PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM-113418
WELL NAME & NO.:	Carl Mottek Federal 121H
SURFACE HOLE FOOTAGE:	0326' FNL & 0410' FWL
BOTTOM HOLE FOOTAGE	0240' FSL & 0330' FWL
LOCATION:	Section 17, T. 24 S., R 34 E., NMPM
COUNTY:	County, New Mexico

A. DRILLING OPERATIONS REQUIREMENTS

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

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

☐ **Lea County**

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

1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper**

copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

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

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

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

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

1. The **13-3/8** inch surface casing shall be set at approximately **1300** 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 minimum collapse requirements.

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

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

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

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

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

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

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

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

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

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

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

If multibowl option is utilized:

5. **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 intermediate casing integrity test 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.**

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

6. The appropriate BLM office shall be notified a minimum of hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    a. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

    d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

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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PECOS DISTRICT
SURFACE USE
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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.

Approval Date: 06/13/2018

I. GENERAL PROVISIONS

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

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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.)

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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)

- The entirety of the well pad would be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pads. Topsoil should not be used to construct the berm. No water flow from the uphill side(s) of the pad should be allowed to enter the well pad. The berm should be maintained through the life of the wells and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad or facilities during the life of the project would be quickly corrected and proper measures would be taken to prevent future erosion.
- Stockpiling of topsoil is required. The topsoil would be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and would not be used for berming or erosion control.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

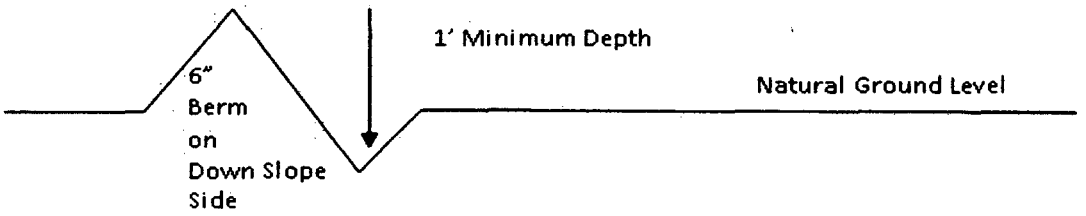
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

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

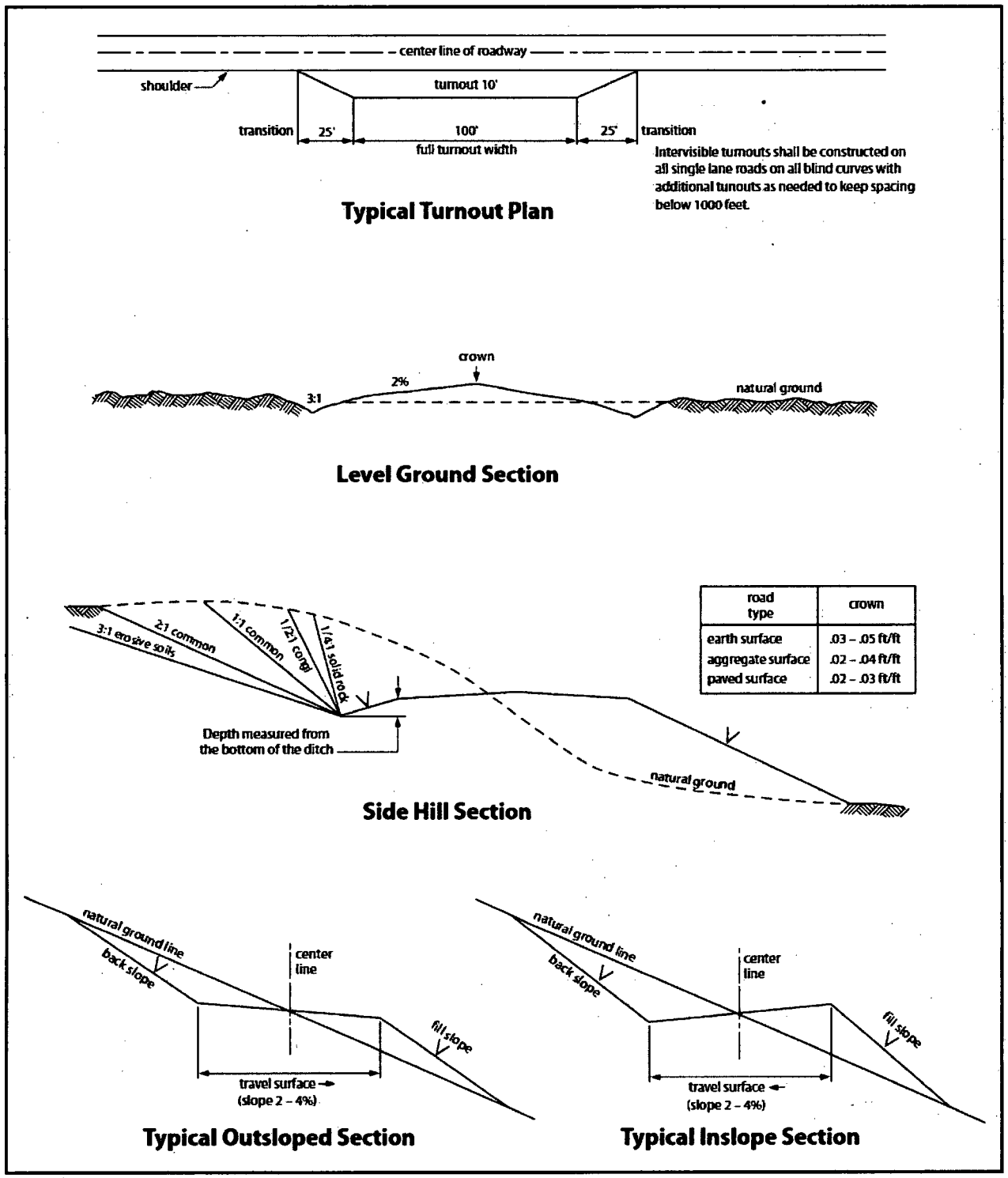


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

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

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

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 1 for Loamy 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 shall be tested and the viability testing of seed will 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 shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/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 shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

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B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

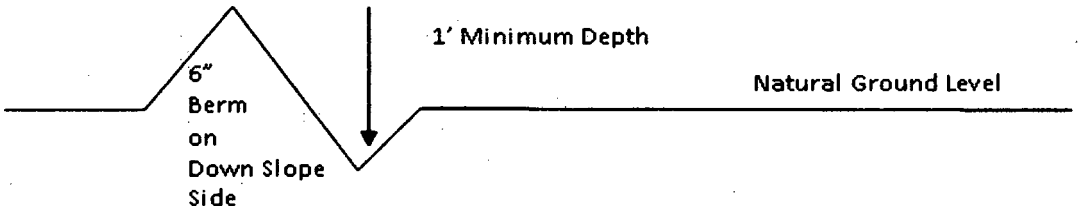
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

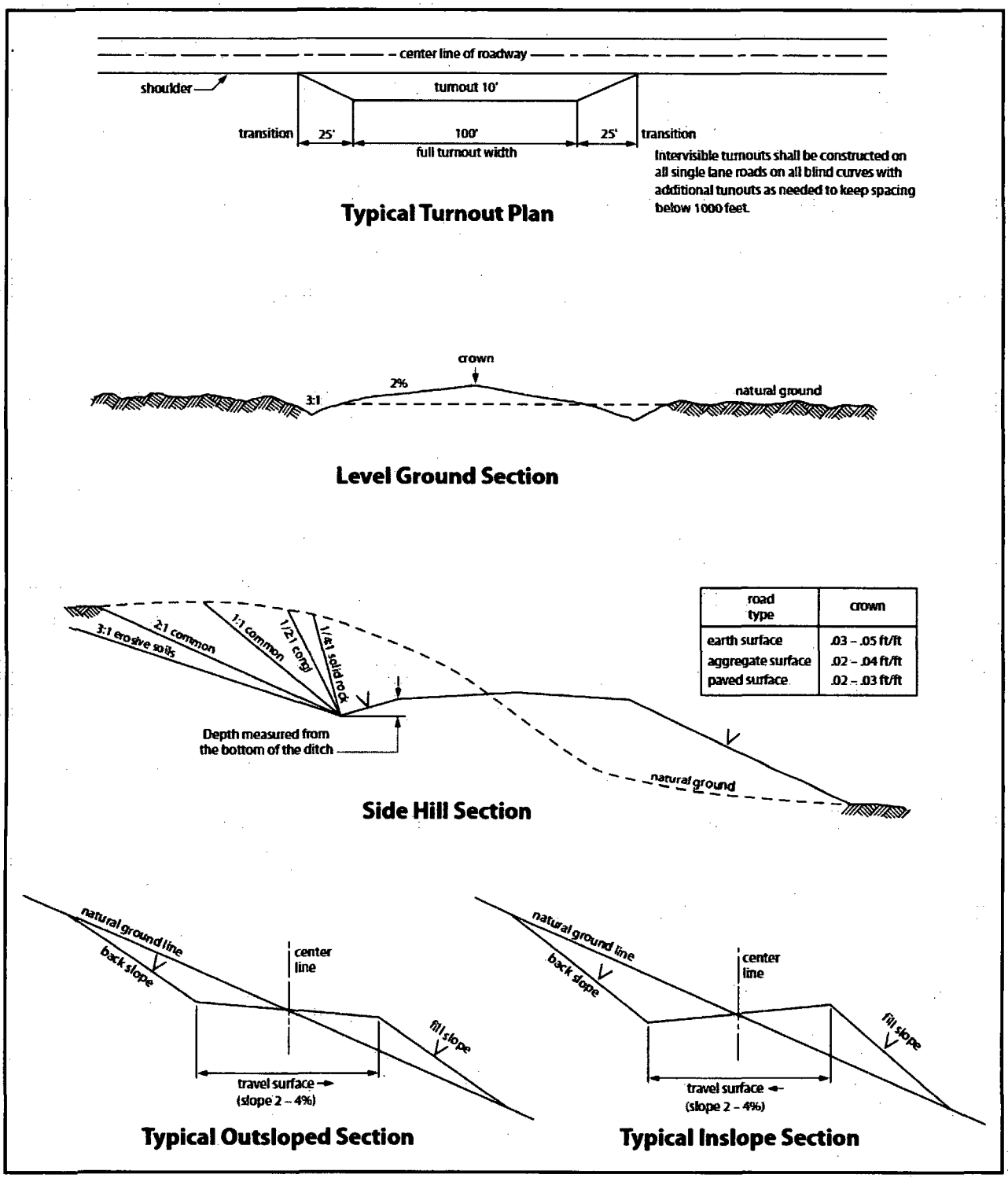


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

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

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

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 1 for Loamy 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 shall be tested and the viability testing of seed will 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 shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/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 shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

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

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*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 to be located on the drilling rig floor, in the base of the sub structure / cellar area, and 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 will be high enough to be visible.
- Windsock on the rig floor and / top of doghouse will 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 attached diagram

6 Communication:

- While working under masks, chalkboards will be used for communications.
- Hand signals will be used where chalk board 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 most drilling foreman's trailer or living quarters.

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

7 Drilling Stem Testing:

- No DST 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

- Attached

H2S Contingency Plan Emergency Contacts
Carl Mottek wells
Matador Production Company
Sec. 17, T24S, R34E Lea County, NM

Company Office			
Matador Production Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Adam Lange	Drilling Engineer	972-371-5247	214-458-0788
Lea County			
Ambulance		911	
Nor Lea General Hospital (Hobbs)		575-397-0560	
State Police (Hobbs)		575-392-5580	
City Police (Hobbs)		575-397-9625	
Sheriff's Office (Lovington)		575-396-3611	
Fire Marshall (Lovington)		575-391-2983	
Volunteer Fire Dept. (Jal)		575-395-2221	
Emergency Management (Lovington)		575-391-2983	
New Mexico Oil Conservation Division (Hobbs)		575-393-6161	575-390-3186
BLM (Hobbs)		575-393-3612	
Hobbs Animal Clinic		575-392-5563	
Dal Paso Animal Hospital (Hobbs)		575-397-2286	
Mountain States Equine (Hobbs)		575-392-7488	
Carlsbad			
BLM		575-234-5972	
Santa Fe			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
National			
National Emergency Response Center (Washington, D.C.)		800-424-8802	
Medical			
Flight for Life- 4000 24th St.; 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	
Other			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563-3356
Halliburton		575-746-2757	
B.J. Services		575-746-3569	
NM Dept. of Transportation (Roswell)		575-637-7200	

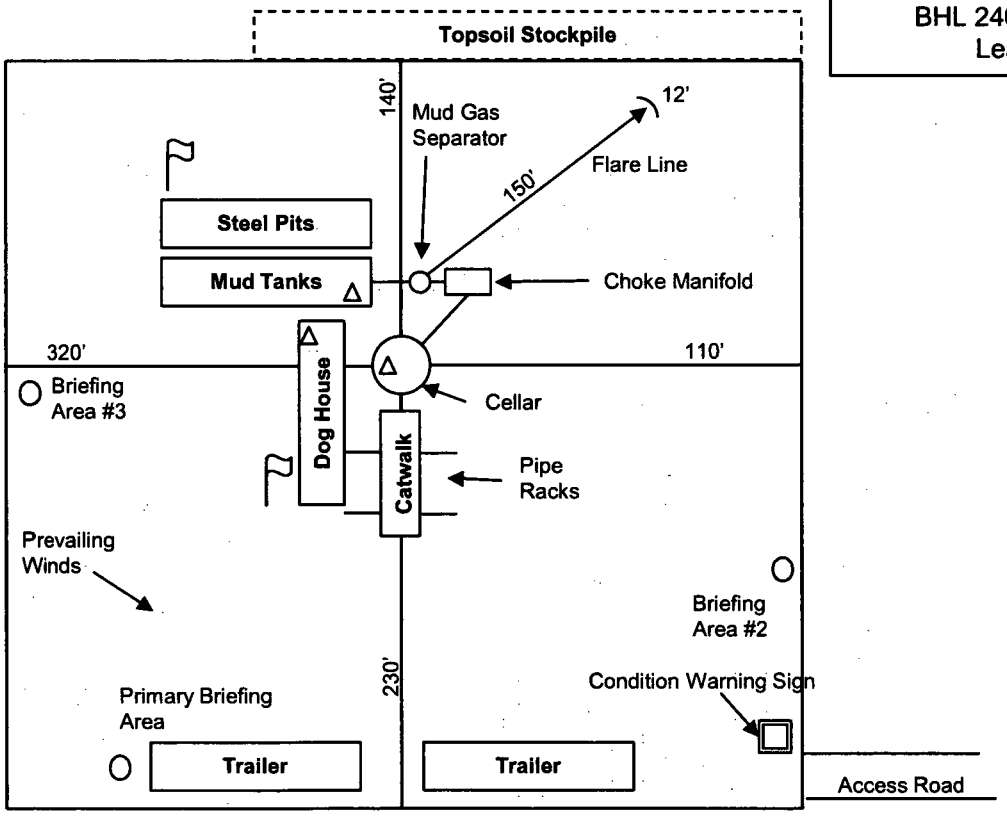
Rig Diagram

Exhibit E-3: Rig Diagram
Carl Mottek Federal #121H
Matador Resources Company
17-24S-34E
SHL 326' FNL & 410' FWL
BHL 240' FSL & 330' FWL
Lea County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas



Matador Resources
Lea County, NM
Carl Mottek 17-24S-34E AR
121H
Prelim Plan A
GL:3578' + KB:29'

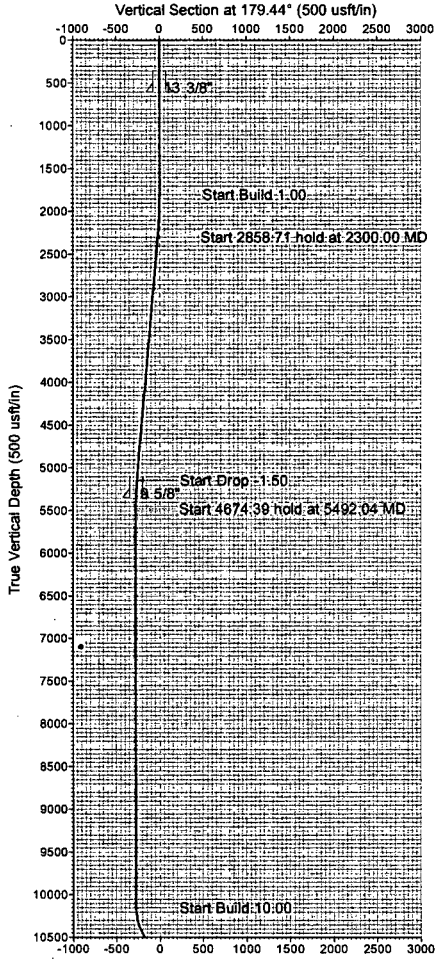
US State Plane 1927 (Exact solution)
NAD 1927 (NADCON CONUS)
Clarke 1866
New Mexico East 3001
Mean Sea Level

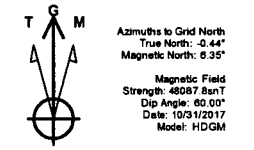
RKB Elevation: Rig @ 3607.00usft (GL:3578' + KB:29')

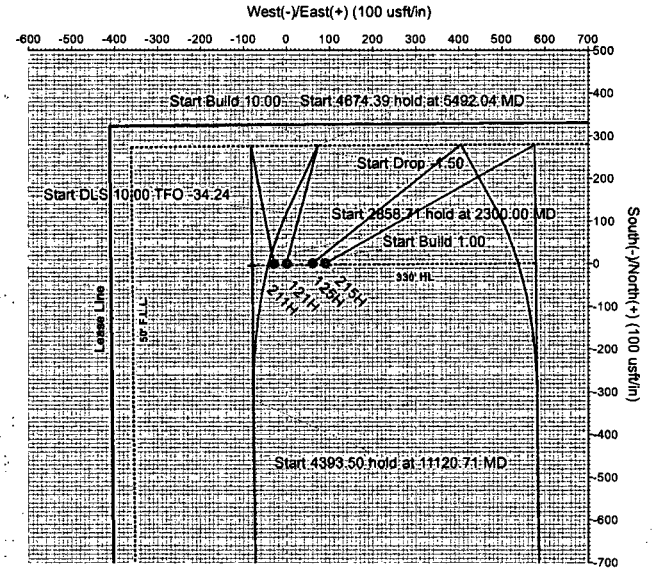
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	446143.00	758108.00	32.2238083	-103.4986917	

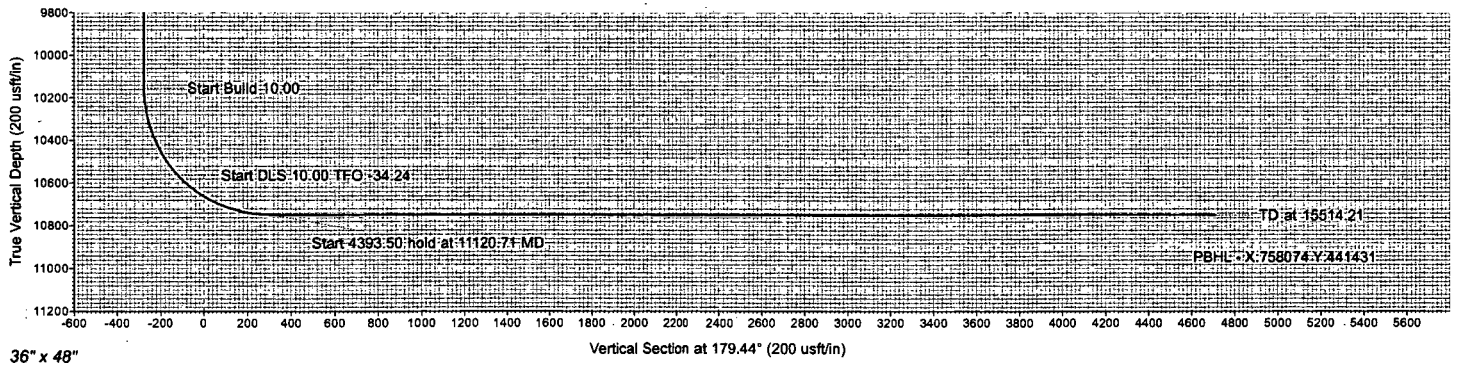
SECTION DETAILS- Lateral

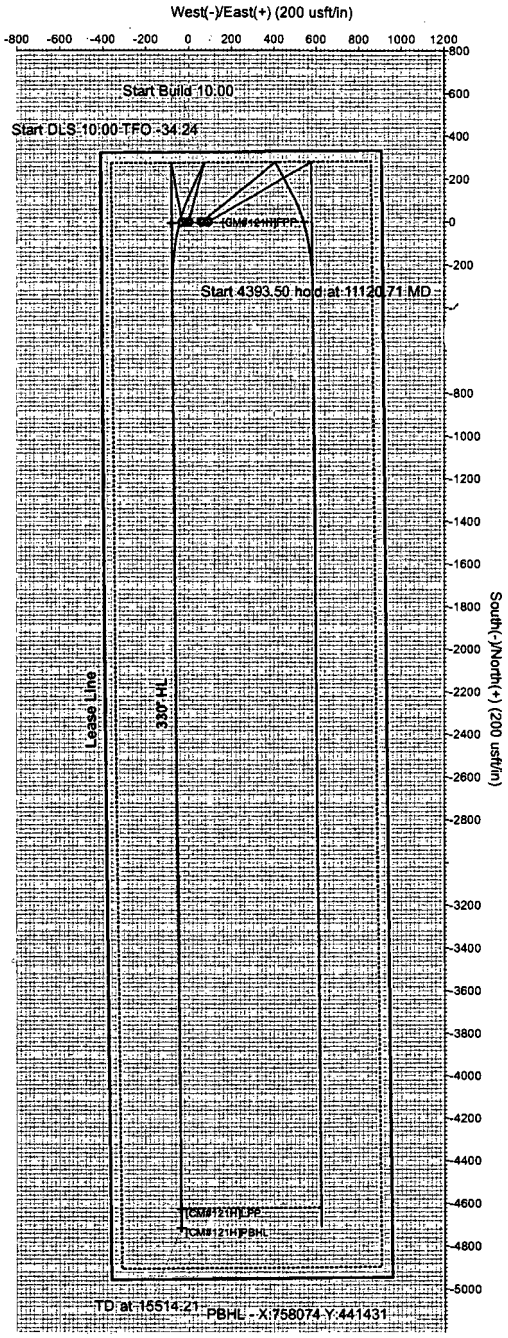
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00
3	2300.00	5.00	14.82	2299.37	21.08	5.57	1.00	-21.02
4	5158.71	5.00	14.82	5147.20	261.95	69.28	0.00	-261.26
5	5492.04	0.00	0.00	5480.11	276.00	73.00	1.50	-275.27
6	10166.44	0.00	0.00	10154.50	276.00	73.00	0.00	-275.27
7	10623.38	45.70	204.86	10564.52	119.25	0.36	10.00	-119.24
8	11120.71	90.00	179.44	10750.00	-318.71	-76.94	10.00	317.94
9	15514.21	90.00	179.44	10750.00	-4712.00	-34.00	0.00	4711.44











36" x 48"

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**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	Carl Mottek 17-24S-34E AR				
Site Position:		**Northing:**	446,143.00 usft	**Latitude:**	32.2238084
From:	Map	**Easting:**	758,108.00 usft	**Longitude:**	-103.4986917
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.45 °

Well	121H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	446,143.00 usft	**Latitude:**	32.2238084
	+E/-W	0.00 usft	**Easting:**	758,108.00 usft	**Longitude:**	-103.4986917
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,578.00 usft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	10/31/2017	6.80	60.00	48,087.80

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	179.44	

Survey Tool Program **Date** 10/31/2017

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.00	1,200.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
1,200.00	10,000.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
10,000.00	15,514.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM

Planned Survey

Measured Depth (usft)	**Inclination (°)**	**Azimuth (°)**	**Vertical Depth (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Vertical Section (usft)**	**Dogleg Rate (°/100usft)**	**Build Rate (°/100usft)**	**Turn Rate (°/100usft)**
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	1.00	14.82	1,899.99	0.84	0.22	-0.84	1.00	1.00	0.00
2,000.00	2.00	14.82	1,999.96	3.37	0.89	-3.37	1.00	1.00	0.00
2,100.00	3.00	14.82	2,099.86	7.59	2.01	-7.57	1.00	1.00	0.00
2,200.00	4.00	14.82	2,199.68	13.49	3.57	-13.46	1.00	1.00	0.00
2,300.00	5.00	14.82	2,299.37	21.08	5.57	-21.02	1.00	1.00	0.00
2,400.00	5.00	14.82	2,398.99	29.50	7.80	-29.43	0.00	0.00	0.00
2,500.00	5.00	14.82	2,498.60	37.93	10.03	-37.83	0.00	0.00	0.00
2,600.00	5.00	14.82	2,598.22	46.36	12.26	-46.23	0.00	0.00	0.00
2,700.00	5.00	14.82	2,697.84	54.78	14.49	-54.64	0.00	0.00	0.00
2,800.00	5.00	14.82	2,797.46	63.21	16.72	-63.04	0.00	0.00	0.00
2,900.00	5.00	14.82	2,897.08	71.63	18.95	-71.44	0.00	0.00	0.00
3,000.00	5.00	14.82	2,996.70	80.06	21.17	-79.85	0.00	0.00	0.00
3,100.00	5.00	14.82	3,096.32	88.48	23.40	-88.25	0.00	0.00	0.00
3,200.00	5.00	14.82	3,195.94	96.91	25.63	-96.66	0.00	0.00	0.00
3,300.00	5.00	14.82	3,295.56	105.34	27.86	-105.06	0.00	0.00	0.00
3,400.00	5.00	14.82	3,395.18	113.76	30.09	-113.46	0.00	0.00	0.00
3,500.00	5.00	14.82	3,494.80	122.19	32.32	-121.87	0.00	0.00	0.00
3,600.00	5.00	14.82	3,594.42	130.61	34.55	-130.27	0.00	0.00	0.00
3,700.00	5.00	14.82	3,694.04	139.04	36.77	-138.67	0.00	0.00	0.00
3,800.00	5.00	14.82	3,793.66	147.47	39.00	-147.08	0.00	0.00	0.00
3,900.00	5.00	14.82	3,893.28	155.89	41.23	-155.48	0.00	0.00	0.00
4,000.00	5.00	14.82	3,992.90	164.32	43.46	-163.88	0.00	0.00	0.00
4,100.00	5.00	14.82	4,092.52	172.74	45.69	-172.29	0.00	0.00	0.00
4,200.00	5.00	14.82	4,192.14	181.17	47.92	-180.69	0.00	0.00	0.00
4,300.00	5.00	14.82	4,291.76	189.59	50.15	-189.10	0.00	0.00	0.00
4,400.00	5.00	14.82	4,391.37	198.02	52.37	-197.50	0.00	0.00	0.00
4,500.00	5.00	14.82	4,490.99	206.45	54.60	-205.90	0.00	0.00	0.00
4,600.00	5.00	14.82	4,590.61	214.87	56.83	-214.31	0.00	0.00	0.00
4,700.00	5.00	14.82	4,690.23	223.30	59.06	-222.71	0.00	0.00	0.00
4,800.00	5.00	14.82	4,789.85	231.72	61.29	-231.11	0.00	0.00	0.00
4,900.00	5.00	14.82	4,889.47	240.15	63.52	-239.52	0.00	0.00	0.00
5,000.00	5.00	14.82	4,989.09	248.58	65.75	-247.92	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	5.00	14.82	5,088.71	257.00	67.97	-256.32	0.00	0.00	0.00
5,158.71	5.00	14.82	5,147.20	261.95	69.28	-261.26	0.00	0.00	0.00
5,200.00	4.38	14.82	5,188.35	265.21	70.15	-264.51	1.50	-1.50	0.00
5,300.00	2.88	14.82	5,288.15	271.33	71.77	-270.62	1.50	-1.50	0.00
5,360.00	1.98	14.82	5,348.09	273.79	72.42	-273.07	1.50	-1.50	0.00
9 5/8"									
5,400.00	1.38	14.82	5,388.07	274.93	72.72	-274.20	1.50	-1.50	0.00
5,492.04	0.00	0.00	5,480.11	276.00	73.00	-275.27	1.50	-1.50	0.00
5,500.00	0.00	0.00	5,488.06	276.00	73.00	-275.27	0.00	0.00	0.00
5,600.00	0.00	0.00	5,588.06	276.00	73.00	-275.27	0.00	0.00	0.00
5,700.00	0.00	0.00	5,688.06	276.00	73.00	-275.27	0.00	0.00	0.00
5,800.00	0.00	0.00	5,788.06	276.00	73.00	-275.27	0.00	0.00	0.00
5,900.00	0.00	0.00	5,888.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,000.00	0.00	0.00	5,988.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,100.00	0.00	0.00	6,088.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,200.00	0.00	0.00	6,188.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,300.00	0.00	0.00	6,288.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,400.00	0.00	0.00	6,388.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,500.00	0.00	0.00	6,488.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,600.00	0.00	0.00	6,588.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,700.00	0.00	0.00	6,688.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,800.00	0.00	0.00	6,788.06	276.00	73.00	-275.27	0.00	0.00	0.00
6,900.00	0.00	0.00	6,888.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,000.00	0.00	0.00	6,988.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,100.00	0.00	0.00	7,088.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,200.00	0.00	0.00	7,188.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,300.00	0.00	0.00	7,288.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,400.00	0.00	0.00	7,388.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,500.00	0.00	0.00	7,488.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,600.00	0.00	0.00	7,588.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,700.00	0.00	0.00	7,688.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,800.00	0.00	0.00	7,788.06	276.00	73.00	-275.27	0.00	0.00	0.00
7,900.00	0.00	0.00	7,888.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,000.00	0.00	0.00	7,988.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,100.00	0.00	0.00	8,088.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,200.00	0.00	0.00	8,188.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,300.00	0.00	0.00	8,288.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,400.00	0.00	0.00	8,388.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,500.00	0.00	0.00	8,488.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,600.00	0.00	0.00	8,588.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,700.00	0.00	0.00	8,688.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,800.00	0.00	0.00	8,788.06	276.00	73.00	-275.27	0.00	0.00	0.00
8,900.00	0.00	0.00	8,888.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,000.00	0.00	0.00	8,988.06	276.00	73.00	-275.27	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,100.00	0.00	0.00	9,088.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,200.00	0.00	0.00	9,188.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,300.00	0.00	0.00	9,288.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,400.00	0.00	0.00	9,388.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,500.00	0.00	0.00	9,488.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,600.00	0.00	0.00	9,588.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,700.00	0.00	0.00	9,688.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,800.00	0.00	0.00	9,788.06	276.00	73.00	-275.27	0.00	0.00	0.00
9,900.00	0.00	0.00	9,888.06	276.00	73.00	-275.27	0.00	0.00	0.00
10,000.00	0.00	0.00	9,988.06	276.00	73.00	-275.27	0.00	0.00	0.00
10,100.00	0.00	0.00	10,088.06	276.00	73.00	-275.27	0.00	0.00	0.00
10,166.44	0.00	0.00	10,154.50	276.00	73.00	-275.27	0.00	0.00	0.00
10,200.00	3.36	204.86	10,188.05	275.11	72.59	-274.39	10.00	10.00	0.00
10,250.00	8.36	204.86	10,237.77	270.48	70.44	-269.78	10.00	10.00	0.00
10,300.00	13.36	204.86	10,286.86	261.94	66.48	-261.28	10.00	10.00	0.00
10,350.00	18.36	204.86	10,334.94	249.55	60.74	-248.94	10.00	10.00	0.00
10,400.00	23.36	204.86	10,381.65	233.40	53.26	-232.87	10.00	10.00	0.00
10,450.00	28.36	204.86	10,426.63	213.62	44.09	-213.18	10.00	10.00	0.00
10,500.00	33.36	204.86	10,469.54	190.36	33.32	-190.03	10.00	10.00	0.00
10,550.00	38.36	204.86	10,510.05	163.79	21.01	-163.58	10.00	10.00	0.00
10,600.00	43.36	204.86	10,547.85	134.13	7.26	-134.05	10.00	10.00	0.00
10,623.38	45.70	204.86	10,564.52	119.25	0.36	-119.24	10.00	10.00	0.00
10,650.00	47.91	202.85	10,582.74	101.50	-7.48	-101.57	10.00	8.34	-7.58
10,700.00	52.17	199.41	10,614.85	65.76	-21.25	-65.96	10.00	8.51	-6.86
10,750.00	56.51	196.36	10,644.00	27.11	-33.69	-27.44	10.00	8.68	-6.11
10,800.00	60.92	193.60	10,669.96	-14.16	-44.71	13.72	10.00	8.82	-5.52
10,850.00	65.38	191.07	10,692.54	-57.73	-54.22	57.20	10.00	8.92	-5.06
10,900.00	69.88	188.71	10,711.57	-103.27	-62.14	102.65	10.00	9.00	-4.71
10,950.00	74.41	186.49	10,726.89	-150.43	-68.42	149.75	10.00	9.06	-4.45
11,000.00	78.96	184.36	10,738.40	-198.85	-73.01	198.13	10.00	9.10	-4.25
11,050.00	83.53	182.30	10,746.01	-248.17	-75.88	247.41	10.00	9.13	-4.12
11,100.00	88.10	180.27	10,749.66	-298.01	-76.99	297.24	10.00	9.15	-4.05
11,120.71	90.00	179.44	10,750.00	-318.71	-76.94	317.94	10.00	9.15	-4.03
11,200.00	90.00	179.44	10,750.00	-398.00	-76.17	397.24	0.00	0.00	0.00
11,300.00	90.00	179.44	10,750.00	-497.99	-75.19	497.24	0.00	0.00	0.00
11,400.00	90.00	179.44	10,750.00	-597.99	-74.21	597.24	0.00	0.00	0.00
11,500.00	90.00	179.44	10,750.00	-697.98	-73.23	697.24	0.00	0.00	0.00
11,600.00	90.00	179.44	10,750.00	-797.98	-72.26	797.24	0.00	0.00	0.00
11,700.00	90.00	179.44	10,750.00	-897.97	-71.28	897.24	0.00	0.00	0.00
11,800.00	90.00	179.44	10,750.00	-997.97	-70.30	997.24	0.00	0.00	0.00
11,900.00	90.00	179.44	10,750.00	-1,097.97	-69.32	1,097.24	0.00	0.00	0.00
12,000.00	90.00	179.44	10,750.00	-1,197.96	-68.35	1,197.24	0.00	0.00	0.00
12,100.00	90.00	179.44	10,750.00	-1,297.96	-67.37	1,297.24	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,200.00	90.00	179.44	10,750.00	-1,397.95	-66.39	1,397.24	0.00	0.00	0.00
12,300.00	90.00	179.44	10,750.00	-1,497.95	-65.41	1,497.24	0.00	0.00	0.00
12,400.00	90.00	179.44	10,750.00	-1,597.94	-64.44	1,597.24	0.00	0.00	0.00
12,500.00	90.00	179.44	10,750.00	-1,697.94	-63.46	1,697.24	0.00	0.00	0.00
12,600.00	90.00	179.44	10,750.00	-1,797.93	-62.48	1,797.24	0.00	0.00	0.00
12,700.00	90.00	179.44	10,750.00	-1,897.93	-61.51	1,897.24	0.00	0.00	0.00
12,800.00	90.00	179.44	10,750.00	-1,997.92	-60.53	1,997.24	0.00	0.00	0.00
12,900.00	90.00	179.44	10,750.00	-2,097.92	-59.55	2,097.24	0.00	0.00	0.00
13,000.00	90.00	179.44	10,750.00	-2,197.91	-58.57	2,197.24	0.00	0.00	0.00
13,100.00	90.00	179.44	10,750.00	-2,297.91	-57.60	2,297.24	0.00	0.00	0.00
13,200.00	90.00	179.44	10,750.00	-2,397.90	-56.62	2,397.24	0.00	0.00	0.00
13,300.00	90.00	179.44	10,750.00	-2,497.90	-55.64	2,497.24	0.00	0.00	0.00
13,400.00	90.00	179.44	10,750.00	-2,597.89	-54.66	2,597.24	0.00	0.00	0.00
13,500.00	90.00	179.44	10,750.00	-2,697.89	-53.69	2,697.24	0.00	0.00	0.00
13,600.00	90.00	179.44	10,750.00	-2,797.88	-52.71	2,797.24	0.00	0.00	0.00
13,700.00	90.00	179.44	10,750.00	-2,897.88	-51.73	2,897.24	0.00	0.00	0.00
13,800.00	90.00	179.44	10,750.00	-2,997.87	-50.75	2,997.24	0.00	0.00	0.00
13,900.00	90.00	179.44	10,750.00	-3,097.87	-49.78	3,097.24	0.00	0.00	0.00
14,000.00	90.00	179.44	10,750.00	-3,197.87	-48.80	3,197.24	0.00	0.00	0.00
14,100.00	90.00	179.44	10,750.00	-3,297.86	-47.82	3,297.24	0.00	0.00	0.00
14,200.00	90.00	179.44	10,750.00	-3,397.86	-46.84	3,397.24	0.00	0.00	0.00
14,300.00	90.00	179.44	10,750.00	-3,497.85	-45.87	3,497.24	0.00	0.00	0.00
14,400.00	90.00	179.44	10,750.00	-3,597.85	-44.89	3,597.24	0.00	0.00	0.00
14,500.00	90.00	179.44	10,750.00	-3,697.84	-43.91	3,697.24	0.00	0.00	0.00
14,600.00	90.00	179.44	10,750.00	-3,797.84	-42.94	3,797.24	0.00	0.00	0.00
14,700.00	90.00	179.44	10,750.00	-3,897.83	-41.96	3,897.24	0.00	0.00	0.00
14,800.00	90.00	179.44	10,750.00	-3,997.83	-40.98	3,997.24	0.00	0.00	0.00
14,900.00	90.00	179.44	10,750.00	-4,097.82	-40.00	4,097.24	0.00	0.00	0.00
15,000.00	90.00	179.44	10,750.00	-4,197.82	-39.03	4,197.24	0.00	0.00	0.00
15,100.00	90.00	179.44	10,750.00	-4,297.81	-38.05	4,297.24	0.00	0.00	0.00
15,200.00	90.00	179.44	10,750.00	-4,397.81	-37.07	4,397.24	0.00	0.00	0.00
15,300.00	90.00	179.44	10,750.00	-4,497.80	-36.09	4,497.24	0.00	0.00	0.00
15,400.00	90.00	179.44	10,750.00	-4,597.80	-35.12	4,597.24	0.00	0.00	0.00
15,500.00	90.00	179.44	10,750.00	-4,697.79	-34.14	4,697.24	0.00	0.00	0.00
15,514.21	90.00	179.44	10,750.00	-4,712.00	-34.00	4,711.44	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Well:	121H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**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
[CM#121H]LPP - plan misses target center by 4622.13usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-4,622.00	-35.00	441,521.00	758,073.00	32.2111046	-103.4989209
[CM#121H]FPP - plan misses target center by 80.10usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-4.00	-80.00	446,139.00	758,028.00	32.2237991	-103.4989505
[CM#121H]PBHL - plan hits target center - Point	0.00	0.00	10,750.00	-4,712.00	-34.00	441,431.00	758,074.00	32.2108572	-103.4989199

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
600.00	600.00	13 3/8"	13-3/8	17-1/2
5,360.00	5,348.09	9 5/8"	9-5/8	12-1/4

Checked By: _____ Approved By: _____ Date: _____

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan A	**Offset TVD Reference:**	Offset Datum

Reference	Prelim Plan A		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,750.59 usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 10/31/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	1,200.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
1,200.00	10,000.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM
10,000.00	15,514.00	Prelim Plan A (OH)	MWD+HDGM	OWSG MWD + HRGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Carl Mottek 17-24S-34E AR						
125H - OH - Prelim Plan A	2,065.75	2,065.17	58.90	46.58	4.778	CC
125H - OH - Prelim Plan A	2,100.00	2,099.15	58.97	46.46	4.711	ES
125H - OH - Prelim Plan A	15,514.21	15,527.02	656.02	501.73	4.252	SF
211H - OH - Prelim Plan A	1,600.00	1,600.00	30.00	20.06	3.020	CC
211H - OH - Prelim Plan A	1,700.00	1,699.89	30.18	19.77	2.900	ES
211H - OH - Prelim Plan A	10,443.27	10,432.43	141.54	72.79	2.059	SF
215H - OH - Prelim Plan A	1,600.00	1,600.00	90.01	81.14	10.156	CC, ES
215H - OH - Prelim Plan A	10,200.00	10,211.98	503.44	439.35	7.856	SF

Offset Design Carl Mottek 17-24S-34E AR - 125H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.05	1.00	60.00	60.01				
100.00	100.00	100.00	100.00	0.13	0.13	89.05	1.00	60.00	60.01	59.75	0.25	235.775	
200.00	200.00	200.00	200.00	0.49	0.49	89.05	1.00	60.00	60.01	59.04	0.97	61.771	
300.00	300.00	300.00	300.00	0.84	0.84	89.05	1.00	60.00	60.01	58.32	1.69	35.542	
400.00	400.00	400.00	400.00	1.20	1.20	89.05	1.00	60.00	60.01	57.60	2.41	24.948	
500.00	500.00	500.00	500.00	1.56	1.56	89.05	1.00	60.00	60.01	56.89	3.12	19.219	
600.00	600.00	600.00	600.00	1.92	1.92	89.05	1.00	60.00	60.01	56.17	3.84	15.630	
700.00	700.00	700.00	700.00	2.28	2.28	89.05	1.00	60.00	60.01	55.45	4.56	13.171	
800.00	800.00	800.00	800.00	2.64	2.64	89.05	1.00	60.00	60.01	54.74	5.27	11.380	
900.00	900.00	900.00	900.00	3.00	3.00	89.05	1.00	60.00	60.01	54.02	5.99	10.018	
1,000.00	1,000.00	1,000.00	1,000.00	3.35	3.35	89.05	1.00	60.00	60.01	53.30	6.71	8.947	
1,100.00	1,100.00	1,100.00	1,100.00	3.71	3.71	89.05	1.00	60.00	60.01	52.58	7.42	8.083	
1,200.00	1,200.00	1,200.00	1,200.00	4.07	4.07	89.05	1.00	60.00	60.01	51.87	8.14	7.371	
1,300.00	1,300.00	1,300.00	1,300.00	4.25	4.43	89.05	1.00	60.00	60.01	51.33	8.68	6.912	
1,400.00	1,400.00	1,400.00	1,400.00	4.28	4.79	89.05	1.00	60.00	60.01	50.94	9.07	6.615	
1,500.00	1,500.00	1,500.00	1,500.00	4.34	5.15	89.05	1.00	60.00	60.01	50.52	9.49	6.324	
1,600.00	1,600.00	1,600.00	1,600.00	4.43	5.50	89.05	1.00	60.00	60.01	50.07	9.94	6.040	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 125H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,700.00	1,700.00	1,700.00	1,700.00	4.55	5.86	89.05	1.00	60.00	60.01	49.60	10.41	5.765	
1,800.00	1,800.00	1,800.00	1,800.00	4.68	6.22	89.05	1.00	60.00	60.01	49.10	10.91	5.502	
1,900.00	1,899.99	1,900.01	1,899.99	4.85	6.58	75.04	1.00	60.00	59.78	48.35	11.43	5.232	
2,000.00	1,999.96	1,999.96	1,999.96	5.03	6.94	77.49	1.00	60.00	59.16	47.19	11.97	4.944	
2,065.75	2,065.66	2,065.17	2,065.17	5.16	7.17	79.77	1.23	60.29	58.90	46.58	12.33	4.778 CC	
2,100.00	2,099.86	2,099.15	2,099.14	5.23	7.29	81.05	1.54	60.67	58.97	46.46	12.52	4.711 ES	
2,200.00	2,199.68	2,198.35	2,198.31	5.45	7.64	85.02	3.16	62.67	60.01	46.93	13.08	4.587	
2,300.00	2,299.37	2,297.56	2,297.42	5.68	7.99	89.16	5.87	66.00	62.34	48.68	13.66	4.563	
2,400.00	2,398.99	2,396.78	2,396.47	5.93	8.34	92.51	9.65	70.67	65.97	51.71	14.26	4.627	
2,500.00	2,498.60	2,504.01	2,495.37	6.19	8.72	94.30	14.51	76.66	70.70	55.80	14.89	4.747	
2,600.00	2,598.22	2,604.16	2,594.84	6.46	9.08	95.27	20.00	83.42	75.96	60.44	15.52	4.894	
2,700.00	2,697.84	2,704.31	2,694.32	6.74	9.44	96.11	25.48	90.18	81.24	65.08	16.16	5.027	
2,800.00	2,797.46	2,795.55	2,793.79	7.03	9.77	96.85	30.96	96.94	86.54	69.76	16.78	5.158	
2,900.00	2,897.08	2,904.60	2,893.26	7.33	10.16	97.50	36.44	103.70	91.85	74.38	17.47	5.258	
3,000.00	2,996.70	2,995.26	2,992.74	7.63	10.49	98.08	41.92	110.46	97.17	79.07	18.10	5.369	
3,100.00	3,096.32	3,104.89	3,092.21	7.94	10.89	98.60	47.41	117.22	102.50	83.69	18.81	5.450	
3,200.00	3,195.94	3,194.96	3,191.68	8.26	11.22	99.07	52.89	123.98	107.83	88.38	19.45	5.545	
3,300.00	3,295.56	3,305.18	3,291.16	8.58	11.62	99.50	58.37	130.74	113.17	93.01	20.17	5.612	
3,400.00	3,395.18	3,405.33	3,390.63	8.91	11.99	99.88	63.85	137.49	118.52	97.67	20.86	5.683	
3,500.00	3,494.80	3,505.48	3,490.11	9.24	12.35	100.24	69.33	144.25	123.88	102.33	21.55	5.749	
3,600.00	3,594.42	3,594.38	3,589.58	9.57	12.68	100.56	74.82	151.01	129.23	107.03	22.20	5.820	
3,700.00	3,694.04	3,705.77	3,689.05	9.90	13.09	100.86	80.30	157.77	134.59	111.65	22.95	5.866	
3,800.00	3,793.66	3,805.91	3,788.53	10.24	13.46	101.13	85.78	164.53	139.96	116.31	23.65	5.918	
3,900.00	3,893.28	3,906.06	3,888.00	10.58	13.82	101.39	91.26	171.29	145.33	120.97	24.35	5.967	
4,000.00	3,992.90	4,006.21	3,987.48	10.92	14.19	101.62	96.74	178.05	150.70	125.63	25.06	6.013	
4,100.00	4,092.52	4,106.35	4,086.95	11.27	14.56	101.85	102.23	184.81	156.07	130.30	25.77	6.055	
4,200.00	4,192.14	4,206.50	4,186.42	11.62	14.93	102.05	107.71	191.57	161.45	134.96	26.49	6.095	
4,300.00	4,291.76	4,306.64	4,285.90	11.96	15.30	102.24	113.19	198.33	166.82	139.62	27.20	6.132	
4,400.00	4,391.37	4,406.79	4,385.37	12.31	15.67	102.42	118.67	205.09	172.20	144.28	27.92	6.167	
4,500.00	4,490.99	4,506.94	4,484.84	12.66	16.04	102.59	124.15	211.85	177.58	148.94	28.64	6.200	
4,600.00	4,590.61	4,607.08	4,584.32	13.02	16.41	102.75	129.64	218.60	182.96	153.60	29.36	6.232	
4,700.00	4,690.23	4,707.23	4,683.79	13.37	16.78	102.90	135.12	225.36	188.35	158.26	30.08	6.261	
4,800.00	4,789.85	4,807.38	4,783.27	13.73	17.16	103.05	140.60	232.12	193.73	162.92	30.81	6.289	
4,900.00	4,889.47	4,907.52	4,882.74	14.08	17.53	103.18	146.08	238.88	199.12	167.59	31.53	6.315	
5,000.00	4,989.09	5,007.67	4,982.21	14.44	17.90	103.31	151.56	245.64	204.50	172.25	32.26	6.340	
5,100.00	5,088.71	5,107.81	5,081.69	14.80	18.27	103.43	157.05	252.40	209.89	176.91	32.98	6.364	
5,200.00	5,188.35	5,207.96	5,181.16	15.15	18.64	103.52	162.53	259.16	215.22	181.52	33.71	6.385	
5,300.00	5,288.15	5,291.91	5,280.65	15.51	18.95	103.09	168.01	265.92	220.06	185.69	34.37	6.403	
5,400.00	5,388.07	5,408.29	5,380.08	15.85	19.39	102.03	173.49	272.68	224.36	189.22	35.14	6.385	
5,500.00	5,488.06	5,491.40	5,479.39	16.19	19.70	115.18	178.96	279.42	228.26	192.48	35.78	6.380	
5,600.00	5,588.06	5,608.98	5,578.63	16.52	20.13	113.25	184.43	286.17	232.19	195.65	36.54	6.354	
5,700.00	5,688.06	5,690.64	5,677.87	16.86	20.44	111.38	189.90	292.91	236.38	199.21	37.17	6.359	
5,800.00	5,788.06	5,809.74	5,777.11	17.19	20.88	109.58	195.37	299.65	240.82	202.88	37.94	6.348	
5,900.00	5,888.06	5,889.88	5,876.35	17.53	21.18	107.85	200.84	306.40	245.48	206.92	38.56	6.366	
6,000.00	5,988.06	5,989.50	5,975.59	17.87	21.55	106.18	206.31	313.14	250.36	211.10	39.26	6.378	
6,100.00	6,088.06	6,089.12	6,074.83	18.21	21.92	104.58	211.78	319.88	255.44	215.49	39.95	6.394	
6,200.00	6,188.06	6,188.74	6,174.07	18.55	22.29	103.04	217.25	326.63	260.72	220.07	40.65	6.414	
6,300.00	6,288.06	6,288.36	6,273.31	18.89	22.67	101.57	222.72	333.37	266.18	224.83	41.34	6.438	
6,400.00	6,388.06	6,387.98	6,372.55	19.23	23.04	100.15	228.19	340.11	271.80	229.76	42.04	6.465	
6,500.00	6,488.06	6,487.60	6,471.79	19.57	23.41	98.79	233.65	346.86	277.59	234.85	42.74	6.495	
6,600.00	6,588.06	6,587.22	6,571.03	19.91	23.78	97.49	239.12	353.60	283.53	240.09	43.43	6.528	
6,700.00	6,688.06	6,686.84	6,670.27	20.26	24.15	96.24	244.59	360.34	289.60	245.47	44.13	6.562	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 125H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,788.06	6,786.46	6,769.51	20.60	24.52	95.04	250.06	367.09	295.81	250.98	44.83	6.599	
6,900.00	6,888.06	6,886.08	6,868.75	20.94	24.90	93.89	255.53	373.83	302.14	256.62	45.53	6.636	
7,000.00	6,988.06	6,985.70	6,967.99	21.29	25.27	92.79	261.00	380.57	308.59	262.37	46.23	6.675	
7,100.00	7,088.06	7,085.31	7,067.23	21.63	25.64	91.74	266.47	387.32	315.15	268.22	46.93	6.716	
7,200.00	7,188.06	7,186.32	7,167.86	21.98	26.02	90.72	271.98	394.11	321.77	274.13	47.64	6.754	
7,300.00	7,288.06	7,293.11	7,274.40	22.32	26.41	89.91	276.53	399.72	327.01	278.62	48.38	6.759	
7,400.00	7,388.06	7,400.23	7,381.43	22.67	26.80	89.44	279.21	403.02	330.10	281.00	49.11	6.722	
7,500.00	7,488.06	7,506.87	7,488.06	23.02	27.17	89.31	280.00	404.00	331.02	281.21	49.81	6.645	
7,600.00	7,588.06	7,606.87	7,588.06	23.36	27.52	89.31	280.00	404.00	331.02	280.51	50.51	6.554	
7,700.00	7,688.06	7,706.87	7,688.06	23.71	27.86	89.31	280.00	404.00	331.02	279.82	51.21	6.464	
7,800.00	7,788.06	7,806.87	7,788.06	24.06	28.21	89.31	280.00	404.00	331.02	279.12	51.91	6.377	
7,900.00	7,888.06	7,906.87	7,888.06	24.41	28.56	89.31	280.00	404.00	331.02	278.42	52.60	6.293	
8,000.00	7,988.06	8,006.87	7,988.06	24.75	28.91	89.31	280.00	404.00	331.02	277.72	53.30	6.210	
8,100.00	8,088.06	8,106.87	8,088.06	25.10	29.25	89.31	280.00	404.00	331.02	277.02	54.00	6.130	
8,200.00	8,188.06	8,206.87	8,188.06	25.45	29.60	89.31	280.00	404.00	331.02	276.32	54.70	6.051	
8,300.00	8,288.06	8,306.87	8,288.06	25.80	29.95	89.31	280.00	404.00	331.02	275.62	55.40	5.975	
8,400.00	8,388.06	8,406.87	8,388.06	26.15	30.30	89.31	280.00	404.00	331.02	274.92	56.10	5.900	
8,500.00	8,488.06	8,506.87	8,488.06	26.50	30.65	89.31	280.00	404.00	331.02	274.22	56.80	5.828	
8,600.00	8,588.06	8,606.87	8,588.06	26.85	31.00	89.31	280.00	404.00	331.02	273.52	57.50	5.757	
8,700.00	8,688.06	8,706.87	8,688.06	27.20	31.35	89.31	280.00	404.00	331.02	272.82	58.21	5.687	
8,800.00	8,788.06	8,806.87	8,788.06	27.55	31.70	89.31	280.00	404.00	331.02	272.12	58.91	5.619	
8,900.00	8,888.06	8,906.87	8,888.06	27.90	32.05	89.31	280.00	404.00	331.02	271.41	59.61	5.553	
9,000.00	8,988.06	9,006.87	8,988.06	28.25	32.40	89.31	280.00	404.00	331.02	270.71	60.31	5.488	
9,100.00	9,088.06	9,106.87	9,088.06	28.60	32.75	89.31	280.00	404.00	331.02	270.01	61.02	5.425	
9,200.00	9,188.06	9,206.87	9,188.06	28.95	33.10	89.31	280.00	404.00	331.02	269.30	61.72	5.363	
9,300.00	9,288.06	9,306.87	9,288.06	29.30	33.45	89.31	280.00	404.00	331.02	268.60	62.42	5.303	
9,400.00	9,388.06	9,406.87	9,388.06	29.65	33.80	89.31	280.00	404.00	331.02	267.90	63.13	5.244	
9,500.00	9,488.06	9,506.87	9,488.06	30.01	34.15	89.31	280.00	404.00	331.02	267.19	63.83	5.186	
9,600.00	9,588.06	9,606.87	9,588.06	30.36	34.50	89.31	280.00	404.00	331.02	266.49	64.54	5.129	
9,700.00	9,688.06	9,706.87	9,688.06	30.71	34.85	89.31	280.00	404.00	331.02	265.78	65.24	5.074	
9,800.00	9,788.06	9,806.87	9,788.06	31.06	35.20	89.31	280.00	404.00	331.02	265.08	65.95	5.020	
9,900.00	9,888.06	9,906.87	9,888.06	31.41	35.56	89.31	280.00	404.00	331.02	264.37	66.65	4.966	
10,000.00	9,988.06	10,006.87	9,988.06	31.59	35.91	89.31	280.00	404.00	331.02	263.84	67.18	4.927	
10,100.00	10,088.06	10,106.87	10,088.06	31.59	36.26	89.31	280.00	404.00	331.02	263.49	67.54	4.901	
10,104.09	10,092.15	10,110.96	10,092.15	31.59	36.27	-115.56	280.00	404.00	331.03	263.47	67.55	4.900	
10,200.00	10,188.05	10,200.00	10,181.18	31.60	36.58	-115.51	279.47	404.29	331.80	263.92	67.88	4.888	
10,300.00	10,286.86	10,277.63	10,258.24	31.59	36.83	-114.86	271.69	408.52	343.37	275.32	68.05	5.046	
10,400.00	10,381.65	10,352.96	10,331.19	31.57	37.07	-113.38	255.39	417.38	368.26	300.20	68.06	5.410	
10,500.00	10,469.54	10,424.32	10,397.47	31.55	37.27	-111.00	232.25	429.96	405.31	337.28	68.03	5.957	
10,600.00	10,547.85	10,490.76	10,455.76	31.59	37.45	-107.64	204.31	445.16	452.95	384.89	68.06	6.655	
10,700.00	10,614.85	10,553.18	10,506.79	31.63	37.61	-100.13	172.78	462.31	506.91	438.71	68.20	7.433	
10,800.00	10,669.96	10,615.01	10,553.16	31.68	37.75	-93.54	136.89	481.82	560.09	491.61	68.48	8.179	
10,900.00	10,711.57	10,734.29	10,630.29	31.75	38.01	-90.80	54.56	519.88	608.50	539.21	69.29	8.782	
11,000.00	10,738.40	10,900.03	10,708.30	31.89	38.39	-90.12	-85.64	559.02	642.80	572.81	69.99	9.184	
11,100.00	10,749.66	11,094.14	10,748.92	32.10	38.86	-90.02	-273.27	580.46	657.92	587.39	70.53	9.328	
11,200.00	10,750.00	11,212.81	10,750.00	32.36	39.15	-90.00	-391.91	582.08	658.28	587.24	71.04	9.267	
11,300.00	10,750.00	11,312.81	10,750.00	32.68	39.44	-90.00	-491.91	583.01	658.22	586.59	71.64	9.188	
11,400.00	10,750.00	11,412.81	10,750.00	33.06	39.78	-90.00	-591.90	583.93	658.17	585.82	72.35	9.097	
11,500.00	10,750.00	11,512.81	10,750.00	33.51	40.15	-90.00	-691.90	584.86	658.12	584.95	73.17	8.994	
11,600.00	10,750.00	11,612.81	10,750.00	34.00	40.58	-90.00	-791.89	585.78	658.07	583.98	74.09	8.882	
11,700.00	10,750.00	11,712.81	10,750.00	34.55	41.05	-90.00	-891.89	586.71	658.02	582.90	75.11	8.760	
11,800.00	10,750.00	11,812.81	10,750.00	35.15	41.56	-90.00	-991.88	587.63	657.96	581.73	76.23	8.631	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 125H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,900.00	10,750.00	11,912.81	10,750.00	35.80	42.11	-90.00	-1,091.88	588.56	657.91	580.47	77.44	8.496	
12,000.00	10,750.00	12,012.81	10,750.00	36.49	42.71	-90.00	-1,191.88	589.48	657.86	579.12	78.74	8.355	
12,100.00	10,750.00	12,112.81	10,750.00	37.23	43.34	-90.00	-1,291.87	590.41	657.81	577.69	80.11	8.211	
12,200.00	10,750.00	12,212.81	10,750.00	38.01	44.02	-90.00	-1,391.87	591.33	657.75	576.19	81.57	8.064	
12,300.00	10,750.00	12,312.81	10,750.00	38.82	44.72	-90.00	-1,491.86	592.26	657.70	574.60	83.10	7.915	
12,400.00	10,750.00	12,412.81	10,750.00	39.67	45.47	-90.00	-1,591.86	593.18	657.65	572.95	84.70	7.765	
12,500.00	10,750.00	12,512.81	10,750.00	40.55	46.24	-90.00	-1,691.85	594.11	657.60	571.23	86.36	7.614	
12,600.00	10,750.00	12,612.81	10,750.00	41.47	47.05	-90.00	-1,791.85	595.03	657.54	569.45	88.09	7.464	
12,700.00	10,750.00	12,712.81	10,750.00	42.41	47.88	-90.00	-1,891.85	595.96	657.49	567.61	89.88	7.315	
12,800.00	10,750.00	12,812.81	10,750.00	43.38	48.75	-90.00	-1,991.84	596.88	657.44	565.72	91.72	7.168	
12,900.00	10,750.00	12,912.81	10,750.00	44.38	49.64	-90.00	-2,091.84	597.81	657.39	563.77	93.62	7.022	
13,000.00	10,750.00	13,012.81	10,750.00	45.40	50.55	-90.00	-2,191.83	598.73	657.33	561.78	95.56	6.879	
13,100.00	10,750.00	13,112.81	10,750.00	46.44	51.49	-90.00	-2,291.83	599.66	657.28	559.73	97.55	6.738	
13,200.00	10,750.00	13,212.81	10,750.00	47.50	52.46	-90.00	-2,391.82	600.58	657.23	557.65	99.58	6.600	
13,300.00	10,750.00	13,312.81	10,750.00	48.58	53.44	-90.00	-2,491.82	601.51	657.18	555.52	101.65	6.465	
13,400.00	10,750.00	13,412.81	10,750.00	49.68	54.44	-90.00	-2,591.82	602.43	657.13	553.36	103.77	6.333	
13,500.00	10,750.00	13,512.81	10,750.00	50.80	55.47	-90.00	-2,691.81	603.36	657.07	551.16	105.91	6.204	
13,600.00	10,750.00	13,612.81	10,750.00	51.93	56.51	-90.00	-2,791.81	604.28	657.02	548.93	108.09	6.078	
13,700.00	10,750.00	13,712.81	10,750.00	53.08	57.57	-90.00	-2,891.80	605.21	656.97	546.66	110.31	5.956	
13,800.00	10,750.00	13,812.81	10,750.00	54.24	58.64	-90.00	-2,991.80	606.13	656.92	544.37	112.55	5.837	
13,900.00	10,750.00	13,912.81	10,750.00	55.42	59.73	-90.00	-3,091.79	607.06	656.86	542.04	114.82	5.721	
14,000.00	10,750.00	14,012.81	10,750.00	56.60	60.84	-90.00	-3,191.79	607.98	656.81	539.70	117.12	5.608	
14,100.00	10,750.00	14,112.81	10,750.00	57.80	61.95	-90.00	-3,291.79	608.91	656.76	537.32	119.44	5.499	
14,200.00	10,750.00	14,212.81	10,750.00	59.01	63.08	-90.00	-3,391.78	609.83	656.71	534.92	121.78	5.392	
14,300.00	10,750.00	14,312.81	10,750.00	60.23	64.23	-90.00	-3,491.78	610.76	656.65	532.50	124.15	5.289	
14,400.00	10,750.00	14,412.81	10,750.00	61.46	65.38	-90.00	-3,591.77	611.68	656.60	530.06	126.54	5.189	
14,500.00	10,750.00	14,512.81	10,750.00	62.69	66.55	-90.00	-3,691.77	612.61	656.55	527.60	128.95	5.092	
14,600.00	10,750.00	14,612.81	10,750.00	63.94	67.73	-90.00	-3,791.76	613.53	656.50	525.12	131.38	4.997	
14,700.00	10,750.00	14,712.81	10,750.00	65.19	68.91	-90.00	-3,891.76	614.46	656.44	522.62	133.82	4.905	
14,800.00	10,750.00	14,812.81	10,750.00	66.45	70.11	-90.00	-3,991.76	615.38	656.39	520.11	136.28	4.816	
14,900.00	10,750.00	14,912.81	10,750.00	67.72	71.31	-90.00	-4,091.75	616.31	656.34	517.58	138.76	4.730	
15,000.00	10,750.00	15,012.81	10,750.00	69.00	72.53	-90.00	-4,191.75	617.23	656.29	515.03	141.26	4.646	
15,100.00	10,750.00	15,112.81	10,750.00	70.28	73.75	-90.00	-4,291.74	618.16	656.24	512.47	143.76	4.565	
15,200.00	10,750.00	15,212.81	10,750.00	71.56	74.98	-90.00	-4,391.74	619.08	656.18	509.90	146.28	4.486	
15,300.00	10,750.00	15,312.81	10,750.00	72.86	76.21	-90.00	-4,491.73	620.01	656.13	507.31	148.82	4.409	
15,400.00	10,750.00	15,412.81	10,750.00	74.16	77.46	-90.00	-4,591.73	620.93	656.08	504.72	151.36	4.334	
15,500.00	10,750.00	15,512.81	10,750.00	75.46	78.71	-90.00	-4,691.73	621.86	656.03	502.11	153.92	4.262	
15,514.21	10,750.00	15,527.02	10,750.00	75.64	78.88	-90.00	-4,705.93	621.99	656.02	501.73	154.28	4.252 SF	

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 211H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	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	29.75	0.25	117.871	
200.00	200.00	200.00	200.00	0.49	0.49	-90.00	0.00	-30.00	30.00	29.03	0.97	30.881	
300.00	300.00	300.00	300.00	0.84	0.84	-90.00	0.00	-30.00	30.00	28.31	1.69	17.768	
400.00	400.00	400.00	400.00	1.20	1.20	-90.00	0.00	-30.00	30.00	27.59	2.41	12.472	
500.00	500.00	500.00	500.00	1.56	1.56	-90.00	0.00	-30.00	30.00	26.88	3.12	9.608	
600.00	600.00	600.00	600.00	1.92	1.92	-90.00	0.00	-30.00	30.00	26.16	3.84	7.814	
700.00	700.00	700.00	700.00	2.28	2.28	-90.00	0.00	-30.00	30.00	25.44	4.56	6.584	
800.00	800.00	800.00	800.00	2.64	2.64	-90.00	0.00	-30.00	30.00	24.73	5.27	5.689	
900.00	900.00	900.00	900.00	3.00	3.00	-90.00	0.00	-30.00	30.00	24.01	5.99	5.008	
1,000.00	1,000.00	1,000.00	1,000.00	3.35	3.35	-90.00	0.00	-30.00	30.00	23.29	6.71	4.473	
1,100.00	1,100.00	1,100.00	1,100.00	3.71	3.71	-90.00	0.00	-30.00	30.00	22.58	7.42	4.041	
1,200.00	1,200.00	1,200.00	1,200.00	4.07	4.07	-90.00	0.00	-30.00	30.00	21.86	8.14	3.685	
1,300.00	1,300.00	1,300.00	1,300.00	4.25	4.43	-90.00	0.00	-30.00	30.00	21.32	8.68	3.455	
1,400.00	1,400.00	1,400.00	1,400.00	4.28	4.79	-90.00	0.00	-30.00	30.00	20.93	9.07	3.307	
1,500.00	1,500.00	1,500.00	1,500.00	4.34	5.15	-90.00	0.00	-30.00	30.00	20.51	9.49	3.162	
1,600.00	1,600.00	1,600.00	1,600.00	4.43	5.50	-90.00	0.00	-30.00	30.00	20.06	9.94	3.020 CC	
1,700.00	1,700.00	1,699.89	1,699.89	4.55	5.86	-88.38	0.86	-30.16	30.18	19.77	10.41	2.900 ES	
1,800.00	1,800.00	1,799.72	1,799.68	4.68	6.22	-83.64	3.42	-30.66	30.85	19.94	10.90	2.829	
1,900.00	1,899.99	1,899.47	1,899.33	4.85	6.58	-92.62	7.68	-31.48	32.44	21.02	11.42	2.840	
2,000.00	1,999.96	1,999.14	1,998.81	5.03	6.93	-87.71	13.65	-32.62	35.07	23.12	11.96	2.934	
2,100.00	2,099.86	2,101.28	2,098.09	5.23	7.30	-83.89	21.30	-34.09	38.66	26.14	12.52	3.088	
2,200.00	2,199.68	2,198.63	2,197.62	5.45	7.65	-82.04	29.85	-35.73	42.62	29.54	13.08	3.258	
2,300.00	2,299.37	2,298.56	2,297.17	5.68	8.01	-82.64	38.41	-37.38	46.37	32.69	13.68	3.391	
2,400.00	2,398.99	2,401.52	2,396.71	5.93	8.38	-84.16	46.96	-39.02	50.02	35.72	14.30	3.499	
2,500.00	2,498.60	2,501.59	2,496.26	6.19	8.75	-85.48	55.51	-40.66	53.71	38.79	14.92	3.600	
2,600.00	2,598.22	2,601.67	2,595.80	6.46	9.11	-86.63	64.06	-42.30	57.42	41.86	15.56	3.691	
2,700.00	2,697.84	2,701.74	2,695.35	6.74	9.48	-87.65	72.62	-43.94	61.15	44.94	16.20	3.774	
2,800.00	2,797.46	2,801.82	2,794.89	7.03	9.84	-88.54	81.17	-45.59	64.89	48.04	16.86	3.849	
2,900.00	2,897.08	2,901.89	2,894.44	7.33	10.21	-89.34	89.72	-47.23	68.65	51.13	17.52	3.918	
3,000.00	2,996.70	3,001.97	2,993.98	7.63	10.58	-90.05	98.28	-48.87	72.43	54.24	18.19	3.981	
3,100.00	3,096.32	3,102.04	3,093.53	7.94	10.95	-90.69	106.83	-50.51	76.21	57.34	18.87	4.039	
3,200.00	3,195.94	3,202.12	3,193.07	8.26	11.32	-91.27	115.38	-52.16	80.00	60.45	19.55	4.091	
3,300.00	3,295.56	3,302.19	3,292.62	8.58	11.68	-91.80	123.93	-53.80	83.80	63.56	20.24	4.140	
3,400.00	3,395.18	3,402.27	3,392.16	8.91	12.05	-92.28	132.49	-55.44	87.61	66.67	20.94	4.185	
3,500.00	3,494.80	3,502.34	3,491.70	9.24	12.42	-92.73	141.04	-57.08	91.42	69.79	21.63	4.226	
3,600.00	3,594.42	3,602.42	3,591.25	9.57	12.79	-93.14	149.59	-58.73	95.24	72.90	22.33	4.264	
3,700.00	3,694.04	3,702.49	3,690.79	9.90	13.16	-93.51	158.15	-60.37	99.06	76.02	23.04	4.300	
3,800.00	3,793.66	3,802.57	3,790.34	10.24	13.53	-93.86	166.70	-62.01	102.88	79.14	23.75	4.333	
3,900.00	3,893.28	3,902.64	3,889.88	10.58	13.91	-94.18	175.25	-63.65	106.71	82.26	24.46	4.363	
4,000.00	3,992.90	4,002.72	3,989.43	10.92	14.28	-94.48	183.80	-65.30	110.54	85.37	25.17	4.392	
4,100.00	4,092.52	4,097.21	4,088.97	11.27	14.63	-94.76	192.36	-66.94	114.38	88.52	25.86	4.423	
4,200.00	4,192.14	4,202.87	4,188.52	11.62	15.02	-95.03	200.91	-68.58	118.21	91.62	26.60	4.444	
4,300.00	4,291.76	4,302.94	4,288.06	11.96	15.39	-95.27	209.46	-70.22	122.05	94.74	27.32	4.468	
4,400.00	4,391.37	4,403.02	4,387.61	12.31	15.76	-95.50	218.01	-71.87	125.90	97.86	28.04	4.490	
4,500.00	4,490.99	4,503.09	4,487.15	12.66	16.13	-95.72	226.57	-73.51	129.74	100.98	28.76	4.511	
4,600.00	4,590.61	4,603.17	4,586.70	13.02	16.51	-95.92	235.12	-75.15	133.58	104.10	29.48	4.531	
4,700.00	4,690.23	4,703.24	4,686.24	13.37	16.88	-96.12	243.67	-76.79	137.43	107.22	30.21	4.550	
4,800.00	4,789.85	4,803.32	4,785.79	13.73	17.25	-96.30	252.23	-78.43	141.28	110.35	30.93	4.567	
4,900.00	4,889.47	4,896.61	4,885.33	14.08	17.60	-96.47	260.78	-80.08	145.13	113.49	31.63	4.588	
5,000.00	4,989.09	4,997.65	4,986.08	14.44	17.97	-97.03	268.39	-81.54	148.64	116.27	32.37	4.592	
5,100.00	5,088.71	5,098.76	5,087.05	14.80	18.34	-98.51	273.40	-82.50	151.38	118.28	33.10	4.574	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 211H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,188.35	5,199.66	5,187.92	15.15	18.70	-100.82	275.78	-82.96	153.47	119.65	33.82	4.538	
5,300.00	5,288.15	5,300.11	5,288.15	15.51	19.05	-103.07	276.00	-83.00	154.84	120.32	34.52	4.485	
5,400.00	5,388.07	5,400.19	5,388.07	15.85	19.40	-104.42	276.00	-83.00	155.72	120.50	35.22	4.422	
5,500.00	5,488.06	5,500.19	5,488.06	16.19	19.75	-90.00	276.00	-83.00	156.00	120.10	35.90	4.345	
5,600.00	5,588.06	5,600.19	5,588.06	16.52	20.10	-90.00	276.00	-83.00	156.00	119.41	36.59	4.263	
5,700.00	5,688.06	5,700.19	5,688.06	16.86	20.46	-90.00	276.00	-83.00	156.00	118.72	37.28	4.185	
5,800.00	5,788.06	5,800.19	5,788.06	17.19	20.81	-90.00	276.00	-83.00	156.00	118.03	37.97	4.109	
5,900.00	5,888.06	5,900.19	5,888.06	17.53	21.16	-90.00	276.00	-83.00	156.00	117.34	38.66	4.036	
6,000.00	5,988.06	6,000.19	5,988.06	17.87	21.51	-90.00	276.00	-83.00	156.00	116.65	39.35	3.965	
6,100.00	6,088.06	6,100.19	6,088.06	18.21	21.87	-90.00	276.00	-83.00	156.00	115.96	40.04	3.896	
6,200.00	6,188.06	6,200.19	6,188.06	18.55	22.22	-90.00	276.00	-83.00	156.00	115.27	40.73	3.830	
6,300.00	6,288.06	6,300.19	6,288.06	18.89	22.57	-90.00	276.00	-83.00	156.00	114.58	41.42	3.766	
6,400.00	6,388.06	6,400.19	6,388.06	19.23	22.92	-90.00	276.00	-83.00	156.00	113.88	42.12	3.704	
6,500.00	6,488.06	6,500.19	6,488.06	19.57	23.28	-90.00	276.00	-83.00	156.00	113.19	42.81	3.644	
6,600.00	6,588.06	6,600.19	6,588.06	19.91	23.63	-90.00	276.00	-83.00	156.00	112.49	43.51	3.585	
6,700.00	6,688.06	6,700.19	6,688.06	20.26	23.98	-90.00	276.00	-83.00	156.00	111.79	44.21	3.529	
6,800.00	6,788.06	6,800.19	6,788.06	20.60	24.34	-90.00	276.00	-83.00	156.00	111.10	44.90	3.474	
6,900.00	6,888.06	6,900.19	6,888.06	20.94	24.69	-90.00	276.00	-83.00	156.00	110.40	45.60	3.421	
7,000.00	6,988.06	7,000.19	6,988.06	21.29	25.05	-90.00	276.00	-83.00	156.00	109.70	46.30	3.369	
7,100.00	7,088.06	7,100.19	7,088.06	21.63	25.40	-90.00	276.00	-83.00	156.00	109.00	47.00	3.319	
7,200.00	7,188.06	7,200.19	7,188.06	21.98	25.75	-90.00	276.00	-83.00	156.00	108.30	47.70	3.270	
7,300.00	7,288.06	7,300.19	7,288.06	22.32	26.11	-90.00	276.00	-83.00	156.00	107.60	48.40	3.223	
7,400.00	7,388.06	7,400.19	7,388.06	22.67	26.46	-90.00	276.00	-83.00	156.00	106.90	49.10	3.177	
7,500.00	7,488.06	7,500.19	7,488.06	23.02	26.82	-90.00	276.00	-83.00	156.00	106.20	49.80	3.132	
7,600.00	7,588.06	7,600.19	7,588.06	23.36	27.17	-90.00	276.00	-83.00	156.00	105.50	50.50	3.089	
7,700.00	7,688.06	7,700.19	7,688.06	23.71	27.53	-90.00	276.00	-83.00	156.00	104.79	51.21	3.047	
7,800.00	7,788.06	7,800.19	7,788.06	24.06	27.88	-90.00	276.00	-83.00	156.00	104.09	51.91	3.005	
7,900.00	7,888.06	7,900.19	7,888.06	24.41	28.24	-90.00	276.00	-83.00	156.00	103.39	52.61	2.965	
8,000.00	7,988.06	8,000.19	7,988.06	24.75	28.59	-90.00	276.00	-83.00	156.00	102.69	53.31	2.926	
8,100.00	8,088.06	8,100.19	8,088.06	25.10	28.95	-90.00	276.00	-83.00	156.00	101.98	54.02	2.888	
8,200.00	8,188.06	8,200.19	8,188.06	25.45	29.30	-90.00	276.00	-83.00	156.00	101.28	54.72	2.851	
8,300.00	8,288.06	8,300.19	8,288.06	25.80	29.66	-90.00	276.00	-83.00	156.00	100.57	55.43	2.815	
8,400.00	8,388.06	8,400.19	8,388.06	26.15	30.01	-90.00	276.00	-83.00	156.00	99.87	56.13	2.779	
8,500.00	8,488.06	8,500.19	8,488.06	26.50	30.37	-90.00	276.00	-83.00	156.00	99.16	56.84	2.745	
8,600.00	8,588.06	8,600.19	8,588.06	26.85	30.72	-90.00	276.00	-83.00	156.00	98.46	57.54	2.711	
8,700.00	8,688.06	8,700.19	8,688.06	27.20	31.08	-90.00	276.00	-83.00	156.00	97.75	58.25	2.678	
8,800.00	8,788.06	8,800.19	8,788.06	27.55	31.43	-90.00	276.00	-83.00	156.00	97.05	58.95	2.646	
8,900.00	8,888.06	8,900.19	8,888.06	27.90	31.79	-90.00	276.00	-83.00	156.00	96.34	59.66	2.615	
9,000.00	8,988.06	9,000.19	8,988.06	28.25	32.15	-90.00	276.00	-83.00	156.00	95.63	60.37	2.584	
9,100.00	9,088.06	9,100.19	9,088.06	28.60	32.50	-90.00	276.00	-83.00	156.00	94.93	61.07	2.554	
9,200.00	9,188.06	9,200.19	9,188.06	28.95	32.86	-90.00	276.00	-83.00	156.00	94.22	61.78	2.525	
9,300.00	9,288.06	9,300.19	9,288.06	29.30	33.21	-90.00	276.00	-83.00	156.00	93.51	62.49	2.497	
9,400.00	9,388.06	9,400.19	9,388.06	29.65	33.57	-90.00	276.00	-83.00	156.00	92.81	63.19	2.469	
9,500.00	9,488.06	9,500.19	9,488.06	30.01	33.93	-90.00	276.00	-83.00	156.00	92.10	63.90	2.441	
9,600.00	9,588.06	9,600.19	9,588.06	30.36	34.28	-90.00	276.00	-83.00	156.00	91.39	64.61	2.415	
9,700.00	9,688.06	9,700.19	9,688.06	30.71	34.64	-90.00	276.00	-83.00	156.00	90.68	65.32	2.388	
9,800.00	9,788.06	9,800.19	9,788.06	31.06	34.99	-90.00	276.00	-83.00	156.00	89.98	66.02	2.363	
9,900.00	9,888.06	9,900.19	9,888.06	31.41	35.35	-90.00	276.00	-83.00	156.00	89.27	66.73	2.338	
10,000.00	9,988.06	10,000.19	9,988.06	31.59	35.71	-90.00	276.00	-83.00	156.00	88.73	67.27	2.319	
10,100.00	10,088.06	10,100.19	10,088.06	31.59	36.06	-90.00	276.00	-83.00	156.00	88.37	67.63	2.307	
10,200.00	10,188.05	10,200.21	10,188.05	31.60	36.42	65.50	276.00	-83.00	155.59	87.60	67.99	2.288	
10,300.00	10,286.86	10,301.40	10,286.86	31.59	36.78	71.00	276.00	-83.00	150.14	81.80	68.34	2.197	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 211H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,381.65	10,406.61	10,381.65	31.57	37.15	83.11	276.00	-83.00	142.76	74.08	68.69	2.078	
10,443.27	10,420.69	10,432.43	10,420.69	31.56	37.25	90.00	276.00	-83.00	141.54	72.79	68.75	2.059	SF
10,500.00	10,469.54	10,481.28	10,469.54	31.55	37.42	99.64	276.00	-83.00	144.44	75.54	68.90	2.096	
10,600.00	10,547.85	10,559.60	10,547.85	31.59	37.70	115.00	276.00	-83.00	168.15	98.99	69.16	2.431	
10,700.00	10,614.85	10,626.59	10,614.85	31.63	37.94	130.40	276.00	-83.00	219.12	149.67	69.45	3.155	
10,800.00	10,669.96	10,681.70	10,669.96	31.68	38.14	141.53	276.00	-83.00	292.68	222.96	69.72	4.198	
10,900.00	10,711.57	10,723.31	10,711.57	31.75	38.28	148.59	276.00	-83.00	379.84	309.92	69.92	5.432	
11,000.00	10,738.40	10,750.15	10,738.40	31.89	38.38	153.02	276.00	-83.00	474.95	404.90	70.06	6.780	
11,100.00	10,749.66	10,761.40	10,749.66	32.10	38.42	155.25	276.00	-83.00	574.04	503.92	70.12	8.187	
11,200.00	10,750.00	10,761.74	10,750.00	32.36	38.42	90.00	276.00	-83.00	674.03	603.90	70.13	9.611	
11,300.00	10,750.00	10,761.74	10,750.00	32.68	38.42	90.00	276.00	-83.00	774.03	703.89	70.14	11.036	
11,400.00	10,750.00	10,761.74	10,750.00	33.06	38.42	90.00	276.00	-83.00	874.03	803.88	70.15	12.459	
11,500.00	10,750.00	10,761.74	10,750.00	33.51	38.42	90.00	276.00	-83.00	974.03	903.87	70.16	13.883	
11,600.00	10,750.00	10,761.74	10,750.00	34.00	38.42	90.00	276.00	-83.00	1,074.03	1,003.86	70.18	15.305	
11,700.00	10,750.00	10,761.74	10,750.00	34.55	38.42	90.00	276.00	-83.00	1,174.03	1,103.84	70.19	16.726	
11,800.00	10,750.00	10,761.74	10,750.00	35.15	38.42	90.00	276.00	-83.00	1,274.03	1,203.83	70.21	18.147	
11,900.00	10,750.00	10,761.74	10,750.00	35.80	38.42	90.00	276.00	-83.00	1,374.03	1,303.81	70.22	19.567	
12,000.00	10,750.00	13,436.23	12,157.75	36.49	46.94	179.99	-1,221.25	-68.29	1,407.94	1,355.65	52.29	26.925	
12,100.00	10,750.00	13,536.22	12,156.09	37.23	47.53	179.99	-1,321.22	-67.31	1,406.28	1,353.32	52.97	26.549	
12,200.00	10,750.00	13,636.20	12,154.44	38.01	48.15	179.99	-1,421.18	-66.33	1,404.63	1,350.95	53.68	26.165	
12,300.00	10,750.00	13,736.19	12,152.78	38.82	48.80	179.99	-1,521.15	-65.35	1,402.98	1,348.54	54.43	25.774	
12,400.00	10,750.00	13,836.17	12,151.13	39.67	49.49	179.99	-1,621.12	-64.36	1,401.32	1,346.10	55.22	25.377	
12,500.00	10,750.00	13,936.16	12,149.48	40.55	50.21	179.99	-1,721.09	-63.38	1,399.67	1,343.63	56.04	24.977	
12,600.00	10,750.00	14,036.15	12,147.82	41.47	50.96	179.99	-1,821.05	-62.40	1,398.01	1,341.13	56.89	24.575	
12,700.00	10,750.00	14,136.13	12,146.17	42.41	51.74	179.99	-1,921.02	-61.42	1,396.36	1,338.59	57.77	24.172	
12,800.00	10,750.00	14,236.12	12,144.52	43.38	52.55	179.99	-2,020.99	-60.44	1,394.71	1,336.03	58.68	23.770	
12,900.00	10,750.00	14,336.11	12,142.86	44.38	53.38	179.99	-2,120.96	-59.45	1,393.05	1,333.44	59.61	23.369	
13,000.00	10,750.00	14,436.09	12,141.21	45.40	54.24	179.99	-2,220.93	-58.47	1,391.40	1,330.82	60.57	22.970	
13,100.00	10,750.00	14,536.08	12,139.56	46.44	55.12	180.00	-2,320.89	-57.49	1,389.74	1,328.18	61.56	22.575	
13,200.00	10,750.00	14,636.07	12,137.90	47.50	56.03	180.00	-2,420.86	-56.51	1,388.09	1,325.52	62.57	22.184	
13,300.00	10,750.00	14,736.05	12,136.25	48.58	56.95	180.00	-2,520.83	-55.53	1,386.44	1,322.83	63.60	21.798	
13,400.00	10,750.00	14,836.04	12,134.59	49.68	57.90	180.00	-2,620.80	-54.54	1,384.78	1,320.12	64.66	21.417	
13,500.00	10,750.00	14,936.02	12,132.94	50.80	58.87	180.00	-2,720.77	-53.56	1,383.13	1,317.39	65.73	21.041	
13,600.00	10,750.00	15,036.01	12,131.29	51.93	59.86	180.00	-2,820.73	-52.58	1,381.48	1,314.65	66.83	20.672	
13,700.00	10,750.00	15,136.00	12,129.63	53.08	60.86	180.00	-2,920.70	-51.60	1,379.82	1,311.88	67.94	20.309	
13,800.00	10,750.00	15,235.98	12,127.98	54.24	61.89	180.00	-3,020.67	-50.61	1,378.17	1,309.09	69.07	19.952	
13,900.00	10,750.00	15,335.97	12,126.33	55.42	62.92	180.00	-3,120.64	-49.63	1,376.51	1,306.29	70.22	19.603	
14,000.00	10,750.00	15,435.96	12,124.67	56.60	63.98	180.00	-3,220.60	-48.65	1,374.86	1,303.47	71.38	19.260	
14,100.00	10,750.00	15,535.94	12,123.02	57.80	65.05	180.00	-3,320.57	-47.67	1,373.21	1,300.64	72.56	18.924	
14,200.00	10,750.00	15,635.93	12,121.36	59.01	66.13	180.00	-3,420.54	-46.69	1,371.55	1,297.80	73.76	18.596	
14,300.00	10,750.00	15,735.91	12,119.71	60.23	67.22	180.00	-3,520.51	-45.70	1,369.90	1,294.93	74.96	18.274	
14,400.00	10,750.00	15,835.90	12,118.06	61.46	68.33	180.00	-3,620.48	-44.72	1,368.24	1,292.06	76.18	17.960	
14,500.00	10,750.00	15,935.89	12,116.40	62.69	69.45	180.00	-3,720.44	-43.74	1,366.59	1,289.17	77.42	17.653	
14,600.00	10,750.00	16,035.87	12,114.75	63.94	70.58	180.00	-3,820.41	-42.76	1,364.94	1,286.28	78.66	17.352	
14,700.00	10,750.00	16,135.86	12,113.10	65.19	71.73	180.00	-3,920.38	-41.78	1,363.28	1,283.37	79.92	17.059	
14,800.00	10,750.00	16,235.85	12,111.44	66.45	72.88	180.00	-4,020.35	-40.79	1,361.63	1,280.44	81.18	16.772	
14,900.00	10,750.00	16,335.83	12,109.79	67.72	74.04	180.00	-4,120.31	-39.81	1,359.97	1,277.51	82.46	16.492	
15,000.00	10,750.00	16,435.82	12,108.13	69.00	75.22	180.00	-4,220.28	-38.83	1,358.32	1,274.57	83.75	16.219	
15,100.00	10,750.00	16,535.81	12,106.48	70.28	76.40	180.00	-4,320.25	-37.85	1,356.67	1,271.62	85.04	15.953	
15,200.00	10,750.00	16,635.79	12,104.83	71.56	77.59	180.00	-4,420.22	-36.87	1,355.01	1,268.66	86.35	15.692	
15,300.00	10,750.00	16,735.78	12,103.17	72.86	78.79	180.00	-4,520.19	-35.88	1,353.36	1,265.69	87.66	15.438	
15,400.00	10,750.00	16,835.76	12,101.52	74.16	79.99	180.00	-4,620.15	-34.90	1,351.70	1,262.72	88.99	15.190	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 211H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	10,750.00	16,927.63	12,100.00	75.46	81.11	180.00	-4,712.00	-34.00	1,350.07	1,259.87	90.21	14.967	
15,514.21	10,750.00	16,927.63	12,100.00	75.64	81.11	180.00	-4,712.00	-34.00	1,350.00	1,259.80	90.20	14.966	

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 215H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 11000-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.36	1.00	90.00	90.01				
100.00	100.00	100.00	100.00	0.13	0.13	89.36	1.00	90.00	90.01	89.75	0.25	353.635	
200.00	200.00	200.00	200.00	0.49	0.49	89.36	1.00	90.00	90.01	89.03	0.97	92.650	
300.00	300.00	300.00	300.00	0.84	0.84	89.36	1.00	90.00	90.01	88.32	1.69	53.308	
400.00	400.00	400.00	400.00	1.20	1.20	89.36	1.00	90.00	90.01	87.60	2.41	37.419	
500.00	500.00	500.00	500.00	1.56	1.56	89.36	1.00	90.00	90.01	86.88	3.12	28.827	
600.00	600.00	600.00	600.00	1.92	1.92	89.36	1.00	90.00	90.01	86.17	3.84	23.444	
700.00	700.00	700.00	700.00	2.28	2.28	89.36	1.00	90.00	90.01	85.45	4.56	19.755	
800.00	800.00	800.00	800.00	2.64	2.64	89.36	1.00	90.00	90.01	84.73	5.27	17.069	
900.00	900.00	900.00	900.00	3.00	3.00	89.36	1.00	90.00	90.01	84.02	5.99	15.026	
1,000.00	1,000.00	1,000.00	1,000.00	3.35	3.35	89.36	1.00	90.00	90.01	83.30	6.71	13.420	
1,100.00	1,100.00	1,100.00	1,100.00	3.71	3.71	89.36	1.00	90.00	90.01	82.58	7.42	12.124	
1,200.00	1,200.00	1,200.00	1,200.00	4.07	4.07	89.36	1.00	90.00	90.01	81.86	8.14	11.056	
1,300.00	1,300.00	1,300.00	1,300.00	4.25	4.25	89.36	1.00	90.00	90.01	81.50	8.51	10.580	
1,400.00	1,400.00	1,400.00	1,400.00	4.28	4.28	89.36	1.00	90.00	90.01	81.44	8.57	10.506	
1,500.00	1,500.00	1,500.00	1,500.00	4.34	4.34	89.36	1.00	90.00	90.01	81.32	8.69	10.362	
1,600.00	1,600.00	1,600.00	1,600.00	4.43	4.43	89.36	1.00	90.00	90.01	81.14	8.86	10.156	CC, ES
1,700.00	1,700.00	1,698.64	1,698.63	4.55	4.54	89.10	1.42	90.74	90.76	81.67	9.09	9.987	
1,800.00	1,800.00	1,797.22	1,797.18	4.68	4.68	88.34	2.69	92.94	93.03	83.67	9.36	9.940	
1,900.00	1,899.99	1,895.71	1,895.57	4.85	4.83	72.79	4.80	96.62	96.58	86.90	9.67	9.985	
2,000.00	1,999.96	1,994.09	1,993.78	5.03	5.01	72.60	7.75	101.75	101.14	91.12	10.02	10.089	
2,100.00	2,099.86	2,107.77	2,091.63	5.23	5.24	72.87	11.52	108.32	106.70	96.26	10.44	10.217	
2,200.00	2,199.68	2,192.04	2,191.05	5.45	5.43	73.73	15.85	115.87	112.65	101.81	10.84	10.389	
2,300.00	2,299.37	2,308.17	2,290.46	5.68	5.71	75.31	20.18	123.41	118.17	106.83	11.35	10.415	
2,400.00	2,398.99	2,408.40	2,389.86	5.93	5.96	77.19	24.51	130.95	123.58	111.74	11.84	10.436	
2,500.00	2,498.60	2,508.62	2,489.25	6.19	6.23	78.92	28.84	138.49	129.12	116.76	12.36	10.444	
2,600.00	2,598.22	2,608.85	2,588.65	6.46	6.50	80.50	33.17	146.03	134.76	121.86	12.91	10.442	
2,700.00	2,697.84	2,709.07	2,688.04	6.74	6.79	81.95	37.50	153.57	140.50	127.03	13.47	10.431	
2,800.00	2,797.46	2,809.30	2,787.44	7.03	7.08	83.29	41.83	161.12	146.32	132.27	14.05	10.415	
2,900.00	2,897.08	2,909.52	2,886.83	7.33	7.39	84.53	46.16	168.66	152.21	137.57	14.64	10.394	
3,000.00	2,996.70	3,009.75	2,986.23	7.63	7.70	85.67	50.48	176.20	158.17	142.92	15.25	10.371	
3,100.00	3,096.32	3,090.02	3,085.62	7.94	7.95	86.73	54.81	183.74	164.18	148.37	15.81	10.385	
3,200.00	3,195.94	3,189.80	3,185.02	8.26	8.27	87.72	59.14	191.28	170.25	153.81	16.44	10.357	
3,300.00	3,295.56	3,289.57	3,284.41	8.58	8.59	88.63	63.47	198.82	176.37	159.29	17.08	10.328	
3,400.00	3,395.18	3,389.35	3,383.81	8.91	8.91	89.49	67.80	206.37	182.52	164.80	17.72	10.299	
3,500.00	3,494.80	3,489.12	3,483.20	9.24	9.24	90.29	72.13	213.91	188.72	170.34	18.38	10.270	
3,600.00	3,594.42	3,588.90	3,582.60	9.57	9.58	91.03	76.46	221.45	194.95	175.91	19.04	10.241	
3,700.00	3,694.04	3,688.67	3,681.99	9.90	9.91	91.74	80.79	228.99	201.21	181.51	19.70	10.212	
3,800.00	3,793.66	3,788.45	3,781.39	10.24	10.25	92.40	85.12	236.53	207.50	187.12	20.37	10.184	
3,900.00	3,893.28	3,888.22	3,880.78	10.58	10.60	93.02	89.45	244.07	213.81	192.76	21.05	10.156	
4,000.00	3,992.90	3,987.99	3,980.18	10.92	10.94	93.60	93.78	251.61	220.15	198.42	21.73	10.129	
4,100.00	4,092.52	4,087.77	4,079.57	11.27	11.28	94.15	98.11	259.16	226.51	204.09	22.42	10.103	
4,200.00	4,192.14	4,187.54	4,178.97	11.62	11.63	94.68	102.44	266.70	232.89	209.78	23.11	10.078	
4,300.00	4,291.76	4,287.32	4,278.36	11.96	11.98	95.17	106.77	274.24	239.29	215.48	23.80	10.053	
4,400.00	4,391.37	4,387.09	4,377.75	12.31	12.33	95.64	111.10	281.78	245.70	221.20	24.50	10.030	
4,500.00	4,490.99	4,486.87	4,477.15	12.66	12.68	96.08	115.43	289.32	252.13	226.93	25.20	10.007	
4,600.00	4,590.61	4,586.64	4,576.54	13.02	13.04	96.51	119.76	296.86	258.57	232.68	25.90	9.985	
4,700.00	4,690.23	4,686.42	4,675.94	13.37	13.39	96.91	124.08	304.41	265.03	238.43	26.60	9.963	
4,800.00	4,789.85	4,786.19	4,775.33	13.73	13.75	97.29	128.41	311.95	271.50	244.19	27.31	9.943	
4,900.00	4,889.47	4,885.96	4,874.73	14.08	14.11	97.66	132.74	319.49	277.98	249.97	28.01	9.923	
5,000.00	4,989.09	4,985.74	4,974.12	14.44	14.46	98.00	137.07	327.03	284.48	255.75	28.72	9.903	
5,100.00	5,088.71	5,085.51	5,073.52	14.80	14.82	98.34	141.40	334.57	290.98	261.54	29.44	9.885	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 215H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 11000-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,188.35	5,185.29	5,172.92	15.15	15.18	98.65	145.73	342.11	297.46	267.31	30.15	9.866	
5,300.00	5,288.15	5,285.10	5,272.34	15.51	15.54	98.60	150.06	349.66	303.61	272.76	30.85	9.840	
5,400.00	5,388.07	5,384.87	5,371.74	15.85	15.90	98.07	154.39	357.20	309.40	277.85	31.55	9.806	
5,500.00	5,488.06	5,484.55	5,471.04	16.19	16.26	111.90	158.72	364.73	314.89	282.65	32.24	9.768	
5,600.00	5,588.06	5,584.17	5,570.28	16.52	16.63	110.68	163.04	372.26	320.37	287.45	32.92	9.732	
5,700.00	5,688.06	5,683.79	5,669.52	16.86	16.99	109.50	167.36	379.79	325.99	292.39	33.60	9.701	
5,800.00	5,788.06	5,783.41	5,768.76	17.19	17.35	108.36	171.69	387.32	331.74	297.46	34.29	9.676	
5,900.00	5,888.06	5,883.03	5,868.00	17.53	17.71	107.26	176.01	394.85	337.62	302.65	34.97	9.654	
6,000.00	5,988.06	5,982.65	5,967.24	17.87	18.08	106.20	180.33	402.38	343.63	307.97	35.66	9.637	
6,100.00	6,088.06	6,082.27	6,066.48	18.21	18.44	105.17	184.65	409.91	349.74	313.40	36.34	9.623	
6,200.00	6,188.06	6,181.89	6,165.72	18.55	18.81	104.18	188.98	417.44	355.97	318.94	37.03	9.612	
6,300.00	6,288.06	6,281.51	6,264.96	18.89	19.17	103.22	193.30	424.97	362.30	324.57	37.72	9.605	
6,400.00	6,388.06	6,381.13	6,364.20	19.23	19.54	102.30	197.62	432.50	368.72	330.31	38.41	9.599	
6,500.00	6,488.06	6,480.75	6,463.44	19.57	19.90	101.41	201.94	440.03	375.24	336.14	39.10	9.597	
6,600.00	6,588.06	6,580.37	6,562.68	19.91	20.27	100.55	206.27	447.56	381.84	342.05	39.79	9.596	
6,700.00	6,688.06	6,679.99	6,661.92	20.26	20.63	99.71	210.59	455.09	388.53	348.05	40.48	9.597	
6,800.00	6,788.06	6,779.60	6,761.16	20.60	21.00	98.91	214.91	462.62	395.30	354.12	41.18	9.600	
6,900.00	6,888.06	6,879.22	6,860.40	20.94	21.37	98.13	219.24	470.15	402.14	360.27	41.87	9.604	
7,000.00	6,988.06	6,978.84	6,959.64	21.29	21.73	97.38	223.56	477.68	409.05	366.49	42.57	9.610	
7,100.00	7,088.06	7,078.46	7,058.88	21.63	22.10	96.66	227.88	485.21	416.03	372.77	43.26	9.617	
7,200.00	7,188.06	7,178.08	7,158.12	21.98	22.47	95.96	232.20	492.74	423.08	379.12	43.96	9.625	
7,300.00	7,288.06	7,277.70	7,257.36	22.32	22.84	95.28	236.53	500.27	430.19	385.53	44.65	9.634	
7,400.00	7,388.06	7,377.32	7,356.61	22.67	23.20	94.62	240.85	507.80	437.35	392.00	45.35	9.644	
7,500.00	7,488.06	7,476.94	7,455.85	23.02	23.57	93.99	245.17	515.33	444.57	398.52	46.05	9.654	
7,600.00	7,588.06	7,576.56	7,555.09	23.36	23.94	93.37	249.49	522.86	451.85	405.10	46.75	9.666	
7,700.00	7,688.06	7,676.18	7,654.33	23.71	24.31	92.78	253.82	530.39	459.17	411.72	47.45	9.678	
7,800.00	7,788.06	7,775.80	7,753.57	24.06	24.68	92.20	258.14	537.92	466.54	418.39	48.15	9.690	
7,900.00	7,888.06	7,875.42	7,852.81	24.41	25.05	91.64	262.46	545.45	473.96	425.11	48.85	9.703	
8,000.00	7,988.06	7,975.04	7,952.05	24.75	25.42	91.10	266.78	552.98	481.42	431.87	49.55	9.716	
8,100.00	8,088.06	8,074.66	8,051.29	25.10	25.79	90.58	271.11	560.51	488.92	438.67	50.25	9.730	
8,200.00	8,188.06	8,182.08	8,158.35	25.45	26.18	90.06	275.46	568.09	495.98	444.98	50.99	9.726	
8,300.00	8,288.06	8,294.70	8,270.80	25.80	26.59	89.71	278.51	573.40	500.70	448.95	51.75	9.676	
8,400.00	8,388.06	8,407.58	8,383.64	26.15	26.98	89.56	279.90	575.83	502.87	450.39	52.47	9.583	
8,500.00	8,488.06	8,512.00	8,488.06	26.50	27.33	89.54	280.00	576.00	503.02	449.85	53.17	9.461	
8,600.00	8,588.06	8,612.00	8,588.06	26.85	27.66	89.54	280.00	576.00	503.02	449.16	53.85	9.340	
8,700.00	8,688.06	8,712.00	8,688.06	27.20	27.99	89.54	280.00	576.00	503.02	448.47	54.54	9.222	
8,800.00	8,788.06	8,812.00	8,788.06	27.55	28.33	89.54	280.00	576.00	503.02	447.78	55.23	9.107	
8,900.00	8,888.06	8,912.00	8,888.06	27.90	28.66	89.54	280.00	576.00	503.02	447.09	55.92	8.994	
9,000.00	8,988.06	9,012.00	8,988.06	28.25	29.00	89.54	280.00	576.00	503.02	446.40	56.62	8.885	
9,100.00	9,088.06	9,112.00	9,088.06	28.60	29.34	89.54	280.00	576.00	503.02	445.71	57.31	8.777	
9,200.00	9,188.06	9,212.00	9,188.06	28.95	29.67	89.54	280.00	576.00	503.02	445.02	58.00	8.673	
9,300.00	9,288.06	9,312.00	9,288.06	29.30	30.01	89.54	280.00	576.00	503.02	444.32	58.69	8.570	
9,400.00	9,388.06	9,412.00	9,388.06	29.65	30.35	89.54	280.00	576.00	503.02	443.63	59.39	8.470	
9,500.00	9,488.06	9,512.00	9,488.06	30.01	30.69	89.54	280.00	576.00	503.02	442.93	60.08	8.372	
9,600.00	9,588.06	9,612.00	9,588.06	30.36	31.03	89.54	280.00	576.00	503.02	442.24	60.78	8.276	
9,700.00	9,688.06	9,712.00	9,688.06	30.71	31.37	89.54	280.00	576.00	503.02	441.54	61.47	8.183	
9,800.00	9,788.06	9,812.00	9,788.06	31.06	31.71	89.54	280.00	576.00	503.02	440.85	62.17	8.091	
9,900.00	9,888.06	9,912.00	9,888.06	31.41	32.05	89.54	280.00	576.00	503.02	440.15	62.86	8.002	
10,000.00	9,988.06	10,012.00	9,988.06	31.59	32.39	89.54	280.00	576.00	503.02	439.63	63.39	7.936	
10,100.00	10,088.06	10,112.00	10,088.06	31.59	32.73	89.54	280.00	576.00	503.02	439.28	63.73	7.892	
10,104.31	10,092.38	10,116.32	10,092.38	31.59	32.74	-115.32	280.00	576.00	503.02	439.27	63.75	7.891	
10,200.00	10,188.05	10,211.98	10,188.05	31.60	33.07	-115.38	280.00	576.00	503.44	439.35	64.09	7.856	SF

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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 Carl Mottek 17-24S-34E AR - 215H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 11000-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,286.86	10,310.80	10,286.86	31.59	33.41	-116.26	280.00	576.00	509.84	445.43	64.41	7.916	
10,400.00	10,381.65	10,405.59	10,381.65	31.57	33.73	-117.88	280.00	576.00	524.81	460.12	64.70	8.112	
10,500.00	10,469.54	10,506.52	10,469.54	31.55	34.08	-119.62	280.00	576.00	550.04	485.03	65.01	8.461	
10,600.00	10,547.85	10,571.79	10,547.85	31.59	34.30	-120.71	280.00	576.00	587.15	521.94	65.21	9.004	
10,700.00	10,614.85	10,638.79	10,614.85	31.63	34.53	-116.53	280.00	576.00	634.51	569.06	65.46	9.694	
10,800.00	10,669.96	10,706.10	10,669.96	31.68	34.76	-111.45	280.00	576.00	686.89	621.15	65.73	10.450	
10,900.00	10,711.57	10,735.50	10,711.57	31.75	34.86	-105.94	280.00	576.00	744.39	678.48	65.91	11.294	
11,000.00	10,738.40	10,762.34	10,738.40	31.89	34.95	-99.38	280.00	576.00	806.54	740.44	66.10	12.202	
11,100.00	10,749.66	10,773.60	10,749.66	32.10	34.99	-91.69	280.00	576.00	872.06	805.81	66.25	13.164	
11,200.00	10,750.00	10,773.94	10,750.00	32.36	34.99	-90.00	280.00	576.00	940.75	874.38	66.36	14.176	
11,300.00	10,750.00	10,773.94	10,750.00	32.68	34.99	-90.00	280.00	576.00	1,014.55	948.08	66.48	15.261	
11,400.00	10,750.00	10,773.94	10,750.00	33.06	34.99	-90.00	280.00	576.00	1,092.54	1,025.95	66.59	16.407	
11,500.00	10,750.00	10,773.94	10,750.00	33.51	34.99	-90.00	280.00	576.00	1,173.86	1,107.17	66.69	17.602	
11,600.00	10,750.00	10,773.94	10,750.00	34.00	34.99	-90.00	280.00	576.00	1,257.89	1,191.10	66.78	18.835	
11,700.00	10,750.00	10,773.94	10,750.00	34.55	34.99	-90.00	280.00	576.00	1,344.10	1,277.23	66.87	20.100	
11,800.00	10,750.00	10,773.94	10,750.00	35.15	34.99	-90.00	280.00	576.00	1,432.10	1,365.15	66.95	21.390	
11,900.00	10,750.00	13,251.23	12,100.78	35.80	39.40	-154.03	-1,092.19	588.66	1,502.53	1,446.63	55.90	26.879	
12,000.00	10,750.00	13,351.23	12,100.76	36.49	40.04	-154.03	-1,192.19	589.58	1,502.48	1,445.77	56.72	26.490	
12,100.00	10,750.00	13,451.23	12,100.74	37.23	40.72	-154.03	-1,292.18	590.50	1,502.44	1,444.85	57.59	26.089	
12,200.00	10,750.00	13,551.23	12,100.72	38.01	41.44	-154.03	-1,392.18	591.42	1,502.40	1,443.89	58.51	25.679	
12,300.00	10,750.00	13,651.23	12,100.70	38.82	42.20	-154.03	-1,492.17	592.35	1,502.35	1,442.88	59.47	25.262	
12,400.00	10,750.00	13,751.23	12,100.68	39.67	42.99	-154.04	-1,592.17	593.27	1,502.31	1,441.83	60.48	24.841	
12,500.00	10,750.00	13,851.23	12,100.65	40.55	43.82	-154.04	-1,692.16	594.19	1,502.27	1,440.74	61.53	24.416	
12,600.00	10,750.00	13,951.23	12,100.63	41.47	44.67	-154.04	-1,792.16	595.11	1,502.22	1,439.61	62.61	23.991	
12,700.00	10,750.00	14,051.23	12,100.61	42.41	45.56	-154.04	-1,892.16	596.04	1,502.18	1,438.44	63.74	23.567	
12,800.00	10,750.00	14,151.23	12,100.59	43.38	46.47	-154.04	-1,992.15	596.96	1,502.14	1,437.23	64.90	23.145	
12,900.00	10,750.00	14,251.23	12,100.57	44.38	47.41	-154.04	-2,092.15	597.88	1,502.09	1,436.00	66.10	22.726	
13,000.00	10,750.00	14,351.23	12,100.55	45.40	48.38	-154.04	-2,192.14	598.80	1,502.05	1,434.73	67.32	22.312	
13,100.00	10,750.00	14,451.23	12,100.52	46.44	49.37	-154.05	-2,292.14	599.73	1,502.01	1,433.43	68.58	21.902	
13,200.00	10,750.00	14,551.23	12,100.50	47.50	50.38	-154.05	-2,392.13	600.65	1,501.96	1,432.10	69.86	21.499	
13,300.00	10,750.00	14,651.23	12,100.48	48.58	51.41	-154.05	-2,492.13	601.57	1,501.92	1,430.74	71.17	21.102	
13,400.00	10,750.00	14,751.23	12,100.46	49.68	52.46	-154.05	-2,592.13	602.49	1,501.87	1,429.36	72.51	20.713	
13,500.00	10,750.00	14,851.23	12,100.44	50.80	53.52	-154.05	-2,692.12	603.41	1,501.83	1,427.96	73.87	20.331	
13,600.00	10,750.00	14,951.23	12,100.42	51.93	54.61	-154.05	-2,792.12	604.34	1,501.79	1,426.53	75.25	19.956	
13,700.00	10,750.00	15,051.23	12,100.39	53.08	55.71	-154.06	-2,892.11	605.26	1,501.74	1,425.08	76.66	19.590	
13,800.00	10,750.00	15,151.23	12,100.37	54.24	56.82	-154.06	-2,992.11	606.18	1,501.70	1,423.62	78.08	19.232	
13,900.00	10,750.00	15,251.23	12,100.35	55.42	57.95	-154.06	-3,092.10	607.10	1,501.66	1,422.13	79.53	18.882	
14,000.00	10,750.00	15,351.23	12,100.33	56.60	59.10	-154.06	-3,192.10	608.03	1,501.61	1,420.62	80.99	18.540	
14,100.00	10,750.00	15,451.23	12,100.31	57.80	60.25	-154.06	-3,292.10	608.95	1,501.57	1,419.10	82.47	18.207	
14,200.00	10,750.00	15,551.23	12,100.29	59.01	61.42	-154.06	-3,392.09	609.87	1,501.53	1,417.56	83.97	17.882	
14,300.00	10,750.00	15,651.23	12,100.26	60.23	62.60	-154.06	-3,492.09	610.79	1,501.48	1,416.00	85.48	17.566	
14,400.00	10,750.00	15,751.23	12,100.24	61.46	63.79	-154.07	-3,592.08	611.72	1,501.44	1,414.43	87.00	17.257	
14,500.00	10,750.00	15,851.23	12,100.22	62.69	64.99	-154.07	-3,692.08	612.64	1,501.40	1,412.85	88.54	16.956	
14,600.00	10,750.00	15,951.23	12,100.20	63.94	66.20	-154.07	-3,792.07	613.56	1,501.35	1,411.25	90.10	16.664	
14,700.00	10,750.00	16,051.23	12,100.18	65.19	67.41	-154.07	-3,892.07	614.48	1,501.31	1,409.64	91.66	16.379	
14,800.00	10,750.00	16,151.23	12,100.16	66.45	68.64	-154.07	-3,992.07	615.41	1,501.26	1,408.02	93.24	16.101	
14,900.00	10,750.00	16,251.23	12,100.13	67.72	69.88	-154.07	-4,092.06	616.33	1,501.22	1,406.39	94.83	15.831	
15,000.00	10,750.00	16,351.23	12,100.11	69.00	71.12	-154.08	-4,192.06	617.25	1,501.18	1,404.75	96.43	15.568	
15,100.00	10,750.00	16,451.23	12,100.09	70.28	72.37	-154.08	-4,292.05	618.17	1,501.13	1,403.10	98.04	15.312	
15,200.00	10,750.00	16,551.23	12,100.07	71.56	73.62	-154.08	-4,392.05	619.09	1,501.09	1,401.43	99.66	15.062	
15,300.00	10,750.00	16,651.23	12,100.05	72.86	74.89	-154.08	-4,492.04	620.02	1,501.05	1,399.76	101.29	14.820	
15,400.00	10,750.00	16,751.23	12,100.03	74.16	76.16	-154.08	-4,592.04	620.94	1,501.00	1,398.08	102.92	14.584	

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

Pro Directional

Anticollision Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**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

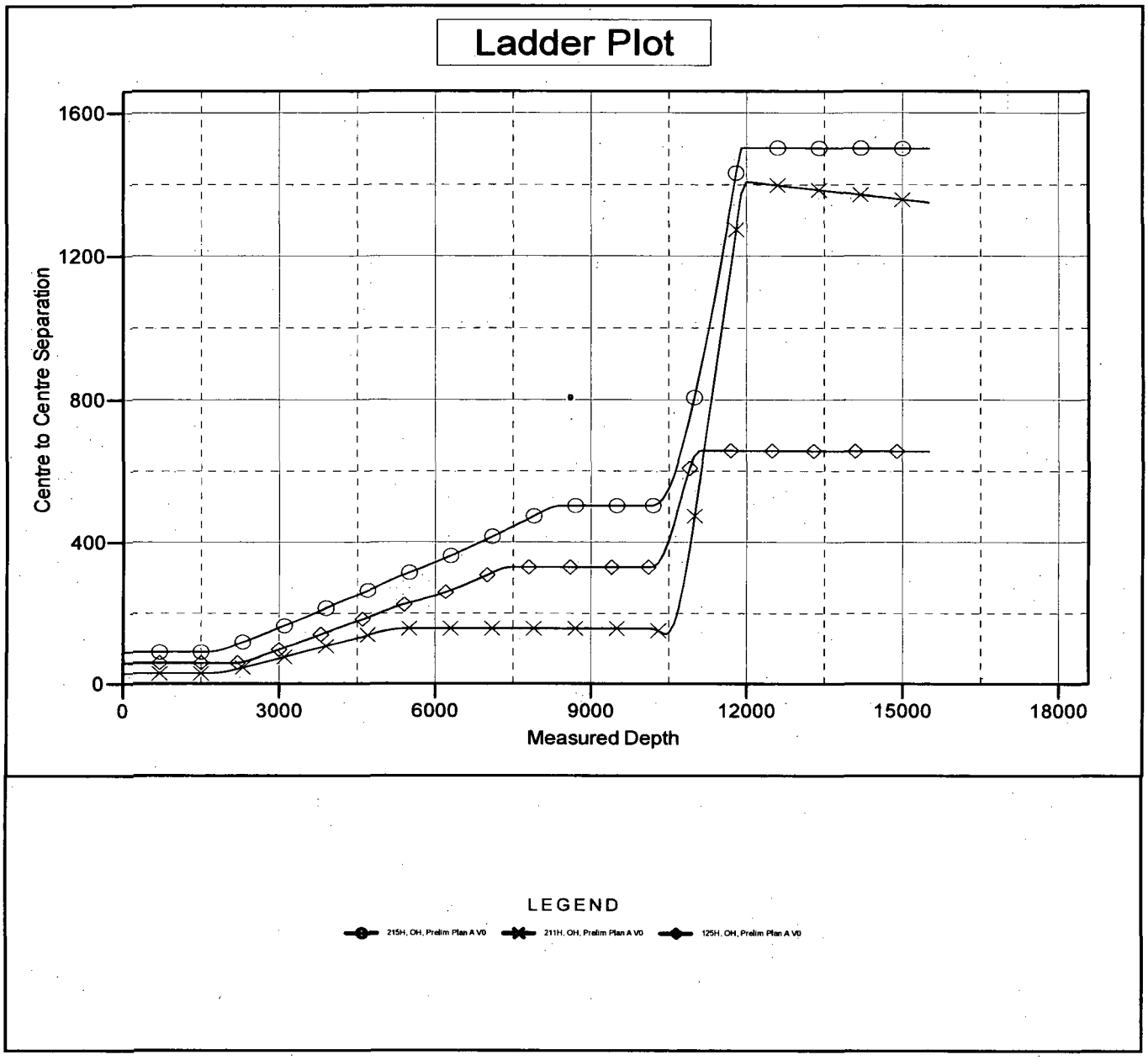
Offset Design Carl Mottek 17-24S-34E AR - 215H - OH - Prelim Plan A — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM, 1200-MWD+HDGM, 11000-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	10,750.00	16,851.23	12,100.00	75.46	77.43	-154.08	-4,692.04	621.86	1,500.96	1,396.39	104.57	14.354	
15,514.21	10,750.00	16,865.43	12,100.00	75.64	77.61	-154.08	-4,706.24	621.99	1,500.95	1,396.15	104.80	14.322	

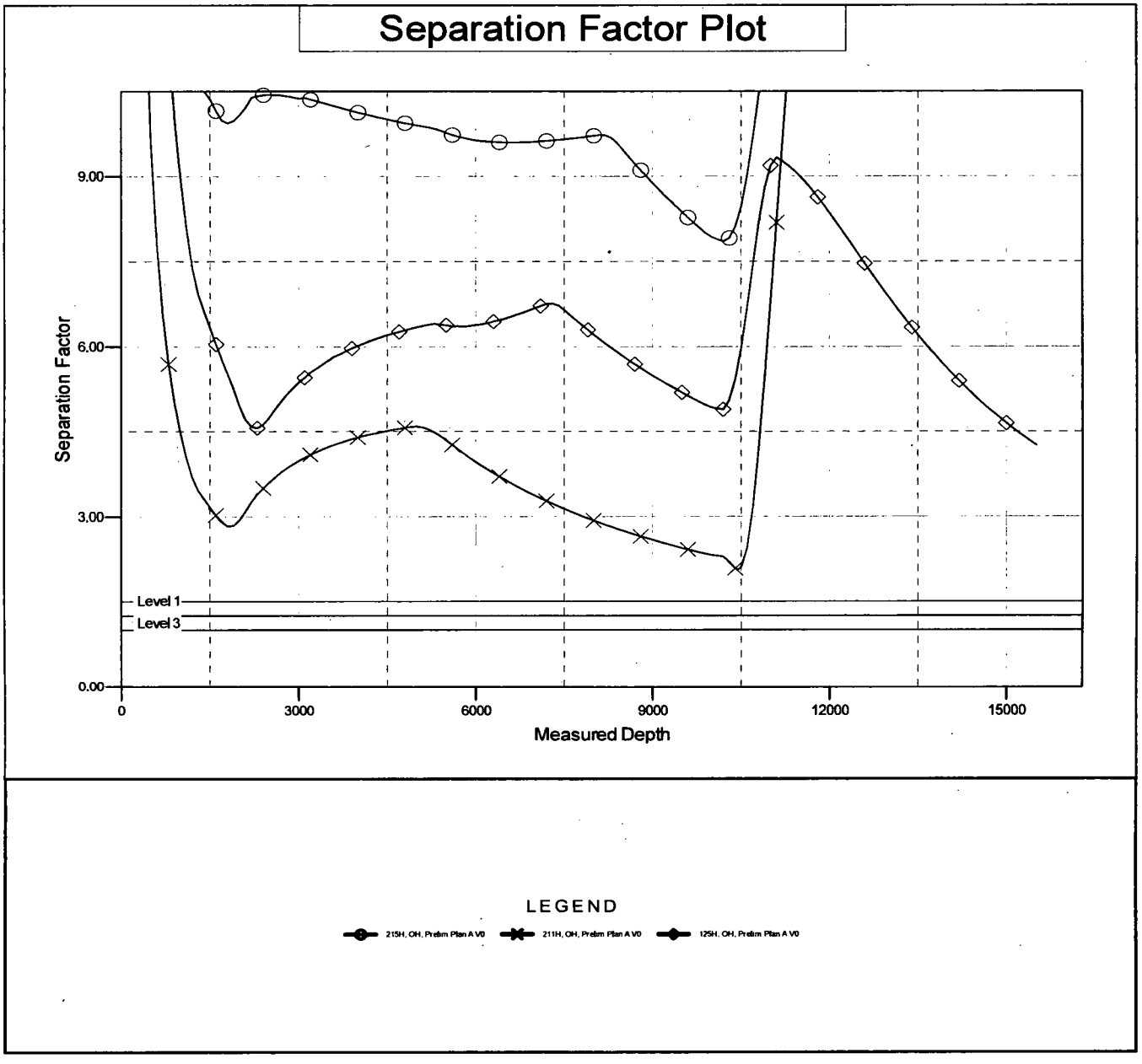
Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan A	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Rig @ 3607.00usft (GL:3578' + KB:29	Coordinates are relative to: 121H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is -104.3333333	Grid Convergence at Surface is: 0.45°



Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 121H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Reference Site:	Carl Mottek 17-24S-34E AR	**MD Reference:**	Rig @ 3607.00usft (GL:3578' + KB:29')
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	121H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan A	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to Rig @ 3607.00usft (GL:3578' + KB:29	Coordinates are relative to: 121H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is -104.3333333	Grid Convergence at Surface is: 0.45°



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

Matador Production Company **DRILL PLAN PAGE 1**
Carl Mottek Federal 121H
SHL 326' FNL & 410' FWL
BHL 240' FSL & 330' FWL
Sec. 17, T. 24 S., R. 34 E., Lea County, NM

Drilling Program

1. ESTIMATED TOPS

Formation	TVD	MD	Bearing
Quaternary	000'	000'	water
Rustler anhydrite	1268'	1268'	N/A
Salado (top) salt	1798'	1798'	N/A
Salado (base) salt	5279'	5293'	N/A
Bell Canyon sandstone	5310'	5324'	hydrocarbons
Brushy Canyon sandstone	7522'	7536'	hydrocarbons
Bone Spring limestone	8922'	8934'	hydrocarbons
Avalon shale	9150'	9162'	hydrocarbons
1st Bone Spring Carb	9787'	9799'	hydrocarbons
1st Bone Spring Sand	9976	9989'	hydrocarbons
KOP	**10154'**	**10166'**	
2nd Bone Spring Carb	10441	10472'	hydrocarbons
2nd Bone Spring Sand (goal)	10592	10660'	hydrocarbons
TD	**10750'**	**15514'**	

2. NOTABLE ZONES

2nd Bone Spring Sand (goal) is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. Closest water well (C 03932) is 2004' northwest. No depth to water was reported in this 72' deep well.

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 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Matador Production Company **SURFACE PLAN PAGE 1**
Carl Mottek Federal 121H
SHL 326' FNL & 410' FWL
BHL 240' FSL & 330' FWL
Sec. 17, T. 24 S., R. 34 E., Lea County, NM

Surface Use Plan

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

From the junction NM 18 & NM 128 in Jal, NM...
Go NW 19 miles on paved NM 128 the equivalent of Mile Post 31.9
Then turn right and go N 1.0 mile on paved County Road 21, aka Delaware Basin
Then turn right and go E 0.55 mile on a caliche road to far side of COG's 4H pad
(Beware of anchors on COG's Sebastian Fed Com 4H)
Then continue E cross-country 579.49' to the proposed Carl Mottek Federal 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 MAPS 4 & 5)

The 579.49' of new resource road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 1%. Maximum cut or fill = 1'. No culvert, cattle guard, or vehicle turn out is needed. COG's anchors will be marked. No upgrade is needed.

3. EXISTING WELLS (See MAP 6)

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

4. PROPOSED PRODUCTION FACILITIES (See MAP 7)

Pipeline and power line plans have not been finalized. Production equipment will be on the north side of the pad.

5. WATER SUPPLY (See MAP 8)

Water will be trucked via existing roads from the existing Madera water station on private land in NWNE 21-24s-34e.

6. CONSTRUCTION MATERIALS & METHODS (See MAPS 9 & 10)

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

7. WASTE DISPOSAL

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

8. ANCILLARY FACILITIES

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

9. WELL SITE LAYOUT (See MAP 9)

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 MAP 11)

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad ≈23% (0.85 acre) by removing caliche and reclaiming a 100' wide swath on the east side. This will leave 2.80 acres for producing 5 wells 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 land owner's requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the last well is plugged, then the rest of the pad and 579.49' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

Land use

30' x 579.49' road = 0.40 acre
+ 370' x 430' pad = 3.65 acres
4.05 acres short term
- 0.85 acre interim reclamation pad
3.20 acres long term (0.40 ac. road + 2.80 ac. pad)

11. SURFACE OWNER

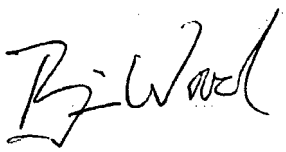
Well pad and that portion of the new road in Sec. 17 will be on private surface owned by Billie McKandles Fortner, 1033 Park Center St., Benbrook TX 76126. That portion of the new road in Section 18 will be on private land owned by Rubert Madera, PO Box 2795, Ruidoso NM 88355.

12. OTHER INFORMATION

On-site inspection was held with Vance Wolf (BLM).

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 13th day of February, 2018.



Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop, Santa Fe, NM 87508
(505) 466-8120 FAX: (505) 466-9682 Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman
Matador Production Company
5400 LBJ Freeway, Suite 1500, Dallas TX 75240
Phone: (972) 371-5241 FAX: (214) 866-4841