37.62	-95.92	146.00	1,381.00	1,659.26	1,585.84	73.42	22.599		
10,950.00	10,937.09	10,956.78	10,943.09	36.44	37.79	-96.16	146.00	1,381.00	1,660.45	1,586.85	73.60	22.560		
11,000.00	10,984.71	11,004.40	10,990.71	36.45	37.96	-96.49	146.00	1,381.00	1,662.20	1,588.43	73.78	22.530		
11,050.00	11,030.83	11,050.52	11,036.83	36.47	38.12	-96.85	146.00	1,381.00	1,664.63	1,590.68	73.95	22.508		
11,100.00	11,075.09	11,105.22	11,081.09	36.49	38.30	-97.24	146.00	1,381.00	1,667.85	1,593.69	74.16	22.491		
11,150.00	11,117.16	11,136.85	11,123.16	36.52	38.36	-97.60	146.00	1,381.00	1,671.98	1,597.75	74.24	22.522		
11,200.00	11,156.71	11,176.40	11,162.71	36.56	38.43	-97.91	146.00	1,381.00	1,677.18	1,602.84	74.34	22.561		
11,250.00	11,193.46	11,230.37	11,216.67	36.60	38.47	-98.51	145.24	1,381.00	1,683.51	1,609.07	74.44	22.616		
11,300.00	11,227.11	11,329.01	11,314.25	36.65	38.47	-99.99	131.71	1,381.05	1,690.16	1,615.67	74.49	22.690		
11,350.00	11,257.40	11,452.48	11,430.77	36.72	38.48	-101.67	91.60	1,381.21	1,696.41	1,621.97	74.44	22.790		
11,400.00	11,284.12	11,606.93	11,580.07	36.81	38.50	-103.32	7.98	1,381.53	1,701.44	1,627.19	74.25	22.915		
11,450.00	11,307.06	11,790.64	11,678.14	36.91	38.81	-104.39	-131.73	1,382.06	1,704.23	1,630.13	74.10	22.998		
11,500.00	11,326.04	11,985.79	11,748.56	37.03	38.88	-104.30	-312.72	1,382.74	1,703.99	1,629.60	74.39	22.906		
11,550.00	11,340.91	12,119.02	11,760.06	37.17	39.24	-103.61	-445.19	1,383.25	1,701.06	1,628.03	75.03	22.673		
11,600.00	11,351.57	12,167.86	11,760.06	37.34	39.41	-103.51	-494.02	1,383.43	1,698.50	1,623.08	75.43	22.519		
11,650.00	11,357.94	12,217.44	11,760.06	37.52	39.60	-103.45	-543.60	1,383.62	1,697.00	1,621.17	75.83	22.378		
11,698.13	11,359.98	12,265.51	11,760.06	37.71	39.80	-103.43	-591.68	1,383.81	1,696.53	1,620.29	76.24	22.251		
11,700.00	11,359.98	12,267.38	11,760.06	37.72	39.81	-103.43	-593.54	1,383.81	1,696.53	1,620.27	76.26	22.247		
11,800.00	11,359.98	12,367.38	11,760.05	38.18	40.28	-103.43	-693.54	1,384.19	1,696.53	1,619.35	77.18	21.981		
11,900.00	11,359.98	12,467.38	11,760.05	38.71	40.82	-103.43	-793.54	1,384.57	1,696.53	1,618.29	78.23	21.686		
12,000.00	11,359.98	12,567.38	11,760.05	39.31	41.41	-103.43	-893.54	1,384.95	1,696.52	1,617.12	79.40	21.367		
12,100.00	11,359.98	12,667.38	11,760.05	39.97	42.07	-103.43	-993.54	1,385.33	1,696.52	1,615.83	80.69	21.026		
12,200.00	11,359.98	12,767.38	11,760.05	40.69	42.78	-103.43	-1,093.54	1,385.71	1,696.52	1,614.44	82.08	20.669		
12,300.00	11,359.98	12,867.38	11,760.05	41.46	43.55	-103.43	-1,193.54	1,386.10	1,696.51	1,612.93	83.58	20.298		
12,400.00	11,359.97	12,967.38	11,760.05	42.29	44.36	-103.43	-1,293.54	1,386.48	1,696.51	1,611.33	85.18	19.917		
12,500.00	11,359.97	13,067.38	11,760.05	43.16	45.22	-103.43	-1,393.54	1,386.86	1,696.51	1,609.63	86.87	19.528		
12,600.00	11,359.97	13,167.38	11,760.04	44.09	46.13	-103.43	-1,493.54	1,387.24	1,696.50	1,607.85	88.66	19.136		
12,700.00	11,359.97	13,267.38	11,760.04	45.05	47.08	-103.43	-1,593.54	1,387.62	1,696.50	1,605.98	90.52	18.742		
12,800.00	11,359.97	13,367.38	11,760.04	46.06	48.07	-103.43	-1,693.54	1,388.00	1,696.50	1,604.04	92.48	18.348		
12,900.00	11,359.97	13,467.38	11,760.04	47.10	49.09	-103.43	-1,793.53	1,388.38	1,696.49	1,602.02	94.48	17.956		
13,000.00	11,359.97	13,567.38	11,760.04	48.18	50.15	-103.43	-1,893.53	1,388.76	1,696.49	1,599.83	96.56	17.569		
13,100.00	11,359.97	13,667.38	11,760.04	49.29	51.24	-103.43	-1,993.53	1,389.14	1,696.49	1,597.78	98.71	17.186		
13,200.00	11,359.97	13,767.38	11,760.04	50.43	52.37	-103.43	-2,093.53	1,389.52	1,696.49	1,595.56	100.92	16.810		
13,300.00	11,359.97	13,867.38	11,760.03	51.60	53.52	-103.43	-2,193.53	1,389.90	1,696.48	1,593.29	103.19	16.441		
13,400.00	11,359.97	13,967.38	11,760.03	52.80	54.70	-103.43	-2,293.53	1,390.28	1,696.48	1,590.97	105.51	16.080		
13,500.00	11,359.98	14,067.38	11,760.03	54.03	55.90	-103.43	-2,393.53	1,390.66	1,696.48	1,588.60	107.87	15.727		
13,600.00	11,359.98	14,167.38	11,760.03	55.27	57.13	-103.43	-2,493.53	1,391.04	1,696.47	1,586.19	110.29	15.382		
13,700.00	11,359.98	14,267.38	11,760.03	56.54	58.38	-103.43	-2,593.53	1,391.42	1,696.47	1,583.73	112.74	15.047		
13,800.00	11,359.98	14,367.38	11,760.03	57.83	59.65	-103.43	-2,693.53	1,391.80	1,696.47	1,581.23	115.24	14.721		
13,900.00	11,359.98	14,467.38	11,760.03	59.14	60.93	-103.43	-2,793.53	1,392.18	1,696.46	1,578.69	117.78	14.404		
14,000.00	11,359.98	14,567.38	11,760.03	60.46	62.24	-103.43	-2,893.53	1,392.56	1,696.46	1,576.11	120.35	14.096		

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

Pro Directional Anticollision Report

Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+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 Slot 2 - 232H - OH - Prelim Plan A													Offset Site Error: 0.00 usft
Survey Program: 0-MWD - OWSG, 500-MWD - OWSG, 11200-MWD - OWSG													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	11,359.98	14,667.38	11,760.02	61.81	63.57	-103.43	-2,993.53	1,392.94	1,696.46	1,573.51	122.95	13.798	
14,200.00	11,359.98	14,767.38	11,760.02	63.17	64.91	-103.43	-3,093.53	1,393.32	1,696.45	1,570.87	125.59	13.508	
14,300.00	11,359.98	14,867.38	11,760.02	64.54	66.26	-103.43	-3,193.52	1,393.70	1,696.45	1,568.20	128.25	13.228	
14,400.00	11,359.98	14,967.38	11,760.02	65.93	67.63	-103.43	-3,293.52	1,394.08	1,696.45	1,565.51	130.94	12.956	
14,500.00	11,359.99	15,067.38	11,760.02	67.33	69.01	-103.43	-3,393.52	1,394.46	1,696.44	1,562.78	133.66	12.692	
14,600.00	11,359.99	15,167.38	11,760.02	68.74	70.41	-103.43	-3,493.52	1,394.84	1,696.44	1,560.04	136.40	12.437	
14,700.00	11,359.99	15,267.38	11,760.02	70.16	71.82	-103.43	-3,593.52	1,395.22	1,696.44	1,557.27	139.17	12.190	
14,800.00	11,359.99	15,367.38	11,760.02	71.60	73.23	-103.43	-3,693.52	1,395.60	1,696.44	1,554.48	141.95	11.951	
14,900.00	11,359.99	15,467.38	11,760.01	73.04	74.66	-103.43	-3,793.52	1,395.99	1,696.43	1,551.67	144.76	11.719	
15,000.00	11,359.99	15,567.38	11,760.01	74.49	76.10	-103.43	-3,893.52	1,396.37	1,696.43	1,548.84	147.58	11.495	
15,100.00	11,359.99	15,667.38	11,760.01	75.96	77.55	-103.43	-3,993.52	1,396.75	1,696.43	1,546.00	150.43	11.277	
15,200.00	11,359.99	15,767.38	11,760.01	77.43	79.00	-103.43	-4,093.52	1,397.13	1,696.42	1,543.13	153.29	11.067	
15,300.00	11,359.99	15,867.38	11,760.01	78.91	80.47	-103.43	-4,193.52	1,397.51	1,696.42	1,540.26	156.16	10.863	
15,400.00	11,359.99	15,967.38	11,760.01	80.39	81.94	-103.43	-4,293.52	1,397.89	1,696.42	1,537.36	159.06	10.665	
15,500.00	11,360.00	16,067.38	11,760.01	81.89	83.42	-103.43	-4,393.52	1,398.27	1,696.41	1,534.45	161.96	10.474	
15,600.00	11,360.00	16,167.38	11,760.00	83.39	84.91	-103.43	-4,493.52	1,398.65	1,696.41	1,531.53	164.88	10.289	
15,700.00	11,360.00	16,267.38	11,760.00	84.89	86.40	-103.43	-4,593.51	1,399.03	1,696.41	1,528.59	167.82	10.109	
15,800.00	11,360.00	16,367.38	11,760.00	86.41	87.90	-103.43	-4,693.51	1,399.41	1,696.40	1,525.64	170.76	9.934	
15,900.00	11,360.00	16,467.38	11,760.00	87.92	89.41	-103.43	-4,793.51	1,399.79	1,696.40	1,522.68	173.72	9.765	
15,955.22	11,360.00	16,522.60	11,760.00	88.76	90.24	-103.43	-4,848.73	1,400.00	1,696.40	1,521.05	175.35	9.674 ES, SF	

Pro Directional Anticollision Report

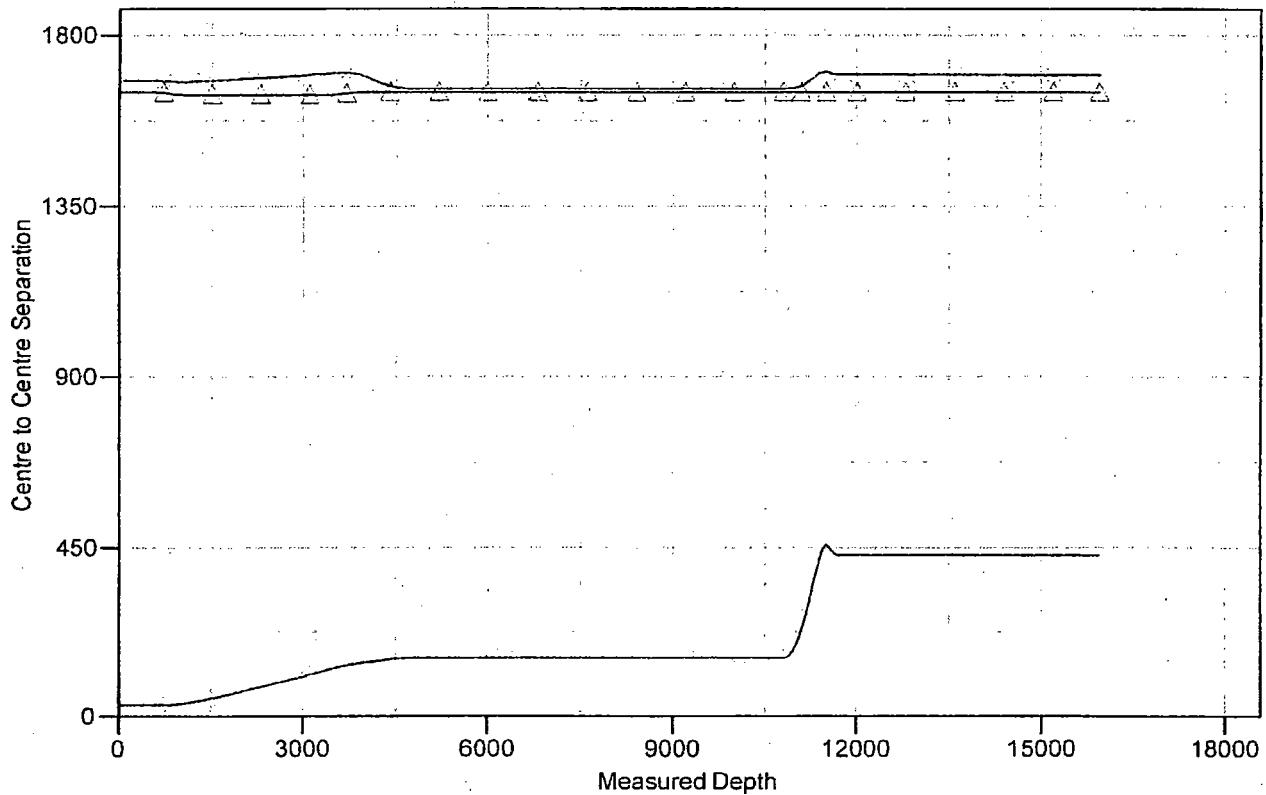
Company: Matador Resources
Project: Lea County, NM
Reference Site: MJ Federal Slot 1
Site Error: 0.00 usft
Reference Well: 221H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: WellPlanner1
Offset TVD Reference: Offset Datum

Reference Depths are relative to Rig @ 3679.50usft (GL:3651'+KB:28.5)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 221H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.37°

Ladder Plot



LEGEND

—●— 221H, OH, Prelim Plan A VO —x— 221H, OH, Prelim Plan A VO —x— 221H, OH, Prelim Plan A VO

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

Pro Directional Anticollision Report

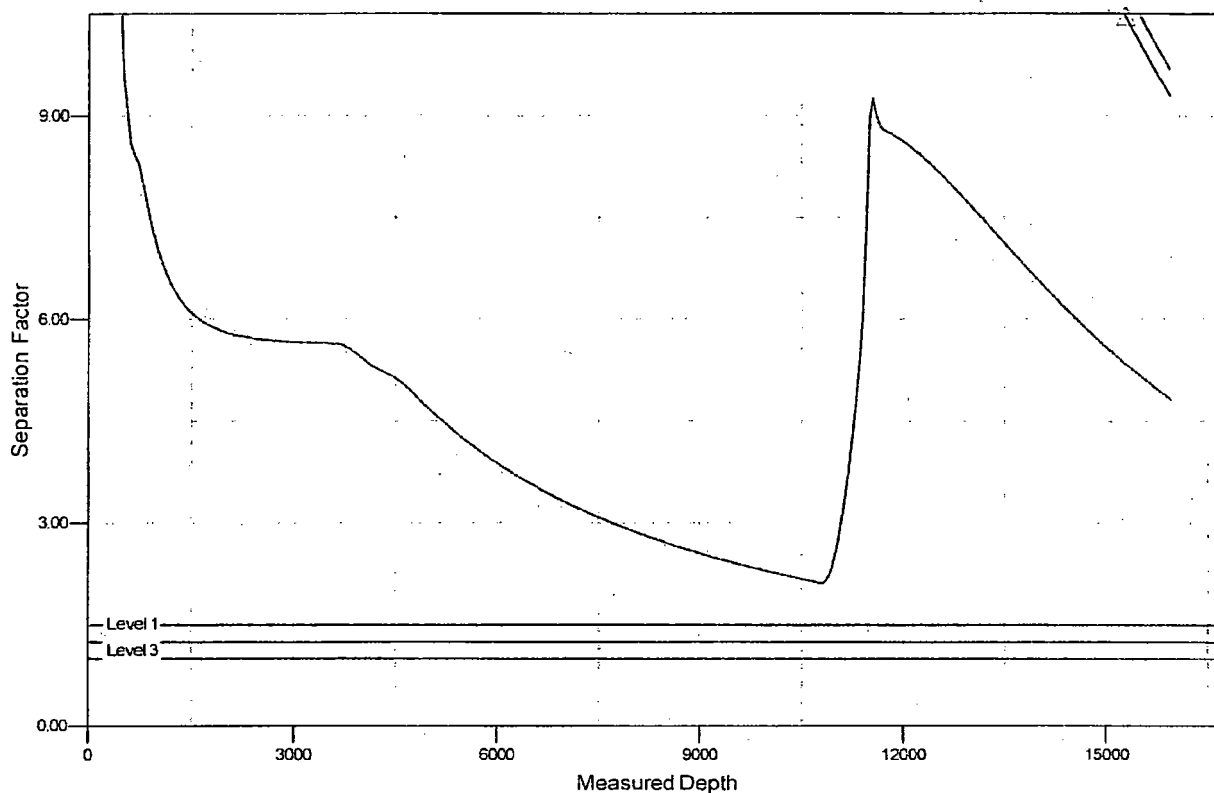
Company: Matador Resources
 Project: Lea County, NM
 Reference Site: MJ Federal Slot 1
 Site Error: 0.00 usft
 Reference Well: 221H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Prelim Plan A

Local Co-ordinate Reference: Well 221H
 TVD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
 MD Reference: Rig @ 3679.50usft (GL:3651'+KB:28.5')
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: WellPlanner1
 Offset TVD Reference: Offset Datum

Reference Depths are relative to Rig @ 3679.50usft (GL:3651'+KB:28.5')
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: 221H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.37°

Separation Factor Plot



LEGEND

● 221H, OH, Prelim Plan A v0 ✕ 221H, OH, Prelim Plan A v0 ▲ 221H, OH, Prelim Plan A v0

Matador Production Company
MJ Fed Com 221H
SHL 188' FNL & 599' FWL
BHL 240' FSL & 330' FWL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

DRILL PLAN PAGE 1

Drilling Program

HOBBS OCD

FEB 06 2018

RECEIVED

1. ESTIMATED TOPS

Formation Name	TVD	MD	Bearing
Quaternary	000'	000'	water
Rustler anhydrite	1450'	1453'	N/A
Top salt	1565'	1568'	N/A
Base salt	3150'	3159'	N/A
Yates gypsum	3330'	3340'	N/A
Seven Rivers dolomite	3710'	3721'	N/A
Queen sandstone	4275'	4286'	N/A
Grayburg sandstone	4775'	4786'	N/A
Delaware Mt. Group sandstones	5510'	5521'	hydrocarbons
Brushy Canyon sandstone	6110'	6121'	hydrocarbons
Bone Spring Limestone	7945'	7956'	hydrocarbons
1 st Bone Spring sandstone	9180'	9191'	hydrocarbons
2 nd Bone Spring sandstone	9705'	9716'	hydrocarbons
(KOP	10788'	10800'	hydrocarbons
3 rd Bone Spring sandstone	10800'	10811'	hydrocarbons
Wolfcamp B sandstone	11010'	11026'	hydrocarbons & goal
TD	11360'	15955'	hydrocarbons

2. NOTABLE ZONES

Wolfcamp B is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be $\geq 330'$ from the dedication perimeter. Closest water well (CP 00658) is 9170' southeast. Depth to water is unknown in this 100' deep inactive well.

Matador Production Company
MJ Fed Com 221H
SHL 188' FNL & 599' FWL
BHL 240' FSL & 330' FWL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

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".

Matador Production Company

DRILL PLAN PAGE 3

MJ Fed Com 221H

SHL 188' FNL & 599' FWL

BHL 240' FSL & 330' FWL

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

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

4. CASING & CEMENT

All casing will be API and new. See attached casing assumption worksheet.

Hole O. D.	Set MD	Set TVD	Name	Casing O. D.	TOC	Weight (lb/ft)	Grade	Joint
20"	0' - 1475'	0' - 1472'	Surface	13.375"	GL	54.5	J-55	BTC
12.25"	0' - 5000'	0' - 4987'	Intermediate 1	9.625"	GL	40	J-55	BTC
8.75"	0' - 4900'	0' - 4889'	Intermediate 2	7.625"	4400'	29.7	P-110	BTC
	4900' - 10748'	4889' - 10737'		7.625"		29.7	P-110	VAM HTF-NR
	10748' - 11600'	10737' - 11352'		7"		29	P-110	BTC
6.125"	0' - 10648'	0' - 10637'	Production	5.5"	10100'	20	P-110	Tenaris XP
	10648' - 15955'	10637' - 11360'		4.5"		13.5	P-110	Tenaris XP

Matador Production Company
 MJ Fed Com 221H
 SHL 188' FNL & 599' FWL
 BHL 240' FSL & 330' FWL
 Sec. 23, T. 19 S., R. 33 E., Lea County, NM

DRILL PLAN PAGE 4

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	1619	1.75	2833	13.5	Class C + 3% NaCl + LCM
	Tail	524	1.38	723	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	1169	1.81	2115	13.5	Class C + Bentonite + 1% CaCl ₂ + 8% NaCl + LCM
	Tail	454	1.38	626	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	836	2.36	1972	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	189	1.38	260	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 4000'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC), 1 every 4 th jt to GL	
Production	Tail	402	1.38	554	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 10600'		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 give the option to pump cement as either a single stage or two stage.

5. MUD PROGRAM

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

Matador Production Company
MJ Fed Com 221H
SHL 188' FNL & 599' FWL
BHL 240' FSL & 330' FWL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

DRILL PLAN PAGE 5

Type	Casing	Interval (MD)	lb/gal	Viscosity	Fluid Loss
fresh water spud	surface	0' - 1475'	8.3	28	NC
brine water	intermediate 1	1475' - 5000'	10.0	30-32	NC
fresh water & cut brine	intermediate 2	5000' - 11600'	9.0	30-31	NC
OBM	production	11600' - 15955'	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 $\approx 1475'$ 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 ≈ 7952 psi. Expected bottom hole temperature is $\approx 170^\circ$ F.

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

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

MATADOR
15K 4-STRING
MQ-94

90.8 EST
42.4 EST
97.0 EST
54.8 EST
97.4 EST
6.4 EST
25.6 EST
25.1 EST
104.8 EST
19.0 EST
25.7 EST
13-3/8 CASING
9-5/8 CASING
7 CASING
4-1/2 CASING
2-3/8 TUBING

2-9/16 10M
1-13/16 10M
1-13/16 10M ACTUATED
1-13/16 10M ACTUATED
ADAPTER, SM-T
7-1/16 15M X 2-9/16 10M
TUBING HANGER
SM-T
7-1/16 X 2-3/8
API MOD BTM X
EU BRD TOP
11 10M
1-13/16 15M
4-1/2 DBL FS
CASING HANGER
S-22
11 X 4-1/2
9-5/8 DBL IPS
CASING HANGER,
SMB-22 PORTED
13-5/8 X 7
W/PRIMARY SEAL
CASING HANGER, SMB-22
13-5/8 X 9-5/8
W/SEAL ASSEMBLY
13-5/8 5M
2-1/16 5M
13-5/8 5M
2 LP 5M
25 OD BASEPLATE

ADJUSTABLE, CHOKE
1-13/16 10M

0FT
1FT
2FT
3FT
4FT
5FT
6FT
7FT
8FT
9FT
10FT

0FT
1FT
2FT
3FT
4FT
5FT
6FT
7FT
8FT
9FT
10FT

Matador requesting
variance to use
speed head.

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

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THAT NO DISCLOSURE OF THE DRAWING OR THE INFORMATION SHOWN
HEREON WILL BE MADE TO A THIRD PARTY WITHOUT PRIOR WRITTEN
CONSENT OF SEABOARD INTERNATIONAL INC.

DRAWN BY: RPL
CHECKED BY:
APPROVED BY:

SCALE: 1:10
DATE: 18JAN16
DRAWING NO.:
P-20986

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

REV

NOTE:
DIMENSIONS SHOWN ON THIS DRAWING ARE
ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY
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NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED.
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15,000 PSI WELLHEAD & TREE ASSEMBLY
13-3/8 X 9-5/8 X 7 X 4-1/2 X 2-3/8

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

Matador Production Company
MJ Fed Com 221H
SHL 188' FNL & 599' FWL
BHL 240' FSL & 330' FWL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

SURFACE PLAN PAGE 1

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 0.15 mile on a caliche road
Then turn left and go N 383' cross-country to the proposed 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 383' 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)

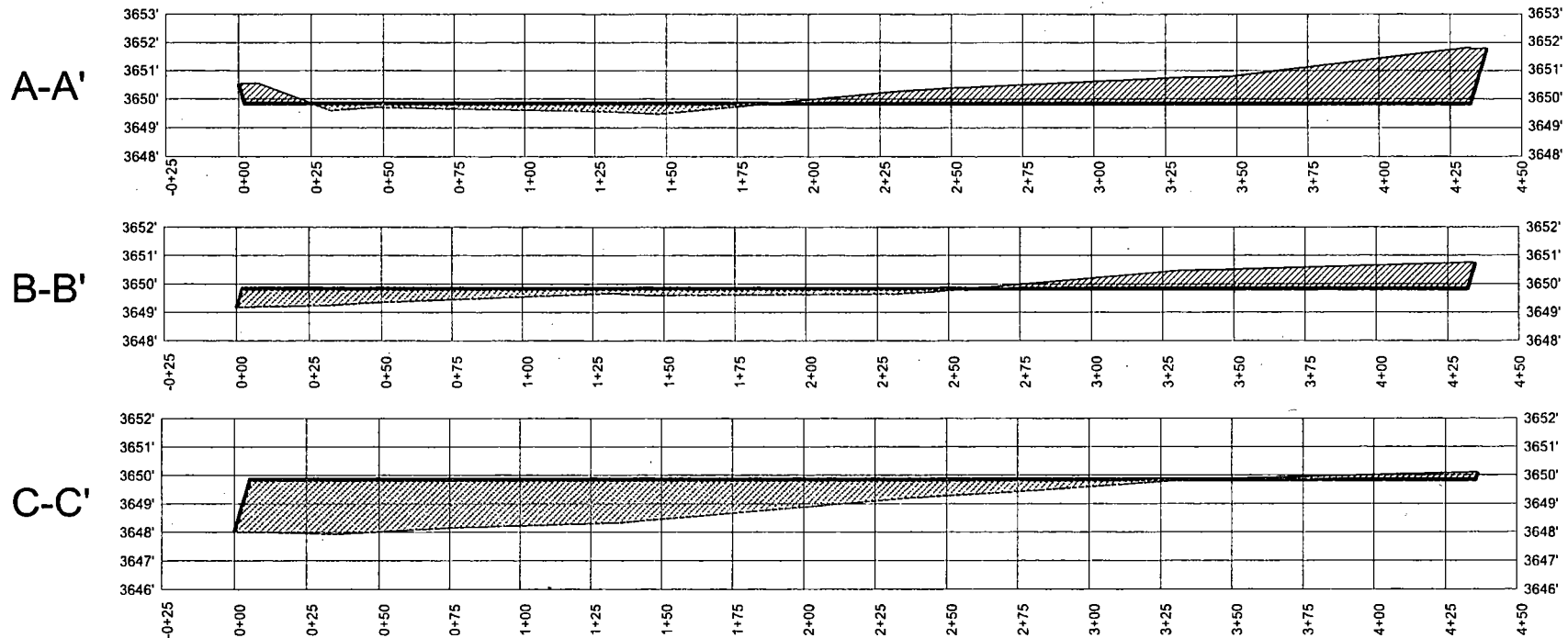
Existing oil, gas, disposal, and P & A wells are within a mile. No water or injection wells are within a mile radius.

HOBBS OCD
FEB 06 2018
RECEIVED

TOP OF PAD ELEVATION: 3649.8590
 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 : 54,846.4 C.F., 2,031.35 C.Y.
 FILL: 54,846.4 C.F., 2,031.35 C.Y.
 AREA: 163340.3 SQ.FT., 3.750 ACRES

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



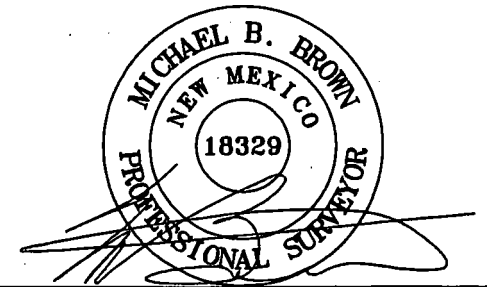
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Horizontal Scale = 1:60
 Vertical Scale = 1:5

MJ FEDERAL #221H SURFACE PAD SITE PROFILE	REVISION:		NOTES:
	INT	DATE	
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_221H_SURFACE_PAD_SITE			
DRAWN BY: EAH			
SHEET: 2 OF 2			

MAP 9



Michael Blake Brown, P.S. No. 18329

MARCH 3, 2017

Field note description of even date accompanies this plat.

Matador Production Company
MJ Fed Com 221H
SHL 188' FNL & 599' FWL
BHL 240' FSL & 330' FWL
Sec. 23, T. 19 S., R. 33 E., Lea County, NM

SURFACE PLAN PAGE 2

4. PROPOSED PRODUCTION FACILITIES

No pipeline or power line plans have been finalized at this time.

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. Top ≈ 6 " of soil and brush will be stockpiled south 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.

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.

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SURFACE PLAN PAGE 3

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 $\approx 24\%$ (0.87 acre) by removing caliche and reclaiming the southwest corner (100' x 380'). This will leave 2.78 acres for the production equipment (e. g., tank battery, heater-treaters, flare/CBU), pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with 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 383' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled. Land use:

383' x 30' road = 0.26 acre
+ 370' x 430' pad = 3.65 acres
3.91 acres short term
- 0.24 acre interim reclamation
3.67 acres long term (0.26 ac. road + 3.41 ac. pad)

11. SURFACE OWNER

All construction will be on BLM.

12. OTHER INFORMATION

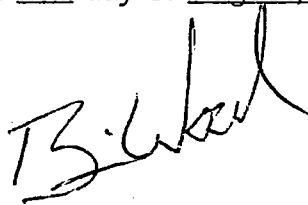
On site inspection was held with Vance Wolf (BLM) on April 20, 2017. Lone Mountain will inspect and file an archaeology report.

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SURFACE PLAN PAGE 4

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 2nd day of August, 2017.



Brian Wood, Consultant

Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman

Matador Production Company

5400 LBJ Freeway, Suite 1500

Dallas TX 75240

Phone: (972) 371-5241

FAX: (214) 866-4841



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

PWD Data Report

02/01/2018

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

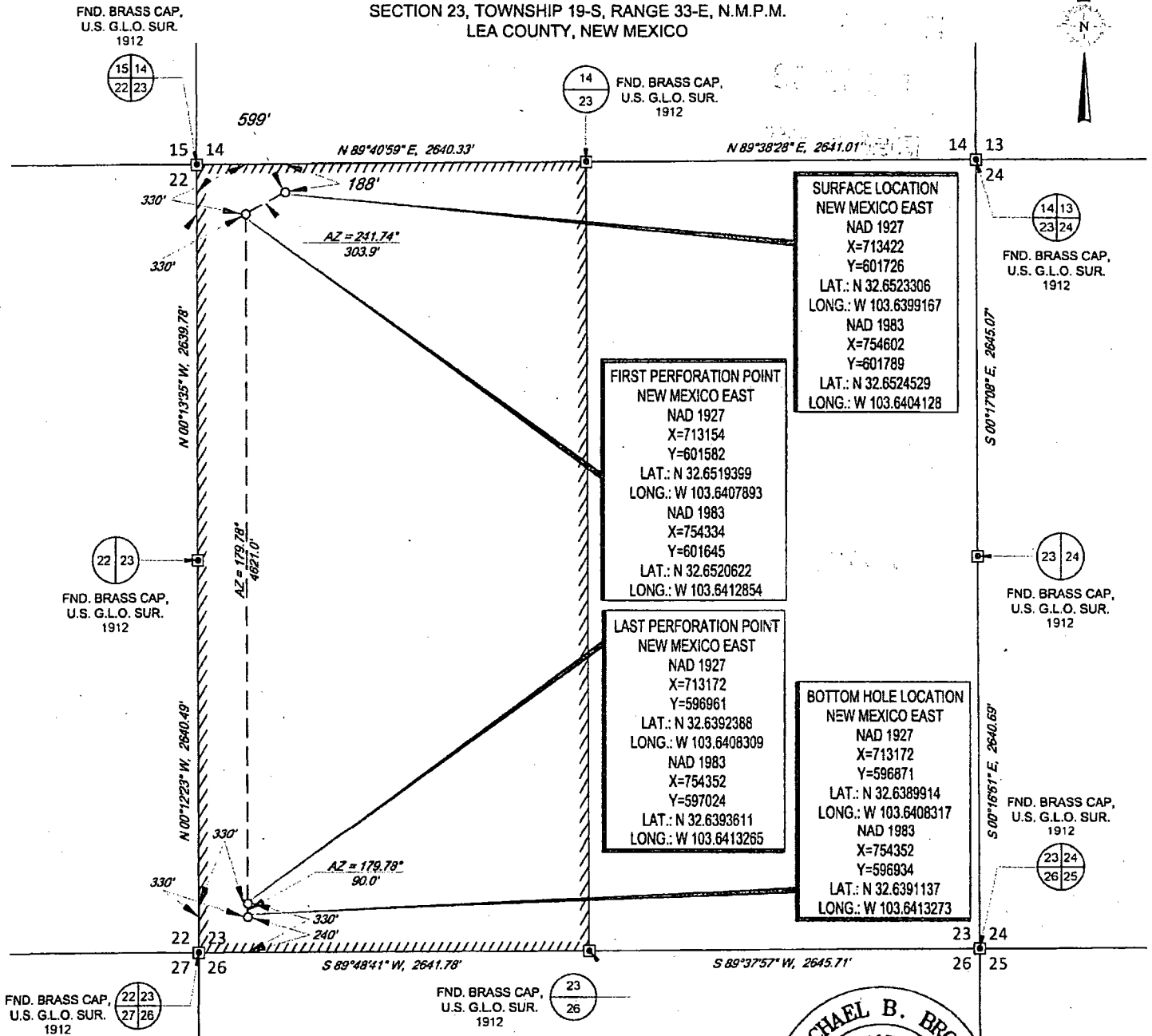
Lined pit bond amount:

Additional bond information attachment:

SCALE: 1" = 1000'
0' 500' 1000'



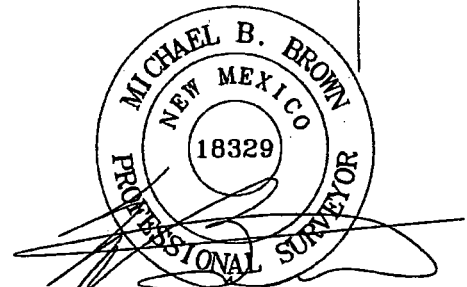
SECTION 23, TOWNSHIP 19-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: MJ FEDERAL #221H
SECTION 23 TWP 19-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 188' FNL & 599' FWL

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 ± 1073 FEET TO A
POINT ± 250 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



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2803 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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