

HOBBS OCD

AUG 30 2019

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

1a. Type of work: ☒ DRILL ☐ REENTER
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other
1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone

5. Lease Serial No.
NMNM138876

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

**RODNEY ROBINSON FEDERAL
122H (326002)**

9. API Well No.

30-024-46335 (96228)

10. Field and Pool, or Exploratory
PRONGHORN / BONE SPRING

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 6 / T23S / R33E / NMP

2. Name of Operator
MATADOR PRODUCTION COMPANY

(228937)

3a. Address
5400 LBJ Freeway, Suite 1500 Dallas TX 75240

3b. Phone No. (include area code)
(972)371-5200

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface **LOT 3 / 240 FNL / 1927 FWL / LAT 32.3404077 / LONG -103.6135354**

At proposed prod. zone **SESW / 60 FSL / 1834 FWL / LAT 32.3122001 / LONG -103.6138378**

14. Distance in miles and direction from nearest town or post office*
27 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)
240 feet

16. No of acres in lease
1179.44

17. Spacing Unit dedicated to this well
320.01

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.
30 feet

19. Proposed Depth
10837 feet / 20972 feet

20. BLM/BIA Bond No. in file
FED: NMB001079

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3732 feet

22. Approximate date work will start*
08/01/2019

23. Estimated duration
60 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
Brian Wood / Ph: (505)466-8120

Date
03/28/2019

Title
President

Approved by (Signature)
(Electronic Submission)

Name (Printed/Typed)
Cody Layton / Ph: (575)234-5959

Date
08/29/2019

Title
Assistant Field Manager Lands & Minerals

Office
CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OCP Res 08/30/19

APPROVED WITH CONDITIONS

Approval Date: 08/29/2019

08/30/19

Double sided

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM connects this information to an evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

1. SHL: LOT 3 / 240 FNL / 1927 FWL / TWSP: 23S / RANGE: 33E / SECTION: 6 / LAT: 32.3404077 / LONG: -103.6135354 (TVD: 0 feet, MD: 0 feet)
PPP: LOT 3 / 225 FNL / 1910 FWL / TWSP: 23S / RANGE: 33E / SECTION: 6 / LAT: 32.3404488 / LONG: -103.6135904 (TVD: 10648 feet, MD: 10648 feet)
BHL: SESW / 60 FSL / 1834 FWL / TWSP: 23S / RANGE: 33E / SECTION: 7 / LAT: 32.3122001 / LONG: -103.6138378 (TVD: 10837 feet, MD: 20972 feet)

BLM Point of Contact

Name: Tanja Baca
Title: Admin Support Assistant
Phone: 5752345940
Email: tabaca@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM138876
WELL NAME & NO.:	Rodney Robinson Federal 122H
SURFACE HOLE FOOTAGE:	240'/N & 1927'/W
BOTTOM HOLE FOOTAGE:	60'/S & 1834'/W
LOCATION:	Section 6, T.23 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☐ Multibowl	☒ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The 13-3/8 inch surface casing shall be set at approximately 1332 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - 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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- 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 must be kept fluid filled to meet BLM minimum collapse requirement.

2. The 9-5/8 inch intermediate casing shall be set at approximately **4975** feet. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:

Option 1 (Single Stage):

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

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

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

Option 1 (Single Stage):

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

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.

Option 2:

1. 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 **5000 (5M) 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

GENERAL 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)

☒ Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.

During office hours call (575) 627-0272.

After office hours call (575)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

(575) 361-2822

☒ Lea County

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

393-3612

1. 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.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. 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 are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. 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.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.
3. 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.
4. 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.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. 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.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: 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.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - 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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - 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.
5. The appropriate BLM office shall be notified a minimum of 4 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).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. 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.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. 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.
- g. 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.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. 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.

NMK08292019

**PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL**

Environmental Assessment DOI-BLM-NM-P020-2019-0732-EA

Matador Production Company

**Rodney Robinson Federal Well Nos. 021H, 101H,
111H, 121H, 131H, 201H, & 215H, 022H, 102H,
112H, 122H, 132H, 202H, 216H
Central Tank Battery Facility, Frac Pond,
Flowlines, Gas Pipeline, Electric
Lines, and Access Roads**

Lease Number NMNM-138876

TABLE OF CONTENTS

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.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie-Chicken Timing Stipulations
 - Ground-level Abandoned Well Marker
 - Range
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- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
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 - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
 - Frac Pond

CTB

- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

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

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

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

Berm would be constructed around the well pads and the production facilities to prevent oil, salt and other chemical contaminants from the pads. Topsoil shall not be used to construct the berms. The berms shall be maintained after interim reclamation has been completed and throughout the life of the wells. No water flow from the uphill side(s) of the pads shall be allowed to enter the well pads or the facility pads.

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

Cattle Guard Requirement

Any new or existing cattle guards on the access route would be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator would be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences. Once the road is abandoned, all affected fences would be restored to their prior condition, or better.

Livestock Watering Requirement

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

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

Karst Mitigation

Construction Mitigation

In order to mitigate the impacts from construction activities on cave karst resources, the following Conditions of Approval would apply to this project:

In the event that any underground voids are encountered during construction activities, construction will be halted and the BLM will be notified immediately.

No blasting will be permitted to prevent geologic structure instabilities.

The holding tanks and frac tanks will be bermed to minimize the effects of any spilled contaminants

Roads will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Turnout ditches and drainage leadoffs will not be constructed in such a manner as to increase or decrease the natural flow of water into or out of cave or karst features.

To avoid or lessen the potential of subsidence or collapse of karst features, toxic or combustible gas buildup, or other possible impacts to cave and karst resources from buried pipelines, alignments may be rerouted to avoid karst features. The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer. Special restoration stipulations or realignment may be required at such intersections, if any. Leak detection systems, back flow eliminators, and differential pressure shut-off valves may be required to minimize the impacts of leaking or ruptured liners and pipelines.

Drilling Mitigation

Federal regulations and standard Conditions of Approval (COA) applied to all APDs require that adequate measures are taken to prevent contamination to the environment. Due to the extreme sensitivity of the cave and karst resources, the following additional Conditions of Approval may be added to this APD.

To prevent cave and karst resource contamination the following will be required.

- Closed mud system using steel tanks with all fluids and cuttings hauled off.
- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

Production Mitigation

In order to mitigate the impacts from production activities, minimize the impacts resulting from leaks, and due to the nature of karst terrain, the facility on the well pad would be bermed and lined.

Leak detection systems would be placed on all flow systems to provide an early alert to operators when a leak has occurred. Automatic shut off, check valves, or similar systems would be installed for pipelines and tanks to limit the volumes of flows and to minimize the effects of line failures used in drilling and production. Leak detection systems, back flow eliminators, and differential

pressure shut-off valves may be required to minimize the impacts of leaking or ruptured pipelines and to quickly identify leaks for their immediate and proper treatment.

Residual and Cumulative Mitigation

Any industrial activities that take place upon or within karst terrains or freshwater aquifer zones have the potential to create both short-term and long-term negative impacts to freshwater aquifers and cave systems. While a number of mitigation measures can be implemented to mitigate many impacts, it is still possible for impacts to occur from containment failures, well blowouts, accidents, spills, and structural collapses. Therefore, it is necessary to implement long-term monitoring studies to determine if current mitigation measures are sufficient enough to prevent long-term or cumulative impacts. Annual pressure monitoring of the well casing would be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing

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

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

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

Surfacing

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

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

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

Crowning

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

Ditching

Ditching shall be required on both sides of the road.

Turnouts

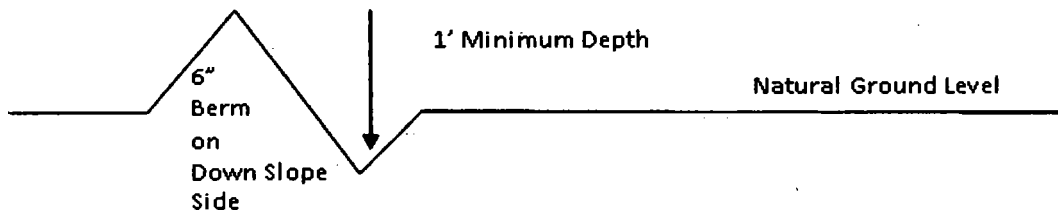
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

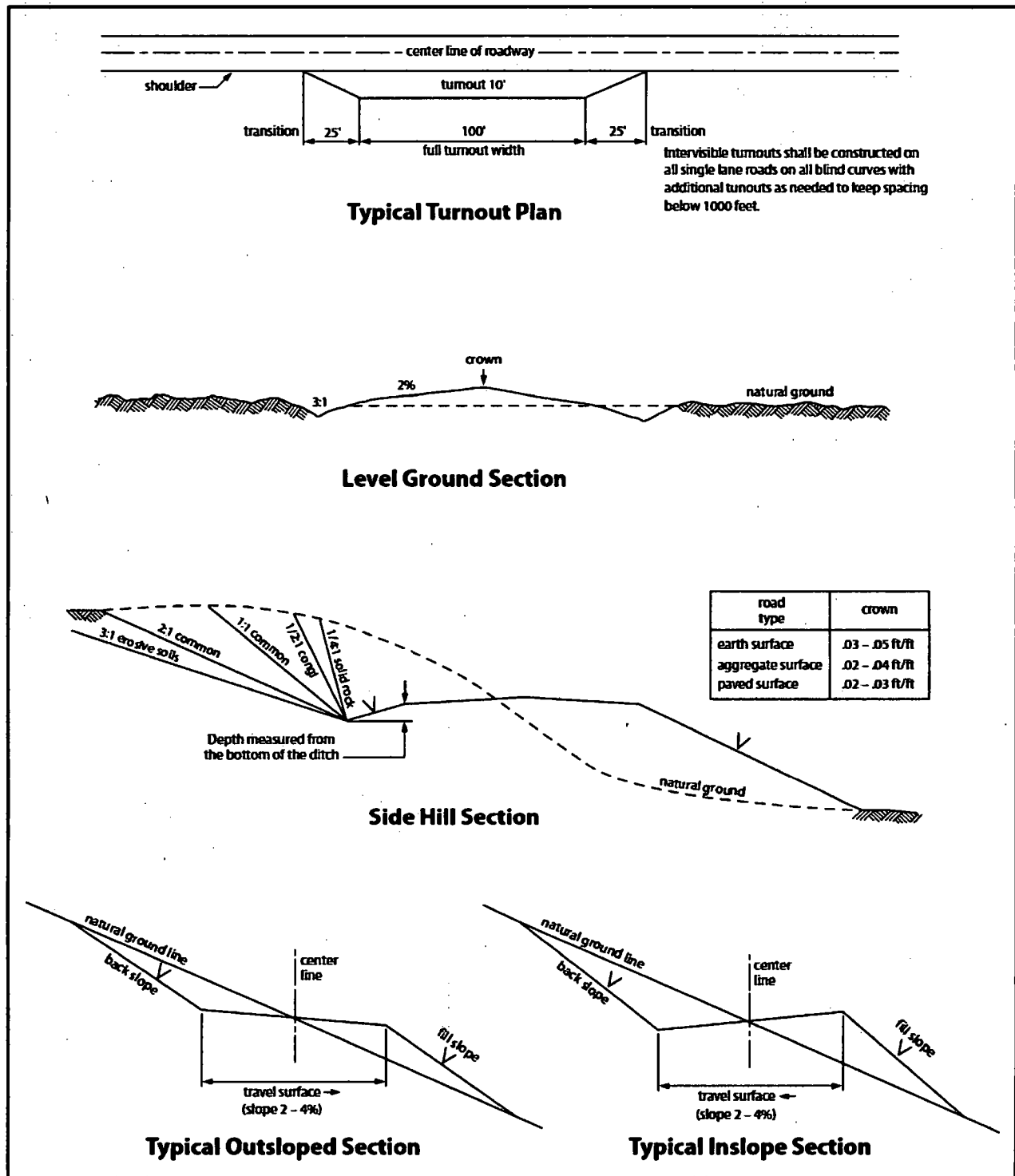


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

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

Exclosure Netting (Open-top Tanks)

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

Chemical and Fuel Secondary Containment and Exclosure Screening

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

Open-Vent Exhaust Stack Exclosures

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

Containment Structures

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

Painting Requirement

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

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

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

parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
 - (1) Land clearing.
 - (2) Earth-disturbing and earth-moving work.
 - (3) Blasting.
 - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing

by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

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

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – Shale Green, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

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

authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. 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, powerline 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.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

a. Lesser Prairie-Chicken: Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted.

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the

Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- | | |
|--|--|
| ☐ seed mixture 1 | ☐ seed mixture 3 |
| ☐ seed mixture 2 | ☐ seed mixture 4 |
| ☒ seed mixture 2/LPC | ☐ Aplomado Falcon Mixture |

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and

maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the

reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

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

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

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

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

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

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

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

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

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

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

STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES

A copy of the application (Grant/Sundry Notice) and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statutes.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et. seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et. seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.
6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)
7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.
8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).
10. 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.
11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site 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 the abandonment of the site. All pads and 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. 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).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- | | |
|--|--|
| ☐ seed mixture 1 | ☐ seed mixture 3 |
| ☐ seed mixture 2 | ☐ seed mixture 4 |
| ☒ seed mixture 2/LPC | ☐ Aplomado Falcon Mixture |

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - 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

16. The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an

impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S.

Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock enclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

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

18. 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.

19. Special Stipulations:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

Lesser Prairie-Chicken

Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal,

around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted. Exhaust noise from permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

FRAC POND CONDITIONS OF APPROVAL

A copy of the Right-of-Way Request, and attachments, including stipulations, survey plat and diagram, will be on location during construction. BLM personnel may request to see a copy of your permit during construction to ensure compliance with all conditions of approval.

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this permit.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated.
3. Required Standard Conditions of Approval:
 - Contact the Supervisory Environmental Protection Specialist, Jim Amos, at 575-234-5909 at least 24 hours prior to starting construction.
 - The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer.
 - If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly.
 - Confine all construction and maintenance activity to the authorized area.
 - Temporary pipelines flowing from the frac pond to the target well will be laid along existing roadways unless an exception has been granted by the authorized officer.

- Mineral materials extracted during construction of the frac pond will be stored on-location and/or used for constructing the frac pond.
- The frac pond will be lined.
- The operator shall stockpile topsoil approximately 25 feet outside the bermed perimeter of the pond in a low profile manner, reasonably protected from wind and water erosion
- Topsoil shall not be used for constructing the frac pond. The topsoil will be used for final reclamation purposes only.
- The frac pond shall be fenced on all sides.
- Install earthen erosion-control structures as are suitable for the specific terrain and soil conditions.
- The plastic lining will be removed prior to final abandonment
- Reclamation efforts will commence immediately after the frac pond is no longer needed for the purpose of completing wells.
- Within 3 months of completion of frac operations on associated wells, all earthwork and final reclamation must be completed. This includes reclaiming and/or removal of:

Any roads approved for use with the pond

Surface water lines

Tanks, pumps, fencing etc.

- Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Requirements for Operations and Final Reclamation:

4. If, during any phase of the construction, operation, maintenance, or termination of the frac pond, any pollutant should be released from the contaminated frac pond, the control and total removal, disposal, and cleaning up of such pollutant, wherever found, shall be the responsibility of holder, regardless of fault.

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

6. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

7. 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.

8. After all disturbed areas have been satisfactorily contoured and prepared for seeding the location needs to be revegetated with the seed mixture provided. Seeding may need to be repeated until revegetation is successful. Operators shall contact Jim Amos, Supervisor, Environmental Protection – (575)234-5909, **prior** to beginning surface reclamation operations.

9. Seeding is required: Use the following seed mix.

- | | |
|---|--|
| ☐ seed mixture 1 | ☐ seed mixture 3 |
| ☐ seed mixture 2 | ☐ seed mixture 4 |
| ☒ LPC mixture | ☐ Aplomado Falcon mix |

10. The topsoil to be stripped is approximately inches in depth.

11. Special Stipulations:

12. Upon failure of holder to control, dispose of, or clean up such discharge, or to repair all damages resulting there-from, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats; at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

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

*Pounds of pure live seed:

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



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

Operator Certification Data Report

08/29/2019

Operator Certification

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

NAME: Brian Wood

Signed on: 03/28/2019

Title: President

Street Address: 37 Verano Loop

City: Santa Fe

State: NM

Zip: 87508

Phone: (505)466-8120

Email address: afmss@permitswest.com

Field Representative

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



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

Application Data Report

08/29/2019

APD ID: 10400040350

Submission Date: 03/28/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - General

APD ID: 10400040350

Tie to previous NOS? N

Submission Date: 03/28/2019

BLM Office: CARLSBAD

User: Brian Wood

Title: President

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM138876

Lease Acres: 1179.44

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? YES

APD Operator: MATADOR PRODUCTION COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: MATADOR PRODUCTION COMPANY

Operator Address: 5400 LBJ Freeway, Suite 1500

Zip: 75240

Operator PO Box:

Operator City: Dallas

State: TX

Operator Phone: (972)371-5200

Operator Internet Address: amonroe@matadorresources.com

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PRONGHORN

Pool Name: BONE SPRING

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: SLOT 2

Well Class: HORIZONTAL

RODNEY ROBINSON

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 27 Miles

Distance to nearest well: 30 FT

Distance to lease line: 240 FT

Reservoir well spacing assigned acres Measurement: 320.01 Acres

Well plat: RR_122H_C102_ETAL_20190327081821.pdf

Well work start Date: 08/01/2019

Duration: 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

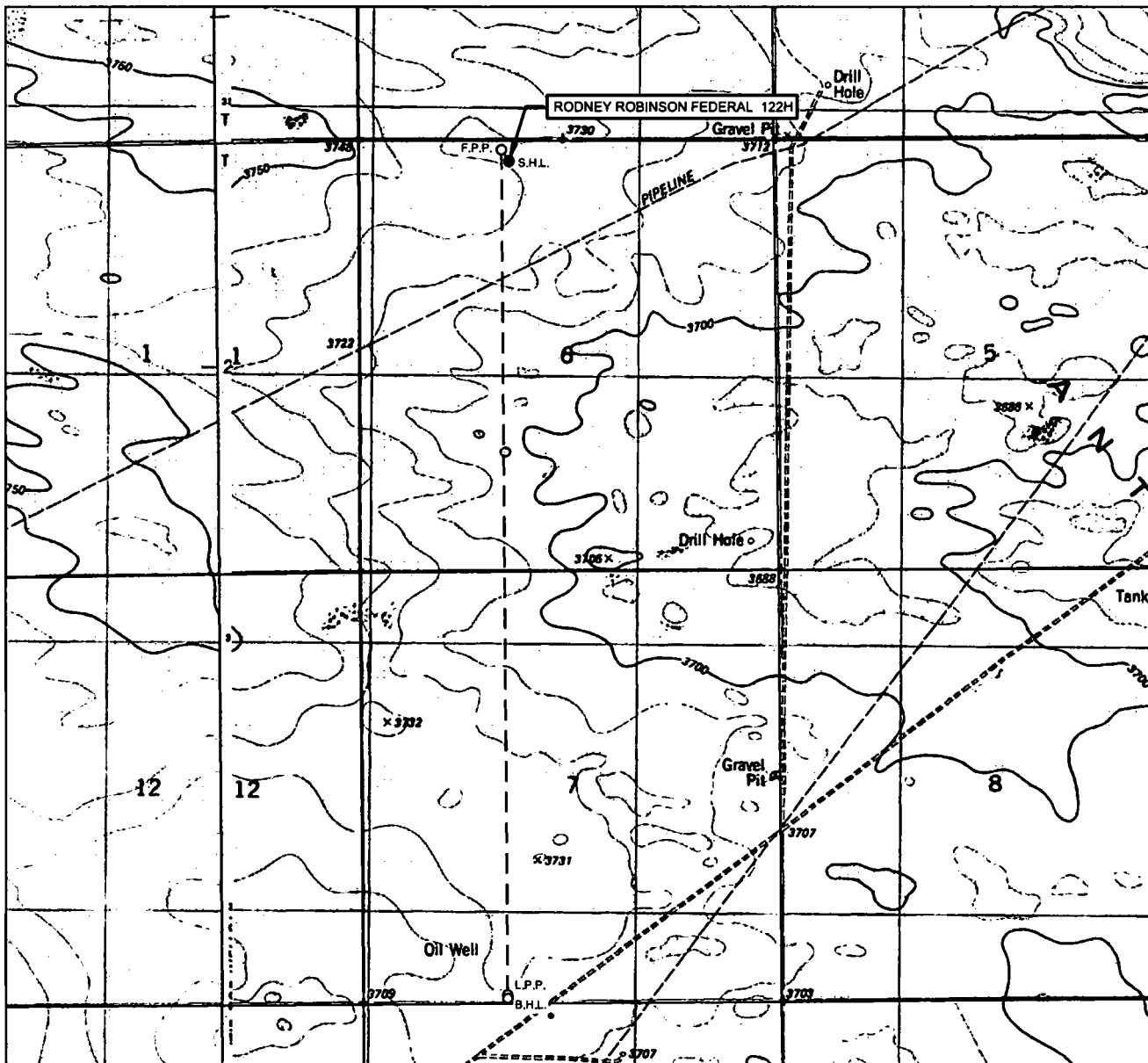
Vertical Datum: NAVD88

Survey number: 25116

Reference Datum:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	240	FNL	192 7	FWL	23S	33E	6	Lot 3	32.34040 77	- 103.6135 354	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 138876	373 2	0	0
KOP Leg #1	50	FNL	193 2	FWL	23S	33E	6	Lot 3	32.34092 82	- 103.6135 142	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 138876	- 644 6	101 78	101 78
PPP Leg #1	225	FNL	191 0	FWL	23S	33E	6	Lot 3	32.34044 88	- 103.6135 904	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 138876	- 691 6	106 48	106 48

LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: RODNEY ROBINSON FEDERAL 122H

SECTION 6 TWP 23-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3732'
 DESCRIPTION 240' FNL & 192' FWL

LATITUDE N 32.3404077 LONGITUDE W 103.6135354



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

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

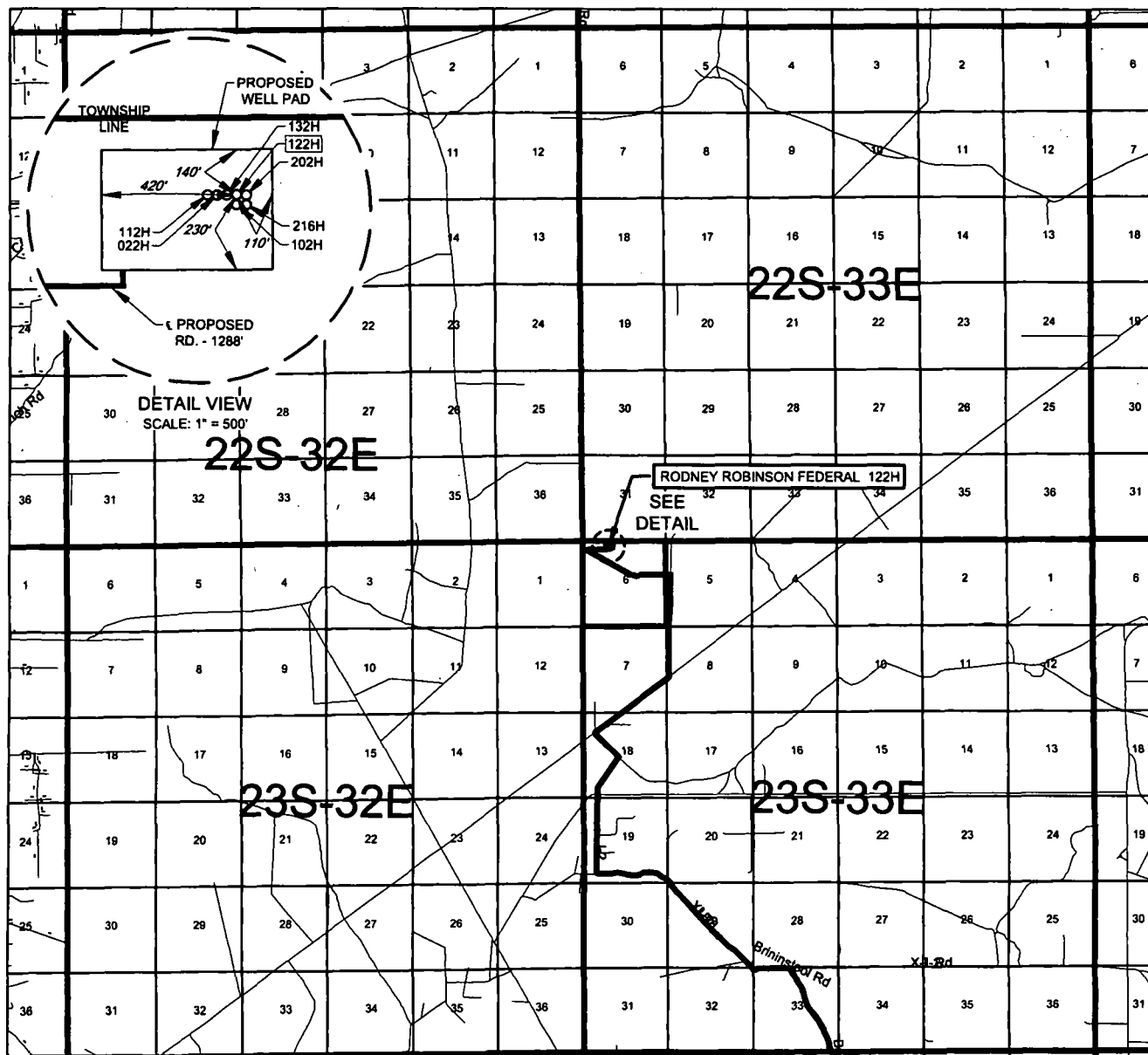
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



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VICINITY MAP



LEASE NAME & WELL NO.: RODNEY ROBINSON FEDERAL 122H

SECTION 6 TWP 23-S RGE 33-E SURVEY N.M.P.M.

COUNTY LEA STATE NM

DESCRIPTION 240' FNL & 1927' FWL

DISTANCE & DIRECTION

FROM INT. OF CR 21. & NM-128. GO WEST ON NM-128 ±3.3 MILES. THENCE NORTH (RIGHT) ON CR 2-A ±4.2 MILES. THENCE WEST (LEFT) ON J-2/XI RD. ±2.8 MILES. THENCE CONTINUE NORTH (RIGHT) ON J-2/XI RD. ±1.4 MILES, THENCE NORTHWEST (LEFT) ON A LEASE RD. ±0.4 MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD. ±1.1 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ±1.2 MILES, THENCE WEST (LEFT) ON A LEASE RD. ±1.0 MILE, THENCE NORTHEAST (RIGHT) ON A PROPOSED RD. ±1288 FEET TO A POINT ±423 FEET SOUTHWEST OF THE LOCATION.

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

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



SCALE: 1" = 10000'
0' 5000' 10000'



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SCALE: 1" = 1000'

0' 500' 1000'



SECTION 6, TOWNSHIP 23-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

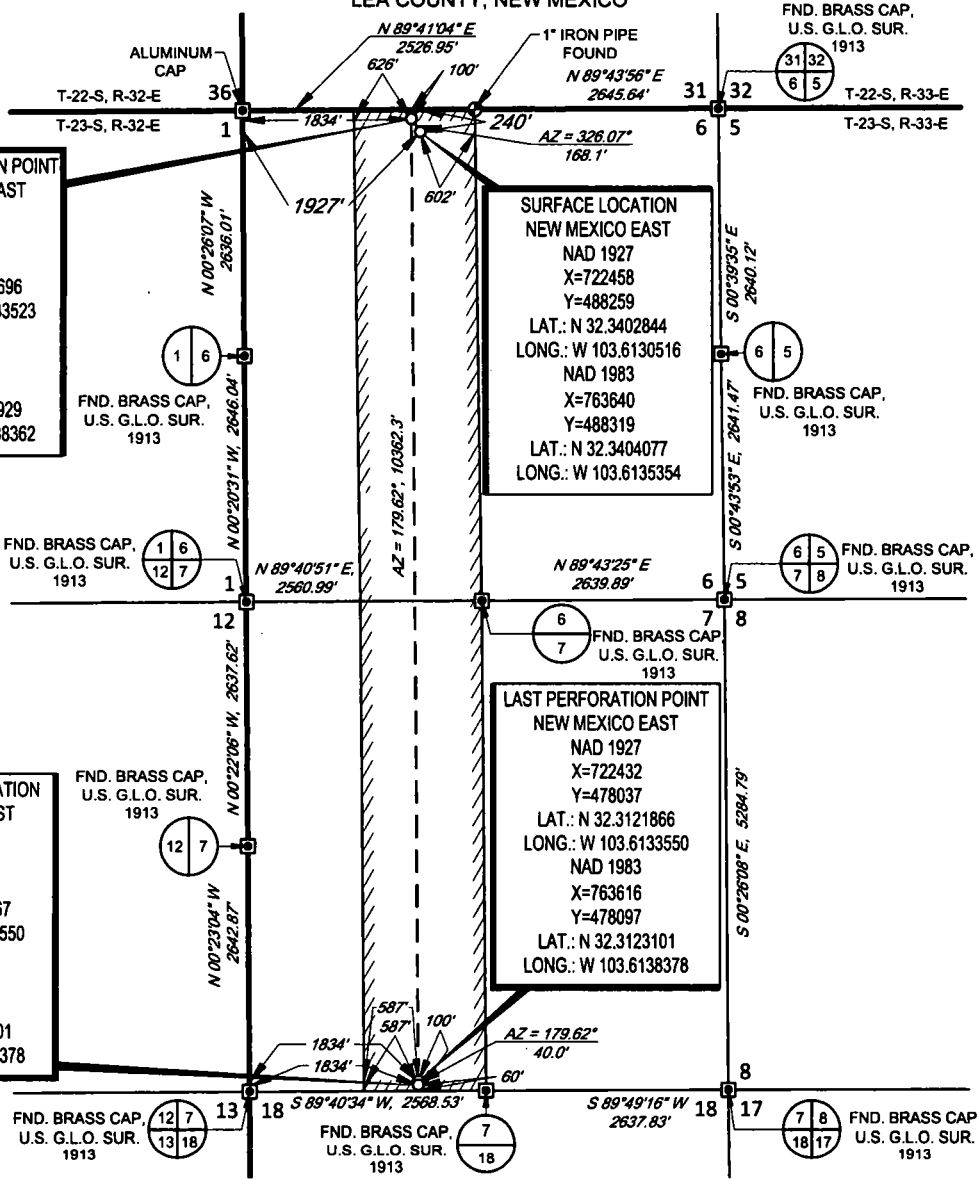


FIRST PERFORATION POINT
NEW MEXICO EAST
NAD 1927
X=722364
Y=488399
LAT.: N 32.3406696
LONG.: W 103.6133523
NAD 1983
X=763547
Y=488459
LAT.: N 32.3407929
LONG.: W 103.6138362

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=722458
Y=488259
LAT.: N 32.3402844
LONG.: W 103.6130516
NAD 1983
X=763640
Y=488319
LAT.: N 32.3404077
LONG.: W 103.6135354

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=722433
Y=477997
LAT.: N 32.3120767
LONG.: W 103.6133550
NAD 1983
X=763616
Y=478057
LAT.: N 32.3122001
LONG.: W 103.6138378

LAST PERFORATION POINT
NEW MEXICO EAST
NAD 1927
X=722432
Y=478037
LAT.: N 32.3121866
LONG.: W 103.6133550
NAD 1983
X=763616
Y=478097
LAT.: N 32.3123101
LONG.: W 103.6138378



LEASE NAME & WELL NO.: RODNEY ROBINSON FEDERAL 122H
SECTION 6 TWP 23-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 240' FNL & 1927' FWL

DISTANCE & DIRECTION
FROM INT. OF CR 21. & NM-128. GO WEST ON NM-128 ±3.3 MILES. THENCE NORTH (RIGHT) ON CR 2-A ±4.2 MILES. THENCE WEST (LEFT) ON J-2/XI RD. ±2.8 MILES. THENCE CONTINUE NORTH (RIGHT) ON J-2/XI RD. ±1.4 MILES. THENCE NORTHWEST (LEFT) ON A LEASE RD. ±0.4 MILES, THENCE NORTHEAST (RIGHT) ON A LEASE RD. ±1.1 MILES, THENCE NORTH (LEFT) ON A LEASE RD. ±1.2 MILES, THENCE WEST (LEFT) ON A LEASE RD. ±1.0 MILE, THENCE NORTHEAST (RIGHT) ON A PROPOSED RD. ±1288 FEET TO A POINT ±423 FEET SOUTHWEST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET
THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
AS OF THE DATE OF SURVEY, ALL ABOVE GROUND APPURTENANCES WITHIN 300' OF THE STAKED LOCATION ARE SHOWN HEREON.

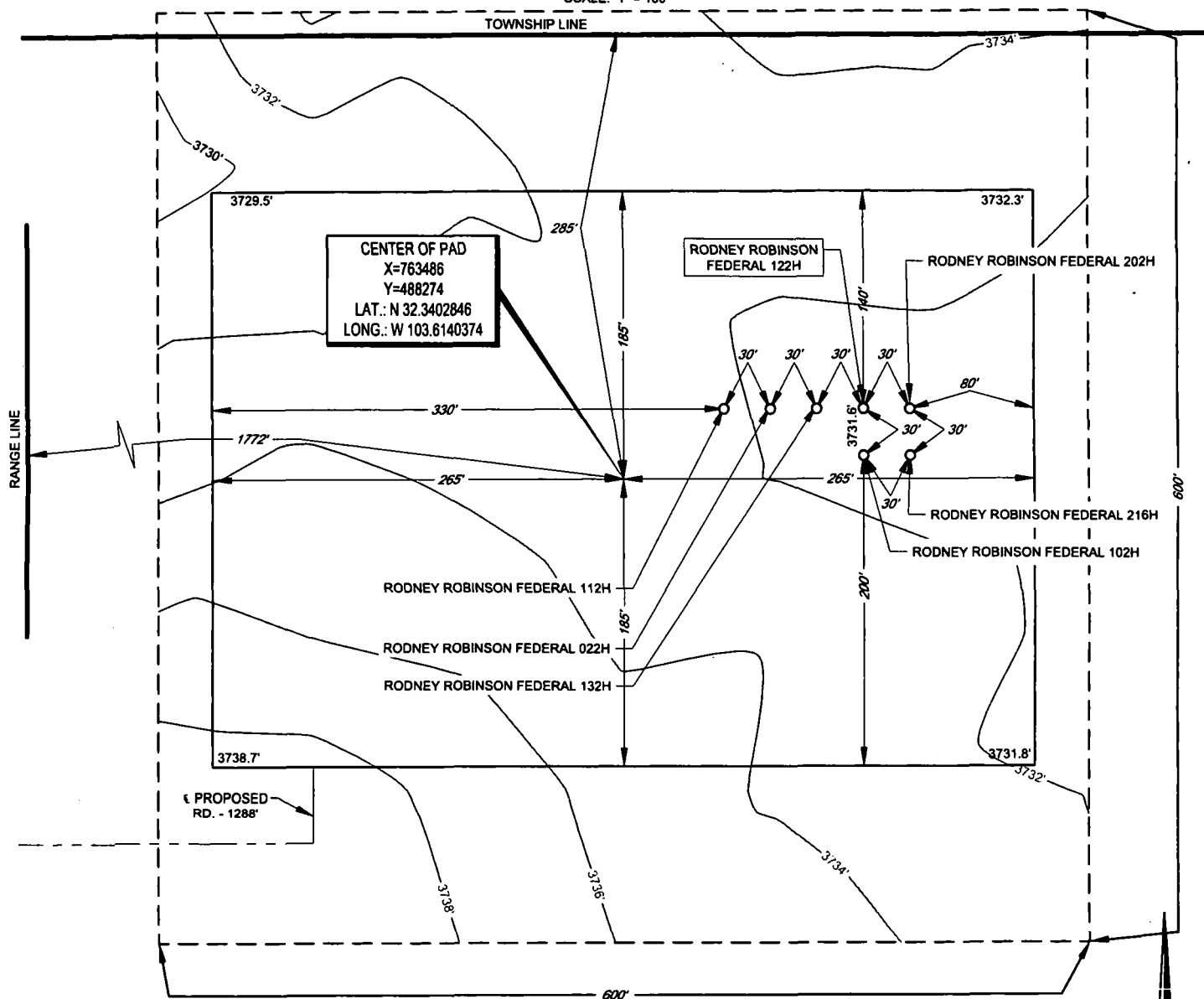


Angel M. Baeza, P.S. No. 25116
MARCH 19, 2019

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SECTION 6, TOWNSHIP 23-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: RODNEY ROBINSON FEDERAL 122H
122H LATITUDE N 32.3404077 122H LONGITUDE W 103.6135354

LEGEND

- TOWNSHIP/RANGE LINE
 PROPOSED ROAD

CENTER OF PAD IS 285' FNL & 1772' FWL



SCALE: 1" = 100'



0' 50' 100'

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"



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Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Pressure Rating (PSI): 5M

Rating Depth: 12000

Equipment: A 12,000' 5000-psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and one annular preventer will be utilized below surface casing to TD. An accumulator complying with Onshore Order #2 requirements for the pressure rating of the BOP stack will be present. A rotating head will also be installed as needed.

Requesting Variance? YES

Variance request: Matador requests a variance to have the option of running a multi-bowl wellhead assembly for setting the Intermediate 1 and Production Strings. The BOPs will not be tested again unless any flanges are separated. Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used. Matador requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, the wellbore will be secured with a blind flange of like pressure. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test.

Testing Procedure: BOP will be inspected and operated as required in Onshore Order #2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs. After setting surface casing, a minimum 5M BOPE system will be installed. Test pressures will be 250 psi low and 5000 psi high with the annular preventer being tested to 250 psi low and 2500 psi high before drilling below surface shoe. In the event that the rig drills multiple wells on the pad and any seal subject to test pressures are broken, a full BOP test will be performed when the rig returns and the 5M BOPE system is re-installed.

Choke Diagram Attachment:

RR_122H_5M_Choke_Manifold_Arrangement_20190327082604.pdf

BOP Diagram Attachment:

RR_122H_5M_BOP_20190327082635.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	1281	0	1281	3732		1281	J-55	54.5	BUTT	1.125	1.125	DRY	1.8	DRY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5053	0	5053	3732		5053	J-55	40	BUTT	1.125	1.125	DRY	1.8	DRY	1.8
3	PRODUCTION	8.75	5.5	NEW	API	N	0	20972	0	10837	3732		20972	P-110	20	OTHER - DWC/C-IS HT Plus	1.125	1.125	DRY	1.8	DRY	1.8

Casing Attachments

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_122H_Casing_Design_Assumptions_3string_20190327082836.pdf

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_122H_Casing_Design_Assumptions_3string_20190327083206.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

RR_122H_Casing_Design_Assumptions_3string_20190327083244.pdf

Section 4 - Cement

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	981	640	1.72	12.5	1094	50	Class C	5% NaCl + LCM
SURFACE	Tail		981	1281	250	1.38	14.8	347	50	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	4042	940	2.13	12.6	1994	50	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		4042	5053	370	1.38	14.8	509	50	Class C	5% NaCl + LCM
PRODUCTION	Lead		4853	9687	680	2.22	11.5	1515	25	Class H	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		9687	2097 2	2650	1.35	13.2	3573	25	Class H	Fluid Loss + Dispersant + Retarder + LCM

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Describe the mud monitoring system utilized: An electronic Pason mud monitoring system complying with Onshore Order #2 will be used.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
5053	2097 2	OTHER : Fresh water cut brine	8.6	9.4							
1281	5053	OTHER : Brine water	9.5	10.2							
0	1281	SPUD MUD	8.4	8.8							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

A 2-person mud logging program will be used from Kick-off point to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from Intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to top of curve.

List of open and cased hole logs run in the well:

CBL,MUDLOG

Coring operation description for the well:

No core or drill stem test is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2913

Anticipated Surface Pressure: 528.86

Anticipated Bottom Hole Temperature(F): 160

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

RR_Slot2_H2S_Plan_20190326141951.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

RR_122H_Horizontal_Plan_20190327083353.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

5.5in_Casing_Specs_20190326142102.PDF

CoFlex_Certs_20190326142051.pdf

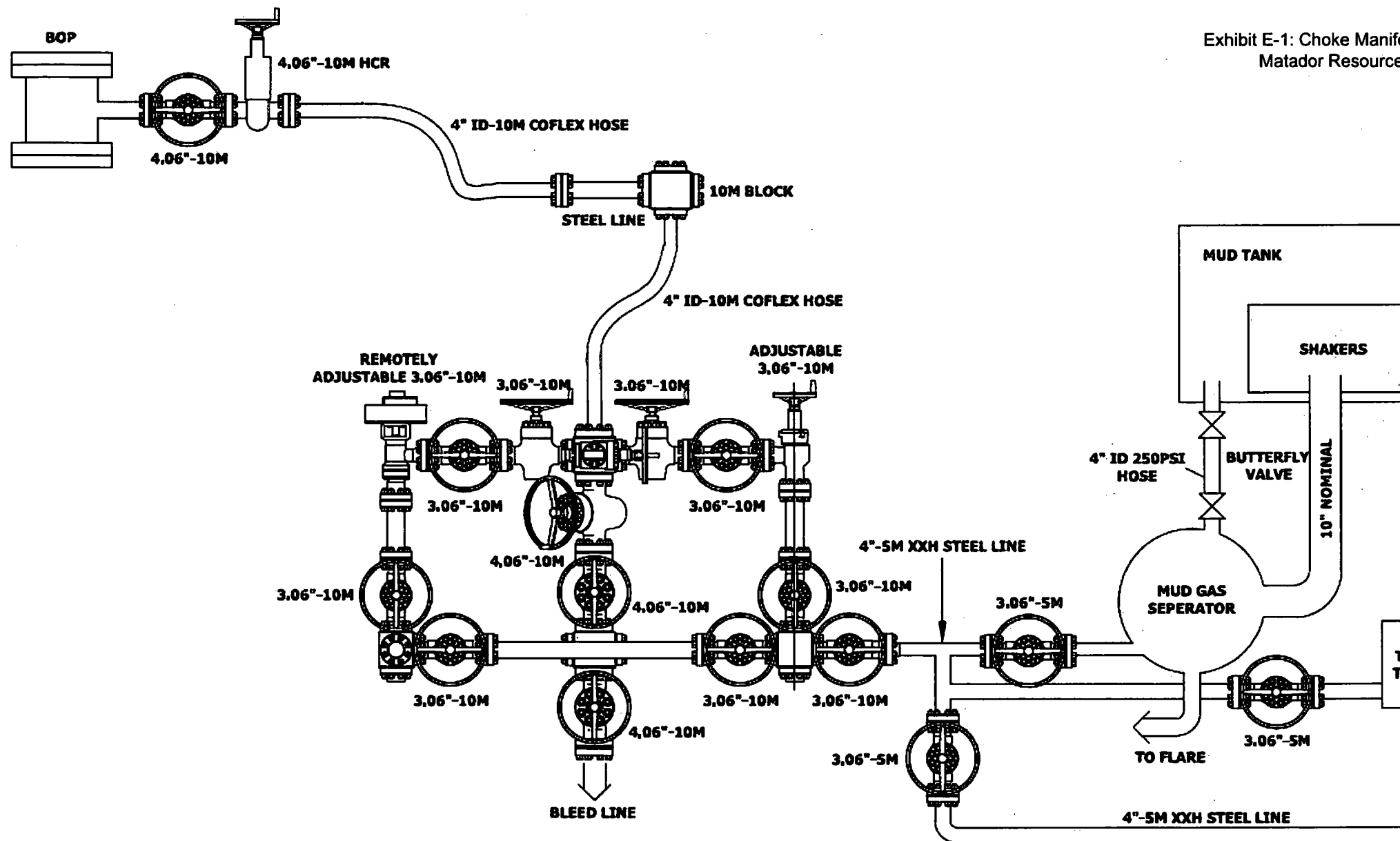
RR_122H_3String_Wellhead_Diagram_20190327083425.pdf

RR_122H_Drill_Plan_20190328111504.pdf

Other Variance attachment:

—

Exhibit E-1: Choke Manif
Matador Resource



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

GENERAL WELDING NOTE:
ALL ACCESSIBLE CONTACT SURFACES
SHALL BE JOINED WITH CONTINUOUS
45 DEGREE FILLET WELDS. WELD SIZE
TO BE 1/16 INCH SMALLER THAN
THINNER MEMBER JOINED UP TO
1/4 INCH THICKNESS AND 1/8 INCH
SMALLER THAN THINNER MEMBER
JOINED UP TO 3/4 INCH THICKNESS
WELDMENT TOLERANCES = +/- 1/16

MACHINING TOLERANCES
1 PLACE DECIMAL = .1
2 PLACE DECIMAL = .03
3 PLACE DECIMAL = .015
FRACTIONAL TOLERANCES = 1/64
INSIDE MACHINED CORNER RADIUS = .031
CHAMFER OUTSIDE CORNERS .03 X 45 DEG
ANGLE TOLERANCES = .1 DEGREE
MACHINED SURFACE FINISH 125 RMS
ALL UNSPECIFIED DIMENSIONS ARE IN INCHES

REV	DATE	DESCRIPTION	CP	CSL	CRN	CHK	APPROV	ENG.
02	8-3-16	ISSUED FOR INFORMATION						
03	1-9-18	ISSUED FOR INFORMATION						

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CHOK

10M CHOK

QWC No. R0297-D.001.

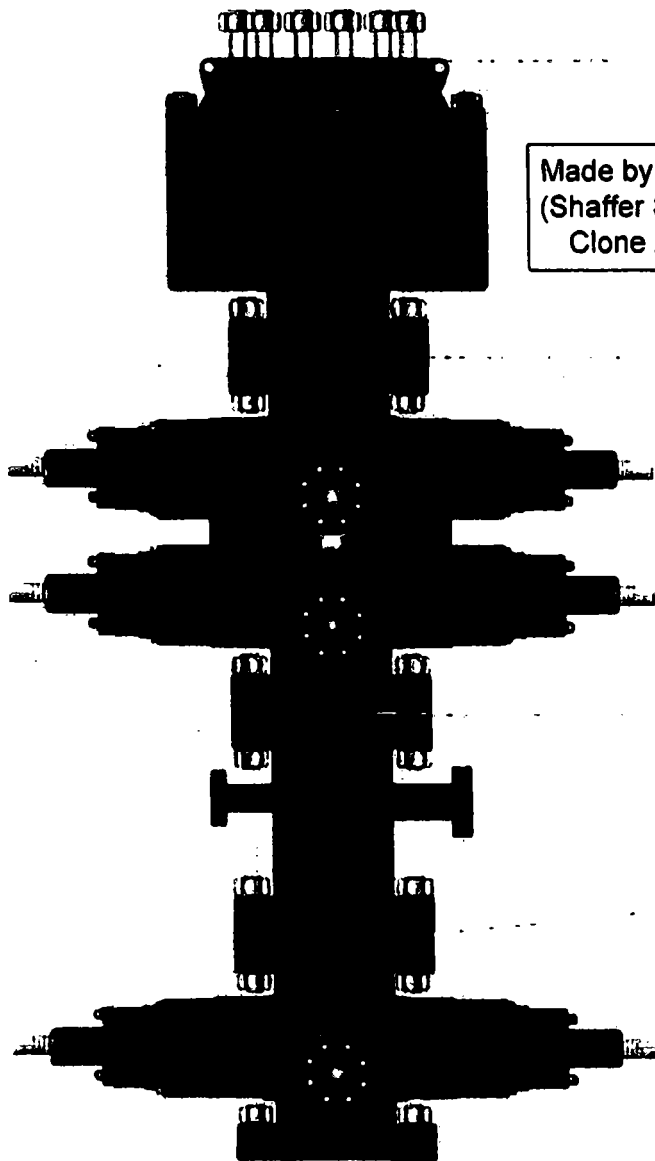


PATTERSON-UTI

Well Control

RIG

297



Made by Cameron
(Shaffer Spherical)
Clone Annular

PATTERSON-UTI # PS2-628

STYLE: New Shaffer Spherical

BORE 13 5/8" PRESSURE 5,000

HEIGHT: 48 1/2" WEIGHT: 13,800 lbs

PATTERSON-UTI # PC2-128

STYLE: New Cameron Type U

BORE 13 5/8" PRESSURE 10,000

RAMS: TOP 5" Pipe BTM Blinds

HEIGHT: 66 5/8" WEIGHT: 24,000 lbs

Length 40" Outlets 4" 10M

DSA 4" 10M x 2" 10M

PATTERSON-UTI # PC2-228

STYLE: New Cameron Type U

BORE 13 5/8" PRESSURE 10,000

RAMS: 5" Pipe

HEIGHT: 41 5/8" WEIGHT: 13,000 lbs

WING VALVES



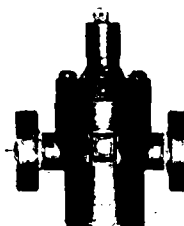
2" Check Valve



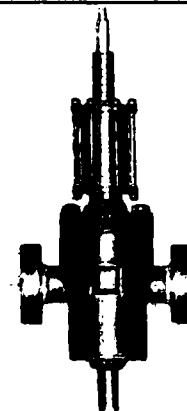
2" Manual Valve



2" Manual Valve



4" Manual Valve



4" Hydraulic Valve

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 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 (8.3 ppg).

Intermediate #2 Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 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 (10.0 ppg).

Production Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 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).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 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 (8.3 ppg).

Intermediate #2 Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 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 (10.0 ppg).

Production Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- **Pressure Test:** 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 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).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 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 (8.3 ppg).

Intermediate #2 Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 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 (10.0 ppg).

Production Casing

Collapse: $DF_c=1.125$

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: $DF_b=1.125$

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 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).

Hydrogen Sulfide Drilling
Operations Plan
Matador Resources

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 30min 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, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

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

4 Condition Flags and Signs:

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

5 Well Control Equipment:

- See Exhibit E-1

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.

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

- See exhibit E-6

HYDROGEN SULFIDE CONTINGENCY PLAN
Drilling, Testing, & Completion

MRC ENERGY CO.

Reviewers

----- Operations Manager
----- Operations Supt.
----- Staff RES
----- Field Supt.
Blake Hermes---Engineering

H2S Contingency Plan # 0165

Revision# 0

This H2S Contingency Plan is subject to updating

Effective date: July 8, 2015

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INTRODUCTION

The H₂S equipment will be rigged up 2 days prior to reaching a potential H₂S containing zone. Drilling into any potential H₂S zone shall not commence until the on-site MRC Drilling Supervisor has confirmed this plan in place.

The onsite Drilling Foreman will give Total Safety one week (7 days) notice to prepare for rig up of H₂S equipment)

To be effective, the plan requires the cooperation and effort of each person participating in the drilling of an H₂S well. Each person must know his/her responsibilities and all emergency and safety procedures. He/she should thoroughly understand and be able to use with accuracy, all safety equipment while performing his/her normal duties, if the circumstance should arise. He/she should therefore familiarize himself/herself with the location of all safety equipment and check to see that it is properly stored, easily accessible at all times, and routinely maintained.

It is the intention of MRC ENERGY CO. and the Drilling Contractor to make every effort to provide adequate safeguards against harm to persons on the rig and in the immediate vicinity from the effects of hydrogen sulfide, which may be released into the atmosphere under emergency conditions. However, the initiative rests with the individual in utilizing the safeguards provided. The ideas and suggestions of the individuals involved in the drilling of this well are highly welcomed and act as a fundamental tool for providing the safest working conditions possible.

The drilling representative is required to enforce these procedures. They are set up for your safety and the safety of all others.

II. PURPOSE

It is MRC Energy Co.'s intent to provide a safe working place, not only for its employees, but also for other contractors who are aiding in the drilling of this well. The safety of the general public is of utmost concern. All precautions will be taken to keep a safe working environment and protect the public.

There is a possibility of encountering toxic hydrogen sulfide gas. Safety procedures must be adhered to in order to protect all personnel connected with the operations as well as people living within the area.

The MRC Energy Co. representative will enforce all aspects of the H₂S Contingency Plan. This job will become easier by a careful study of the following pages and training and informing all personnel that will be working on the well, their duties and responsibilities.

A. OPERATING PROCEDURES

DEFINITIONS:

For purpose of this plan, on-site personnel shall be referred to as "In Scope Personnel" or "Out of Scope Personnel", per the following definitions:

In Scope Personnel – Personnel who will be working or otherwise present in potential H₂S release areas, including the rig floor, cellar, pits, and shaker areas.

Out of Scope Personnel – Personnel who will not be working or Otherwise present in potential H₂S areas. Such personnel include rig Site visitor, delivery and camp services personnel.

GENERAL:

Before this H₂S contingency plan becomes operational, all regularly assigned In Scope Personnel (primarily the MRC, drilling contractor, and certain service personnel,) shall be thoroughly trained in the use of breathing equipment, emergency procedures, and responsibilities. Total Safety Technician or a designee assigned by the MRC Drilling Foreman shall keep a list of all personnel who have been through the on-site H₂S training program at the drill site.

All In Scope Personnel shall be given H₂S training and the steps to be taken during H₂S conditions under which the well may be drilled. General information will be explained about toxic gases, as well as the physiological effects of H₂S and the various classified operating conditions. In addition, the reader will be informed his/her general responsibility concerning safety equipment and emergency procedures.

The Total Safety H₂S Safety Technician or MRC on-site RSE Technician shall make available the H₂S Contingency Plan for all personnel to review.

Without exception, all personnel that arrive on location must proceed directly to and sign-in with the on-site MRC RSE Technician. In Scope Personnel will be required to complete an on-site H₂S training and respirator fit testing before starting work, or produce evidence that they have received equivalent training. Out of Scope Personnel will be required to complete a site H₂S awareness and general safety briefing. This briefing will consist of a H₂S hazard overview, alarm review and required response to alarms.

B. PROCEDURES TO BE INITIATED PRIOR TO H₂S CONTINGENCY PLAN COMPLIANCE:

A list of emergency phone numbers and contacts will be on location and posted at the following locations:

1. MRC ENERGY CO.'S Representative's Office
2. Drilling Contractor's, Toolpusher Office
3. Living Quarters Area

All safety equipment and H₂S related hardware must be set up as required by MRC Energy Co. with regard to location of briefing areas, breathing equipment, etc. All safety equipment must be inspected periodically (at least weekly) with particular attention to resuscitators and breathing equipment.

In Scope Personnel working in the well site area will be assigned breathing apparatus. Operator and drilling contractor personnel required to work in the following areas will be provided with Self Contained Breathing Apparatus:

1. Rig Floor
2. Mud Pits
3. Derrick
4. Shale Shaker
5. Cellar

The Total Safety H₂S Safety Technician will be responsible for rigging up all H₂S continuous monitoring-type detectors. The Total Safety Technician will monitor and bump test the detector units periodically (at least at least once a week to test alarm function during drilling conditions. In the event H₂S is detected, or when drilling in a zone confirmed to contain H₂S, the units shall be bump tested at least once every 24 hours. A bump test/calibration log will be kept on location. All results will be reported to the MRC on-site Drilling Foreman.

All Total Safety H₂S equipment will be maintained and inspected by a Total Safety Technician on at least a Weekly basis.

C. DRILLING BELOW CONTINGENCY PLAN DEPTH

H₂S response drills will be held at least once per week if possible or as often as necessary to acquaint the crews and service company personnel of their responsibilities and the proper procedures to shut-in a well. Initial drills will be performed until crews demonstrate competency donning and working under mask. After the MRC Energy Co.'s representative is satisfied with initial blowout drill procedures, a drill will be conducted weekly with each crew, as necessary. The H₂S Safety Technician or designee will conduct safety talks and maintain the safety equipment, consult and carry out the instructions of the drilling supervisor. All personnel allowed in the well work area during drilling or testing operations will be instructed in the use of breathing equipment until supervisory personnel are satisfied that they are capable of using it.

After familiarization, each person must perform a drill with breathing equipment. The drill should include getting the breathing equipment, donning the breathing apparatus, and performing expected duties for a short period. A record shall be kept of all personnel drilled and the date of the drill. H₂S training records will be kept on location for all personnel.

Rig crews and service company personnel shall be made aware of the location of spare air bottles, resuscitation equipment, portable fire extinguishers, H₂S monitors and detectors. Knowledge of the location of the H₂S monitors and detectors are vital in determining as our gas location and the severity of the emergency conditions.

After any device has initially detected H₂S, all areas of poor ventilation shall be inspected periodically by means of a portable H₂S detector instrument. The buddy system will be utilized. (When an alarm sounds, personnel will don an SCBA, shut the well in, and proceed to SBA for roll call. The H₂S Technician or designee will mask up, with a buddy and will verify source of H₂S and report back to the on-site MRC Foreman.)

D. PROCEDURES PROGRAM

1. Drill Site
 - a. The drilling rig will be located to allow prevailing winds to blow across the reserve pit.
 - b. A Safe Briefing Area will be provided with a breathing air cascade trailer and or 30-minute SCBA's at the Primary Area. Personnel will assemble at the most up-wind station under alarm conditions, or when so ordered by the MRC Energy Co. representative, the Contractor representative, or

the Total Safety H₂S Safety Technician. Windsocks or streamers will be anchored to various strategic places on a pole about 10 feet high, so it is in easy view from the rig floor at all times.

- c. Warning signs will be posted on the perimeters. "No Smoking" signs will be posted by MRC Energy Co. as well.
- d. One multi-channel automatic H₂S monitor will be provided by Total Safety and the detector heads will be at the shale shaker, bell nipple, mud pits, rig floor, and quarter's area. The monitor will be located inside HSE or Company man trailer. Should the alarm be shut off to silence the sirens, the blinker light must continue to warn of H₂S presence. The Total Safety H₂S Safety Technician or designee will continuously monitor the detectors and will reactivate the alarm if H₂S concentrations increase to a dangerous level.
- e. A method of escape will be open at all times.
- f. If available, land line telephone service will be provided or cell phones provided. (Primary communications provided)
- g. A rig communication system will be provided, as needed.
- h. A gas trap, choke manifold, and degasser will be installed.
- i. A kill line, securely anchored and of ample strength, will be laid to the well-head from a safe location. This line is to be used only in an emergency.

General

- a. The MRC Energy Co. representative and/or the Contractor's Toolpusher will be available at all times. The drilling supervisor, while on duty, will have complete charge of the rig and location operations and will take whatever action is deemed necessary to insure personnel safety, to protect the well, and to prevent damage.
- b. A Mud Engineer will be on location at all times when drilling takes place at the depth H₂S may be expected. The mud engineer will be able to verify the presence or absence of H₂S.

III. CONDITIONS AND EMERGENCY PROCEDURES

A. DEFINITION OF OPERATIONAL "CONDITIONS"

CONDITION I	"POSSIBLE DANGER"
Warning Flags	Green
Alarms	No Alarm. Less than 10 ppm
Characterized By:	Drilling operations in zones that may contain hydrogen sulfide. This condition remains in effect unless H ₂ S is detected and it becomes necessary to go to Condition II.
General Action:	a. Be alert for a condition change b. Check all safety equipment for availability and proper functioning. c. Perform all drills for familiarization and proficiency.
CONDITION II	"MODERATE DANGER"
Warning Flags	Yellow
Alarms:	Actuates at 10 ppm. Continuous flashing light.
Characterized By:	Drilling operations in zones containing hydrogen sulfide. This condition will remain in effect until adding chemicals to the mud system neutralizes the hydrogen sulfide or it becomes necessary to go to Condition III.
General Action:	a. Be alert for a condition change b. WHEN DRILLING AHEAD - Driller and designated crewmember will don 30 min SCBA, shut-in the well and immediately proceed to the Safe Briefing Area. WHEN TRIPPING - Driller and two designated crewmembers will don 30 min SCBA, shut in the well and immediately proceed to the Safe Briefing Area. The Derrickman will

don a 5-minute escape pack, descend to the rig floor, don a 30-min SCBA (if necessary) and immediately proceed to the Safe Briefing Area.

- c. All In Scope Personnel will proceed directly to the appropriate Safe Briefing Area.
- d. Remain in safe briefing area, take roll call and wait for instructions
- e. Contact the Total H2S Technician if not on location.
- f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H₂S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases.
- g. All Out of Scope Personnel will report to the appropriate Safe Briefing Area.

CONDITION III "EXTREME DANGER"

Warning Flags

Red

Alarms

Actuate at 15 ppm. Continuous Sirens and Flashing Lights

Characterized by:

Critical well operations which pose an immediate threat of H₂S exposure to on-site personnel and a potential threat to the public.

General Action:

- a. **WHEN DRILLING AHEAD -**
Driller and designated crewmember will don 30 min SCBA, shut-in the well and immediately proceed to the Safe Briefing Area.

WHEN TRIPPING - Driller and two designated crewmembers will don 30

min SCBA, shut in the well and immediately proceed to the Safe Briefing Area. The Derrickman will don a 5-minute escape pack, descend to the rig floor, don a 30-min SCBA (if necessary) and immediately proceed to the Safe Briefing Area.

- b. All In Scope Personnel should don SCBA if nearby and immediately proceed to Safe Briefing Area. If SCBA is not nearby at time of alarm, DO NOT GO TOWARDS RIG AREA, but proceed directly to the Safe Briefing Area
- c. All out of Scope Personnel shall evacuate the location.
- d. Remain in the Safe Briefing Area, take roll call and wait for instructions.
- e. Contact the Total H₂S Technician if not on location.
- f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H₂S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases. Use the buddy system.
- g. Remain in safe briefing area, take roll call and wait for instructions.
- h. A cascade breathing air system shall be mobilized and utilized to conduct any additional on rig work required to correct the H₂S release condition.
- i. If well is ignited do not assume area is safe. SO₂ is hazardous and not all H₂S will burn.

H₂S EMERGENCY PROCEDURES; IN SCOPE PERSONNEL

A. Day To Day Drilling Operations

1. Upon discovering a release of H₂S gas in the ambient air by warning alarms or in any other way **Do Not Panic**.
2. Hold your breath donning the nearest Self Contained Breathing Apparatus and rapidly move up or across-wind away from the areas where H₂S sensing devices are in place, to the closest available safe briefing area. Continue to use breathing apparatus until it has been determined that the exposure of H₂S gas in the ambient air no longer exists. **Do Not Panic!**
3. Utilize the "Buddy System", i.e.; select and pair up each person participating in the drilling of an H₂S well prior to an emergency situation.
4. Help anyone who is overcome or affected by the H₂S gas by taking him/her up-wind out of the contaminated area. (This should be done utilizing an SCBA and with a buddy.)
5. Take necessary steps to confirm the release of the H₂S gas into the ambient air.
 - When an H₂S alarm activates, two designated personnel using the buddy system, while wearing their self contained breathing apparatus, will determine by the read-out on the fixed monitor which sensing device has detected the release of the H₂S gas.
 - They will utilize the hand-held sniffer type device at the particular sensing point disclosed on the fixed monitor to corroborate the fact that H₂S gas has actually been released. This will rule out the possibility of a false alarm. This will be done with a buddy and under mask after reporting to the Safe Briefing Area for roll call and instructions by on-site MRC Foreman.
6. Refer to the Emergency Phone Numbers and call emergency personnel.
7. Take the necessary steps to suppress the release of H₂S gas into the ambient air. Comply with the MRC Energy Co. Representative to physically suppress the release of H₂S gas at the actual release point.

8. Check all of MRC Energy Co.'s monitoring devices and increase gas-monitoring activities with the portable hand-operated H₂S and gas detector units.

Do Not Panic!

The MRC Energy Co. representative will assess the situation and with assistance of the Contractor's Representative and Total Safety's H₂S Safety Technician or on site designee, will assign duties to each person to bring the situation under control.

B. RESPONSIBILITIES OF WELL-SITE PERSONNEL

In the event of a release of potentially hazardous amounts of H₂S, all personnel will immediately don their protective breathing apparatus, the well will be shut in and personnel will proceed upwind to the nearest designated safe briefing area for roll call and instructions by MRC Foreman. Consideration will be given to evacuating Out of Scope Personnel, as situation warrants.

1. MRC ENERGY CO.'S Well-site Representatives

- a. If MRC Energy Co.'s well-site representative is incapacitated or not on location, this responsibility will fall to the Toolpusher/Driller.
- b. Immediately upon assessing the situation, set this plan into Action by initiating the proper procedures to contain the gas and notify the appropriate people and agencies.
- c. Ensure that the alarm area indicated by the fixed H₂S Monitor is checked and verified with a portable H₂S detector. (Safety Technician if on location or MRC assigned designee with a buddy utilizing SCBA's)
- d. Consult Pusher/driller of remedial actions as needed.
- e. Ensure that non-essential personnel proceed to the safe briefing area.
- f. Ensure location entrance barricades are positioned. Keep the number of persons on location to a minimum during hazardous operations.

- g. Consult each contractor, Service Company and all others allowed to enter the site, that H₂S gas may be encountered and the potential hazards that may exist.
- h. Authorize the evacuation of local residents if H₂S threatens Their safety.
- i. Non essential personnel should be evacuated from location if Situation warrants.

2. Toolpusher

- a. Toolpusher/Driller will assume responsibilities of MRC Energy Co.'s well-site representative if that person is incapacitated or not on location.
- b. Ensure that the alarm area indicated by the fixed H₂S monitor is checked and verified with a portable H₂S gas detector. (Alarm area indicated by the monitor will be Checked by the H₂S Technician and a buddy, under mask.) This will be done after checking in and roll call at the Upwind Safe Briefing Area.
- c. Confer with MRC Energy Co.'s well-site representative or superintendent and direct remedial action to suppress the H₂S and control the well.
- d. Ensure that personnel at the safe briefing area are instructed on emergency actions required.
- e. Ensure that personnel at the drill floor area are instructed on emergency actions required.
- f. Ensure that all personnel observe the appropriate safety and emergency procedures.
- g. Ensure that all persons are accounted for and provided emergency assistance as necessary.

3. Mud Engineer

- a. Run a sulfide check on the flowline mud.
- b. Take steps to determine the source of the H₂S and suppress it. Lime and H₂S scavenger shall be added to the mud as necessary.

4. Total H₂S Safety Technician, if on location, or MRC Designee

- a. H₂S Safety Technician or designee don nearest SCBA and report to Safe Briefing Area for roll call, take a buddy masked up and check monitor and verify with a portable H₂S detector the alarm area indicated by the fixed H₂S monitor. Advise the Toolpusher/Driller and MRC Energy Co.'s well-site representative of findings. Record all findings.
- b. If H₂S is flared, check for sulfur dioxide (SO₂) near the flare as necessary. Take hourly readings at different perimeters, log readings and record on location.
- c. Ensure that personnel at the safe briefing area are instructed on emergency actions required.
- d. Ensure that the appropriate warning flags are displayed.
- e. Ensure that all personnel are in S.C.B.A. as necessary.
- f. Ensure that all persons are accounted for and provide emergency assistance as necessary.
- g. Be prepared to evacuate rig if order is issued.

5. General Personnel & Visitors

- a. All In Scope Personnel, if not specifically designated to shut the well in or control the well, shall proceed to the (upwind) safe briefing area. All Out of Scope Personnel shall immediately proceed to the appropriate (upwind) safe briefing area or evacuate the site as conditions warrant.

- b. During any emergency, use the "buddy" system to prevent anyone from entering or being left in a gas area alone, even wearing breathing apparatus.
- c. Provide assistance to anyone who may be injured or overcome by toxic gases. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering a potentially H₂S contaminated area.
- d. Remain in safe briefing area and wait for instructions.

C. INSTRUCTIONS FOR IGNITING THE WELL

- 1. The Toolpusher/Driller will confer with MRC Energy Co.'s well-site representative who will secure the approval of the "Texas Wells Delivery Manager, prior to igniting the well, if at all possible.

The Toolpusher/Driller will be responsible for igniting the well in the event of severe well control problems. This decision should be made only as a last resort in situations where it is clear that:

- a. Human life and property are endangered, or
 - b. There is no hope of controlling the well under current conditions.
- 2. Once the decision has been made, the following procedures should be followed:
 - a. Two people wearing self-contained breathing apparatus will be needed for the actual lighting of the well. They must first establish the flammable perimeter by using an explosimeter. This should be established at 30% to 40% of the lower flammable limits.
 - b. After the flammable perimeter has been established and everyone removed from the area, the ignition team should select a site upwind of the well from which to ignite the well. This site should offer the maximum protection and have a clear path for retreat from the area.

- c. The ignition team should have safety belts and lifeline attached and manned before attempting ignition. If the leak is not ignited on the first attempt, move in 20 to 30 feet and fire again. Continue to monitor with the explosimeter and NEVER fire from an area with over 75% of the Lower Explosive Limit (LEL). If having trouble igniting the well, try firing 40 degrees to 90 degrees on either side of the well.
- d. If ignition is not possible due to the makeup of the gas, the toxic perimeter must be established and evacuation continued until the well is contained.
- e. All personnel must act only as directed by the person in charge of the operations.

NOTE: After the well is ignited, burning hydrogen sulfide (H_2S) will convert to sulfur dioxide (SO_2), which is also a highly toxic gas.

DO NOT ASSUME THE AREA IS SAFE AFTER THE WELL IS IGNITED

D. CORING PROCEDURES

Only essential personnel shall be on the rig floor. Ten (10) stands prior to retrieving core barrel; all personnel on drill floor and in derrick shall confirm self-Contained breathing apparatus available and ready for use.

A Total H₂S Technician will don a SCBA with a buddy assigned from the rig crew, and continuously monitor for H₂S at each connection. Any levels detected will require operations to be shut down and all involved personnel to don SCBAs. Precautions will remain in place until barrel is laid down.

All involved personnel will don SCBAs when removing the inner barrel from the outer barrel. SCBAs can be removed once the absence of H₂S is confirmed by the Total H₂S Technician.

Cores will be appropriately marked and sealed for transportation.

Normal Operations

1. Responsibilities of well-site personnel

a. Well-site Representative

1. Notify H₂S Technician of expected date to reach Contingency Plan implementation depth (Two (2) days prior to reaching suspected H₂S bearing zone) or prior to starting well work.
2. Ensure H₂S Safety Technician completes rig-up procedures prior to reaching Contingency Plan effective depth.
3. Restrict the number of personnel at the drilling rig or well site to a minimum while drilling, starting well work, testing or coring.
4. Ensure weekly H₂S drills/training are performed, if possible.

B. Toolpusher

1. Ensure that necessary H₂S safety equipment is provided on the rig, and that it is properly inspected and maintained.
2. Ensure that all personnel that work in the well area, are thoroughly trained in the use of H₂S safety equipment and periodic drills are held to maintain an adequate level of proficiency.

C. In Scope Personnel

1. Remain clean-shaven. Beards and long sideburns do not allow a proper facepiece seal.
2. Receive H₂S safety training on location, or confirm prior training by certification that is one year within date.
3. Familiarize yourself with the rig's Contingency Plan.
4. Inspect and practice putting on your breathing apparatus.

5. Know the location of the "safe briefing areas".
6. Keep yourself "wind conscious". Be prepared to quickly move upwind and away in the event of any emergency involving release of H₂S.

D. Total Safety H₂S Safety Technician or MRC Designee

1. Conduct training as necessary to ensure all personnel working in well area are familiar with the contingency procedures and the operation of emergency equipment.
2. Check all H₂S safety equipment to ensure that it is ready for emergency use:
 - Check pressure weekly for each shift on breathing apparatus (both 30-minute and hip-packs) to make sure they are charged to full volume.
 - Check pressure on cascade air bottles, if on location, to see that they are capable of recharging breathing apparatus.
 - Check oxygen resuscitator, if on location, to ensure that it is charged to full volume.
 - Check H₂S detectors weekly for each shift (fixed and portable), and explosimeter, to ensure they are working properly.
3. Provide a weekly report to MRC Energy Co.'s well-site representative documenting:
 - Calibrations performed on H₂S detectors.
 - Proper location and working order of H₂S safety equipment.
 - Attendance of all personnel, trained or retrained, and their company.
 - Weekly drills, if held and a list of personnel participating and summary of actions.

OUT OF SCOPE PERSONNEL

MRC Energy Co. policy will not require Out of Scope Personnel to be clean shaven, have processed medical questionnaires, fit testing, or have certified H2S Training.

SAFETY EQUIPMENT

All respirators will be designed, selected, used and maintained in conformance with ANSI Z88.2, American National Standard for respiratory protection.

Personal protective equipment must be provided and used. Those who are expected to use respiratory equipment in case of an emergency will be carefully instructed in the proper use and told why the equipment is being used. Careful attention will be given to the minute details in order to avoid possible misuse of the equipment during periods of extreme stress.

Self-contained breathing apparatus provides complete respiratory and eye protection in any concentration of toxic gases and under any condition of oxygen deficiency. The wearer is independent of the surrounding atmosphere because he/she is breathing with a system admitting no outside air. It consists of a full face mask, breathing tube, pressure demand regulator, air supply cylinder, and harness. Pure breathing air from the supply cylinder flows to the mask automatically through the pressure demand regulator which reduces the pressure to a breathing level. Upon inhalation, air flows into the mask at a rate precisely regulated to the user's demand. Upon exhalation, the flow to the mask stops and the exhaled breath passes through a valve in the face piece to the surrounding atmosphere. The apparatus includes an alarm & gauge which warns the wearer to leave the contaminated area for a new cylinder of air or cylinder refill.

The derrickman is provided with a full face piece unit attached to a 5-minute escape cylinder. He will also have his own self-contained 30-minute unit breathing apparatus located on the drilling floor. He will use the 5-minute unit to exit the derrick to the floor, donning the 30-minute unit located on the floor, if needed.

All respiratory protective equipment, when not in use, should be stored in a clean, cool, dry place, and out of direct sunlight to retard the deterioration of rubber parts. After each use, the mask assembly will be scrubbed with soap and water, rinsed thoroughly, and dried. Air cylinders can be recharged to a full condition from a cascade system.

Personnel in each crew will be trained in the proper techniques of bottle filling.

The primary piece of equipment to be utilized, should anyone be overcome by hydrogen sulfide, is the oxygen resuscitator, if on location.

When asphyxiation occurs, the victim must be moved to fresh air and immediately given artificial respiration. In order to assure readiness, the bottles of oxygen will be checked at regular intervals and an extra tank kept on hand.

Hand-operated pump-type detectors incorporating detector tubes will give more accurate readings of hydrogen sulfide. The pump-type draws air to be tested through the detector tube containing lead acetate-silica gel granules. Presence of hydrogen sulfide in the air sample is shown by the development of a dark brown stain on the granules, which is the

scale reading of the concentration of hydrogen sulfide. By changing the type of detector tube used, this detector may also be used for sulfur dioxide (SO₂) detection when hydrogen sulfide (H₂S) is being burned in the flare area.

Provisions must be made for the storage of all safety equipment as is evident from the foregoing discussion. All equipment must be stored in an available location so that anyone engaged in normal work situations is no more than "one breath away" from a mask.

V – TOXICITY OF VARIOUS GASES

Lethal Common Name ppm⁴	Chemical Formula	Specific Gravity¹	PEL (OSHA)²	STEL³
Hydrogen Cyanide 300	HCN	0.94	10	150
Hydrogen Sulfide 600	H ₂ S	1.18	20	Peak- 50ppm
Note: The ACGIH(7) recommends a TWA(6) value of 10ppm as the TLV(5) for H ₂ S and an STEL of 15ppm.				
Sulfur Dioxide 1000	SO ₂	2.21	2	5 ppm
Chlorine	CL ₂	2.45	1	
Carbon Monoxide 1000	CO	0.97	35	200/1 Hour
Carbon Dioxide 10%	CO ₂	1.52	5000	5%
Methane	CH ₄	0.55	90000	

¹ Air = 1.0

² **Permissible** - Concentration at which is believed that all workers may repeatedly be exposed, day after day, without adverse effect.

³ **STEL** - Short Term Exposure Limit. A 15-minute time weighted average.

⁴ **Lethal** - Concentration that will cause death with short-term exposure.

TLV – Threshold Limit Value; a concentration recommended by the American Conference of Governmental Industrial Hygienists (ACGIH)

TWA – Time Weighted Average; the average concentration of contaminant one can be exposed to over a given eight-hour period.

ACGIH – (American Conference of Governmental Industrial Hygienists) is an organization comprised of Occupational Health Professionals believed by many to be the top experts in the field of Industrial Hygiene. They are recognized as an expert resource by OSHA. The ACGIH releases a bi-annual publication "Threshold Limit Values and Biological Indices" that many safety professionals consider to be the authoritative document on airborne contaminants.

Reference: API RP-49, September 1974 - Reissued August 1978

VI. PROPERTIES OF GASES**A. CARBON DIOXIDE**

1. Carbon Dioxide (CO₂) is usually considered inert and is commonly used to extinguish fires. It is 1.52 times heavier than air and will concentrate in low areas of still air. Humans cannot breathe air containing more than 10% CO₂ without losing conscience or becoming disorientation in a few minutes. Continued exposure to CO₂ after being affected will cause convulsions, coma, and respiratory failure.

2. The threshold limit of CO₂ is 5000 ppm. Short-term exposure to 50,000 ppm (5%) is reasonable. This gas is colorless, odorless, and can be tolerated in relatively high concentrations.

B. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H₂S) is a colorless, transparent, flammable gas. It is heavier than air and, hence, may accumulate in low places.

2. Although the slightest presence of H₂S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of H₂S.

CONCENTRATION			EFFECTS
% H ₂ S	PPM	GR/100 SCF ¹	
0.001	10	.65	Safe for 8 hours without respirator. Obvious and unpleasant odor.
0.0015	15	0.975	Safe for 15 minutes of exposure without respirator.
0.01	100	6.48	Kills smell in 3-15 minutes; may sting eyes and throat.
0.02	200	12.96	Kills smell quickly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; need prompt artificial respiration.
0.07	700	45.92	Rapid Unconsciousness; death will result if not rescued promptly.
0.1	1000	64.80	Instant unconsciousness, followed by death within minutes.

¹ Grains per 100 Cubic Feet

VII. Treatment Procedures for Hydrogen Sulfide Poisoning

- A. Remove the victim to fresh air.
- B. If breathing has ceased or is labored, begin resuscitation immediately.
 Note: This is the quickest and preferred method of clearing victim's lungs of contaminated air; however, under disaster conditions, it may not be practical to move the victim to fresh air. In such instances, where those rendering first aid must continue to wear masks, a resuscitator should be used.
- C. Apply resuscitator to help purge H_2S from the blood stream.
- D. Keep the victim at rest and prevent chilling.
- E. Get victim under physician's care as soon as possible.

C. SULPHUR DIOXIDE

1. Sulfur Dioxide (SO_2) is a colorless, non-flammable, transparent gas.
2. SO_2 is produced during the burning of H_2S . Although SO_2 is heavier than air, it can be picked up by a breeze and carried downwind at elevated temperatures. Since SO_2 is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect. The following table indicates the toxic nature of SO_2 :

CONCENTRATION		EFFECTS
% SO_2	PPM	
0.0005	3 to 5	Pungent odor, normally a person can detect SO_2 in this range.
0.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of eyes.
0.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, event with the first breath.

VIII. BREATHING AIR EQUIPMENT DRILLS FOR ON & OFF DUTY PERSONNEL

An H₂S Drill and Training Session must be given once a week to ALL on-duty personnel with off duty personnel. On-duty and Off-duty personnel will reverse roles on alternate drills.

An H₂S drill and training session must be given once a week to all off-duty personnel in coincidence with on-duty personnel reversing roles on alternate drills.

The purpose of this drill is to instruct the crews in the operation and use of breathing air and H₂S related emergency equipment and to allow the personnel to become acquainted with using the equipment under working conditions. The crews should be trained to put on the breathing air equipment within one minute when required or requested to do so.

The following procedure should be used for weekly drills. The MRC supervisor must be satisfied that the crews are proficient with the equipment.

1. All personnel should be informed that a drill will be held.
2. The Total H₂S Safety Technician or a designee assigned by the MRC Drilling Foreman should initiate the drill by signaling as he/she would if H₂S was detected.
3. Personnel should don their breathing apparatus.
4. Once the breathing air equipment is on, the H₂S Technician should check all personnel to insure proper operation.

A training and information session will be conducted after each drill to answer any H₂S related questions and to cover any gaps identified from one of the following topics:

- Condition II, and III alerts and steps to be taken by all personnel.
- The importance of wind direction when dealing with H₂S.
- Proper use and storage of all types of breathing equipment.
- Proper use and storage of oxygen resuscitators.
- Proper use and storage of H₂S detectors (Mini Checks or equivalent).
- The "buddy system" and the procedure for rescuing a person overcome by H₂S.
- Responsibilities and duties.
- Location of H₂S safety equipment.
- Other parts of the "H₂S Contingency Plan" that should be reviewed.

NOTE: A record of attendance must be kept for weekly drills and training sessions.

IX. HYDROGEN SULFIDE TRAINING CURRICULUM

(FOR EMPLOYERS, VISITORS, AND CONTRACTORS)

EACH PERSON WILL BE INFORMED ON THE RESTRICTIONS OF HAVING BEARDS AND CONTACT LENS. THEY WILL ALSO BE INFORMED OF THE AVAILABILITY OF SPECTACLE KITS.

AFTER THE H2S EQUIPMENT IS RIGGED UP, ALL IN SCOPE PERSONNEL WILL BE H2S TRAINED AND PUT THROUGH A DRILL. ANY DEFICIENCIES WILL BE CORRECTED.

Training Completion cards are good for one year and will indicate date of completion or expiration. Personnel previously trained on another facility and visiting, must attend a "supplemental briefing" on H2S equipment and procedures before beginning duty. Visitors who remain on the location more than 24 hours must receive full H2S training given all crew members. A "supplemental briefing" will include but not be limited to: Location of respirators, familiarization with safe briefing areas, alarms with instruction on responsibilities in the event of a release and hazards of H2S and (SO2, if applicable). A training and drill log will be kept.

Topics for full H2S training shall include the following equipment if on location, but not be limited to the following:

1. **Brief Introduction on H2S**
 - A. Slide or Computer presentation (If Available)
 - B. H2S material will be distributed
 - C. Re-emphasize the properties, toxicity, and hazards of H2S
 - D. Source of SO2 (if applicable)
2. **H2S Detection**
 - A. Description of H2S sensors
 - B. Description of warning system (how it works & it's location)
 - C. Actual location of H2S sensors
 - D. Instruction on use of pump type detector (Gastec)
 - E. Use of card detectors, ampoules, or dosimeters
 - F. Use of combustible gas detector
 - G. Other personnel detectors used
 - H. Alarm conditions I & II,
 - I. SO2 alarms (if applicable)

3. **H2S Protection**

- A. Types of breathing apparatus provided (30-minute SCBA & 5-minute SCBA (with voice diaphragms for communication if supplied)
- B. Principle of how breathing apparatus works
- C. Demonstration on how to use breathing apparatus
- D. Location of breathing apparatus

4. **Cascade System**

- A. Description of cascade system
- B. How system works
- C. Cascade location of rig with reference to briefing areas
- D. How to use cascade system (with 5-minute hose work line units & refill, if supplied)
- E. Importance of wind direction and actual location of Windssocks
- F. Purpose of compressor/function (if one is on site)

5. **H2S Rescue and First Aid**

- A. Importance of wind direction
- B. Safe briefing area
- C. Buddy system
- D. H2S symptoms
- E. Methods of rescue

6. **Hands on Training**

- A. Donning/familiarization of SCBA 30-minute unit
- B. Donning/familiarization of SKADA 5- MIN. Packs
- C. Familiarization of cascades
- D. Use of O2 resuscitator
- E. Alarm conditions - upwind briefing areas, etc...
- F. Duties and responsibilities of all personnel
- G. Procedures for evacuation
- H. Search and Rescue teams

7. **Certification**

- A. Testing on material covered

TOTAL SAFETY US INC., FIT TEST

X. EMPLOYEE INFORMATION

Employee Name: _____ Date: _____

Date of Employee Medical Evaluation: _____

Medical Status (circle): Unrestricted Limitations on Use Use Not
Authorized

RESPIRATOR INFORMATION

Respirator Type (Dustmask, SCBA, etc): _____

Brand: _____

Size: (circle): XS S M L XL

FIT TEST INFORMATION

Type of Fit Test Performed:

Quantitative

Porta Count
Fittestest 3000

Fit Factor: _____
Fit Factor: _____

Qualitative

Irritant Smoke
Isoamyl Acetate (Banana Oil)
Saccharin
Bitrex

Passed / Failed
Passed / Failed
Passed / Failed
Passed / Failed

I hereby certify that this fittestest was conducted in accordance with the OSHA Fit Testing
Protocols found in Appendix A of 1910.134.

Fit Tester Name (Print): _____

Signature: _____ Date: _____

XI. H₂S SAFETY SERVICES

HYDROGEN SULFIDE SAFETY PACKAGE – Contained on location in Total Safety H₂S Equipment Trailer, unless otherwise noted:

RESPIRATORY SAFETY SYSTEMS

QTY DESCRIPTION

- 12 30-Minute Pressure Demand SCBA
(4-Primary Safe Briefing Area, 4-Secondary Safe Briefing Area, 4-floor with one of these for derrick man)
- 9 Hose Line 5-minute Work Unit w/Escapes Cylinder (1 in derrick, 6 on drill floor, 1 in mud pit wt area, 1 in shaker area)

The following shall be part of the package if requested by the MRC Foremen (at least one trailer with cascade system is required to be located in the MRC Magnolia asset for use as needed)

- 1 Breathing air cascade of 10 bottles w/regulator
- 2 Refill lines to refill 30-minute units on location
- 1 6-Man manifold that can be rigged up to work area on floor, if needed
- 6 25 foot hose lines
- 2 50 foot hose lines
- 100 Feet of hose line to rig cascade up to 12 man manifold on floor
- 12 30-minute Self Contained Breathing apparatus

DETECTION AND ALARM SAFETY SYSTEM

- 1 H₂S Fixed Monitor w/8Channels (Loc determined at rig up) suggested.
(Mud pit area, shaker area, bell nipple area, floor/driller area, & outside quarters)
- 5 H₂S Sensors
- 3 Explosion Proof Alarms (Light and Siren)
(1 on floor, 1 in work area, 1 in trailer area where quarters are located)
- 2 Personal H₂S monitors
- 1 Portable Tri-Gas Hand Held Meter (O₂, LEL, H₂S)
- 1 Sensidyne/Gastech Manual Pump Type Detector
- 8 Boxes H₂S Tubes Various Ranges
- 2 Boxes SO₂ Tubes Various Ranges
- 1 Calibration Gas
- 1 Set Paper Work for Records: Training, Cal, Inspection, other

ADDITIONAL SAFETY RELATED EQUIPMENT

QTY DESCRIPTION

- 2 Windsocks with Pole and Bracket
- 1 Set Well Condition Sign w/Green, Yellow, Red Flags
- 1 Primary Safe Briefing Area Sign
- 1 Secondary Safe Briefing Area Sign
- 6 Operating Condition Signs for Work Areas & Living Quarters

**TRAILER WITH BREATHING AIR CASCADE WILL
ALSO INCLUDE THE FOLLOWING:**

This equipment will be part of the H2S equipment stored in the trailer, when on location

- 1 First aid kit
- 1 Fire Blanket
- 1 Eye wash station
- 2 Safety Harness w/150' safety line

XII. EMERGENCY PHONE NUMBERS (Updated March 18, 2009)**EMERGENCY PHONE NUMBERS**

MRC Energy Co. Emergency Phone #

MRC Energy Co. Permian Operations Phone-----

MRC Energy Co. Production

113 Daw Rd

Mansfield LA 71052

Title	Names	Phone	Cell
Operations Manager			
Operation Supt.			
Operations Supervisor			
Operations Supervisor			
Office Supervisor			
HSE			
Scheduler Planner			

Hydrogen Sulfide Safety Consultants

Total Safety W. Bender Blvd. Hobbs, NM	575-392-2973	After Hours 24 Hour Call Center Through Office Number
Tommy Throckmorton Operations Manager	575-392-2973	940-268-9614
Rodney Jourdan Sales Contact	575-392-2973	432-349-3928

**MRC Energy Co. MEDICAL RESPONSE PLAN AND IT'S MEDICAL
PROTOCOLS WILL BE FOLLOWED**

MEDICAL COORDINATOR # -----

Emergency Numbers & Directions

Hospitals (911)

Artesia General Hospital 702 N. 13th St. Artesia, NM 88210	Main Phone Number	575-748-3333
Nor-Lea General Hospital 1600 N. Main Ave. Lovington, NM 88260	Main Phone Number	575-396-6611
Lea Regional Medical Center 5419 N. Lovington Hwy Hobbs, NM 88240	Main Phone Number	575-492-5260
Carlsbad General Hospital 2430 W. Pierce St. Carlsbad, NM	Main Phone Number	575-887-4100
Lovelace Regional Hospital 117 E. 19th St Roswell, NM 88201	Main Phone Number	575-627-7000
Winkler Co. Memorial Hospital 821 Jeffee Dr. Kermit, Texas 79745	Main Phone Number	432-586-8299
Reeves County Hospital 2323 Texas St. Pecos, Texas 79772	Main Phone Number	432-447-3551

State Police (911)

Texas DPS Loving co. 225 N.Pecos Mentone, Texas 79754	Office Number	432-377-2411
Texas DPS Winkler Co. 100 E Winkler Kermit, Texas 79745	Office Number	432-586-3465
Texas DPS Pecos Co. 148 N I-20 Frontage RD Pecos, Texas 79772	Office Number	432-447-3532
New Mexico State Police 3300 W. Main St Artesia, NM	Office Number	575-748-9718
New Mexico State Police 304 N. Canyon St Carlsbad, NM 88220	Office Number	575-885-3137
New Mexico State Police 5100 Jack Gomez Blvd. Hobbs, NM 88240	Office Number	575-392-5588

Local Law Enforcement (911) (Sheriff)

Reeves Co. Sheriff 500 N. Oak ST Pecos, Texas 79722	Office Number	432-445-4901
Winkler Co. Sheriff 1300 Bellaire St. Kermit, Texas 79745	Office Number	432-586-3461
Loving Co. Sheriff Courthouse Mentone, Texas	Office Number	432-377-2411
Lea Co. Sheriff 1417 S. Commercial St. Lovington, NM 88260	Office Number	
Eddy Co. Sheriff 305 N 7th St. Artesia, NM 88210	Office Number	575-766-9888
Eddy Co. Sheriff 305 N 7th St. Carlsbad, NM 88220	Office Number	575-746-9888

Federal & State Agencies

OSHA Lubbock Area Office 1205 Texas Av. Room 806 Lubbock, Texas 79401	Main Number	806-472-7681 EXT 7685
New Mexico Environment Department 400 N Pennsylvania Roswell, NM 88201	Joe Fresquez	575-623-3935
Texas Railroad Commission Midland, Texas	Main Number	844-773-0305
BLM Carlsbad, NM Field Office 620 E. Green ST Carlsbad, NM 88220	Main Number	575-234-5972
BLM Hobbs Field Station 414 W. Taylor Rd. Hobbs, NM 88240	Main Number	575-393-3612
BLM Roswell District Office 2909 W. Second St. Roswell, NM 88201	Main Number	575-627-0272
TECQ Texas Commission on Environmental Quality	Main Number	800-832-8224
New Mexico OCD		
U.S. Environmental Protection Agency Region 6 Texas/New Mexico	Main Number	214-655-2222
National Response Center Toxic Chemicals & Oil Spills	Main Number	800-424-8802

Rig Company

XIII. EVACUATION OF THE GENERAL PUBLIC

The procedure to be used in alerting nearby persons in the event of any occurrence that could pose a threat to life or property will be arranged and completed with public officials in detail, prior to drilling into the hydrogen sulfide formations.

In the event of an actual emergency, the following steps will be immediately taken:

1. The MRC Energy Co.'s representative will dispatch sufficient personnel to immediately warn each resident and transients down-wind within radius of exposure from the well site. Then warn all residence in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants.
2. The MRC Energy Co.'s representative will immediately notify proper authorities, including the Sheriff's Office, Highway Patrol, and any other public officials as described above and will enlist their assistance in warning residents and transients in the calculated radius of exposure.
3. The MRC Energy Co.'s representative will dispatch sufficient personnel to divert traffic in the vicinity away from the potentially dangerous area. A guard to the entrance of the well site will be posted to monitor essential and non essential traffic.
4. General:
 - A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.
 - B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. MRC Energy Co. will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.
 - C. MRC Energy Co. will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel

will cooperate with and provide such information to civil authorities as they might require.

- D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S . A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

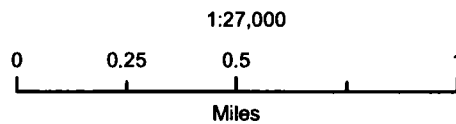
**Exhibit E-6: H2S Contingency Plan Emergency Contacts
Matador Resources Company**

Company Office			
Matador Resources 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
Blake Hermes	Drilling Engineer	972-371-5485	713-876-8558
	Construction Superintendent		
	Construction Superintendent		
Artesia			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
Carlsbad			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-887-6544	
New Mexico Oil Conservation Division		575-887-6544	
Santa Fe			
New Mexico Emergency Response Comission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Comission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
National			
National Emegency 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 S.E., D3; Albuquerque, NM		505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop S.E.; 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
Haliburton		575-746-2757	
B.J. Services		575-746-3569	

Matador Production Company

Rodney Robinson Slot 2
H₂S Contingency Plan:
2 Mile Radius Map

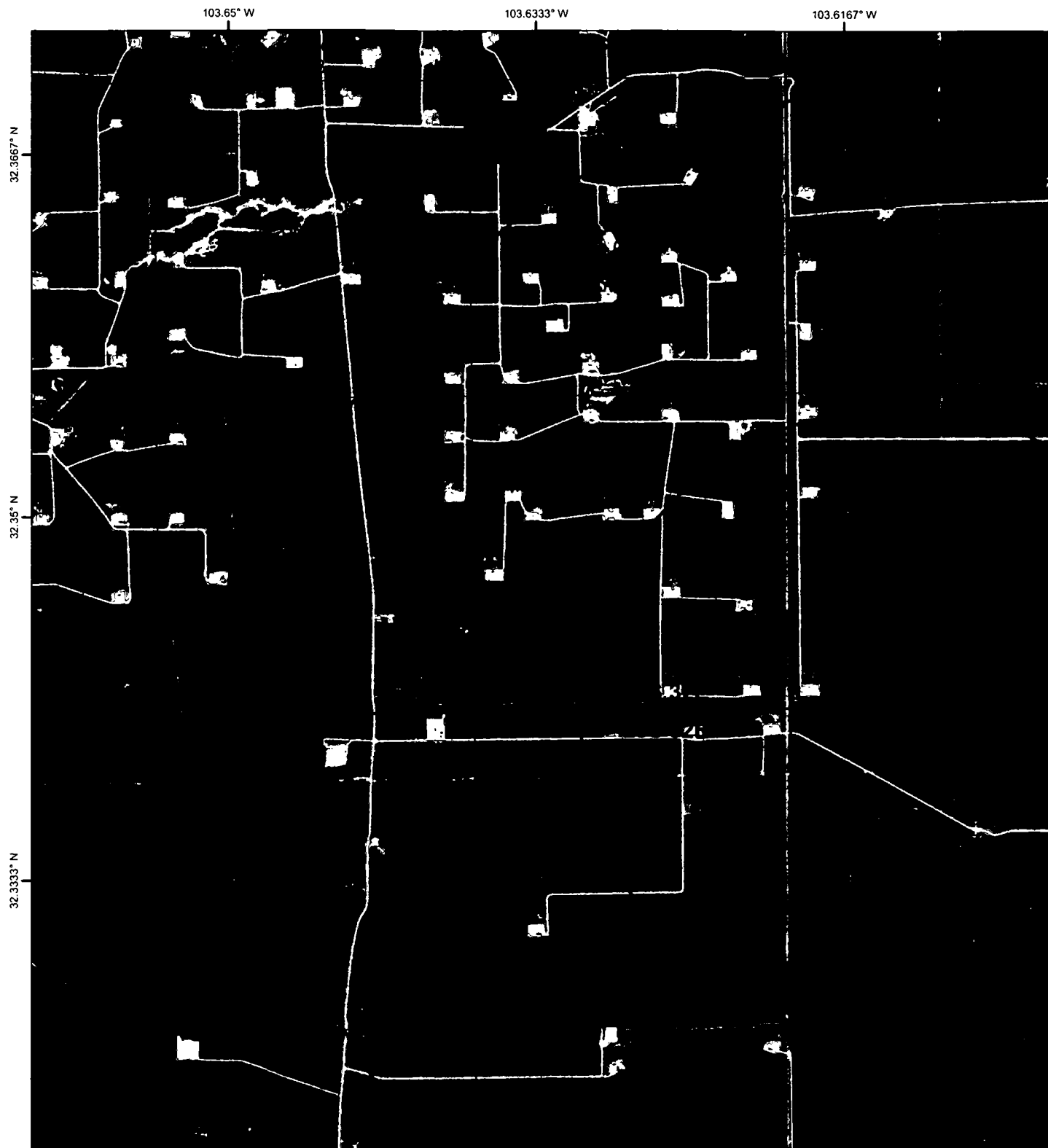
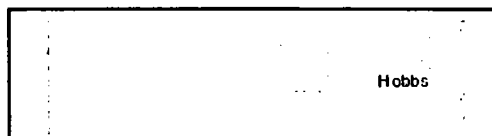
Section 6, Township 23S, Range 33E
Lea County, New Mexico



NAD 1983 New Mexico State Plane East
FIPS 3001 Feet



Prepared by Permits West, Inc., March 22, 2019
for Matador Production Company



Rig Diagram

Rig Diagram
Rodney Robinson Federal
Slots 1 & 2 Well Pad
Matador Resources Company
6-23S-33E
Lea County, NM

Wind Direction
Indicator

H2S Monitors

Briefing Areas

Condition Warning Sign

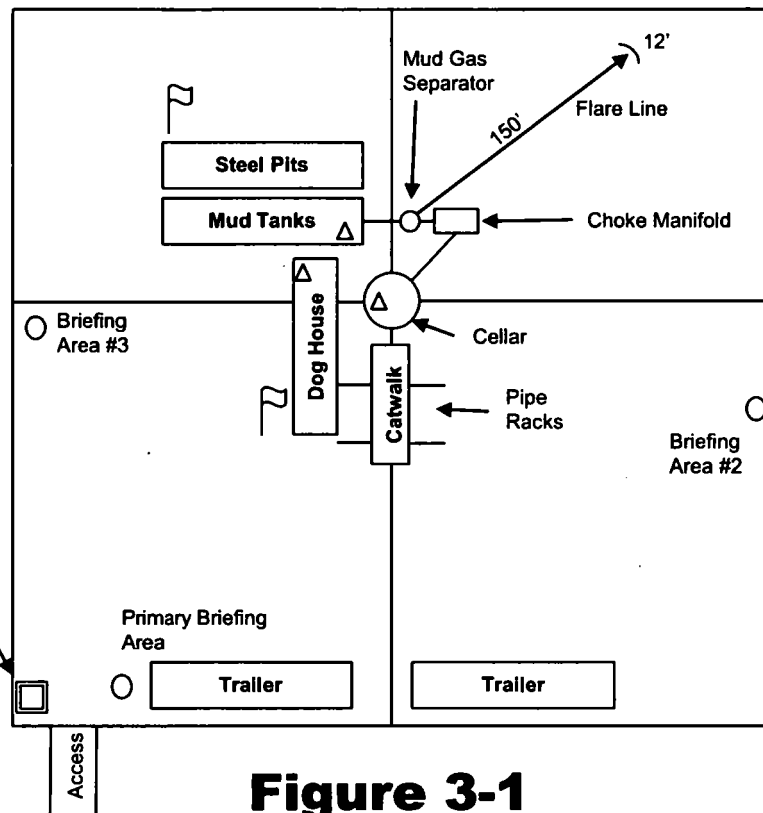


Figure 3-1

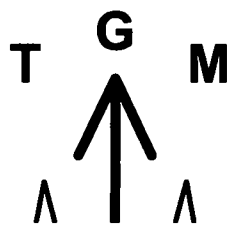




Company: Matador Resources
Well: Rodney Robinson Federal 122H
County: Lea County, New Mexico (NAD 27)
Rig: Patterson 282
Wellbore: Wellbore #1
Design: Design #1
Created By: BSW
Date: 16:35, March 05 2019

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

To convert a Magnetic Direction to a Grid Direction, Add 6.476°
To convert a Magnetic Direction to a True Direction, Add 6.861° E
To convert a True Direction to a Grid Direction, Subtract 0.385°



Azimuths to Grid
True North: -
Magnetic North:



Matador Resources

**Lea County, New Mexico (NAD 27)
Rodney Robinson Federal (East)
Rodney Robinson Federal 122H**

Wellbore #1

Plan: Design #1

Standard Planning Report

05 March, 2019





MS Directional
Planning Report



Database: EDM 5000.14 Conroe DB
Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Site: Rodney Robinson Federal (East)
Well: Rodney Robinson Federal 122H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, New Mexico (NAD 27)		
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 Rodney Robinson Federal (East)

Site Position:		Northing:	488,259.00 usft	Latitude:	32° 20' 25.024 N
From:	Map	Easting:	722,398.00 usft	Longitude:	103° 36' 47.679 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well Rodney Robinson Federal 122H

Well Position	+N/-S	0.00 usft	Northing:	488,259.00 usft	Latitude:	32° 20' 25.020 N
	+E/-W	0.00 usft	Easting:	722,458.00 usft	Longitude:	103° 36' 46.980 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,732.00 usft
Grid Convergence:		0.385 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2018	2/27/2019	6.861	60.092	47,868.35

Design Design #1

Audit Notes:

Version:	Phase:	PLAN	Tie On Depth:	0.00
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Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.62

Plan Survey Tool Program	Date	3/5/2019
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Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,972.02	Design #1 (Wellbore #1)	MWD OWSG MWD - Standard



MS Directional
Planning Report



Database: EDM 5000.14 Conroe DB
Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Site: Rodney Robinson Federal (East)
Well: Rodney Robinson Federal 122H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,399.70	6.00	1.50	1,398.60	31.34	0.82	1.00	1.00	0.00	1.505	
2,722.26	6.00	1.50	2,713.93	169.47	4.45	0.00	0.00	0.00	0.000	
3,122.06	0.00	0.00	3,113.00	190.37	5.00	1.50	-1.50	0.00	180.000	VP - Rodney Robin
10,187.06	0.00	0.00	10,178.00	190.37	5.00	0.00	0.00	0.00	0.000	
11,082.06	89.50	187.20	10,750.94	-373.11	-66.18	10.00	10.00	0.00	187.200	
11,461.17	89.50	179.62	10,754.26	-751.25	-88.71	2.00	0.00	-2.00	-90.047	
20,972.39	89.50	179.62	10,837.55	-10,261.90	-25.24	0.00	0.00	0.00	0.000	PBHL - Rodney Rol



MS Directional Planning Report



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MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.00°/100' Build									
900.00	1.00	1.50	899.99	0.87	0.02	-0.87	1.00	1.00	0.00
1,000.00	2.00	1.50	999.96	3.49	0.09	-3.49	1.00	1.00	0.00
1,100.00	3.00	1.50	1,099.86	7.85	0.21	-7.85	1.00	1.00	0.00
1,200.00	4.00	1.50	1,199.68	13.95	0.37	-13.95	1.00	1.00	0.00
1,300.00	5.00	1.50	1,299.37	21.80	0.57	-21.79	1.00	1.00	0.00
1,399.70	6.00	1.50	1,398.60	31.34	0.82	-31.34	1.00	1.00	0.00
Begin 6.00° Tangent									
1,500.00	6.00	1.50	1,498.36	41.82	1.10	-41.81	0.00	0.00	0.00
1,600.00	6.00	1.50	1,597.81	52.26	1.37	-52.25	0.00	0.00	0.00
1,700.00	6.00	1.50	1,697.26	62.71	1.65	-62.70	0.00	0.00	0.00
1,800.00	6.00	1.50	1,796.71	73.15	1.92	-73.14	0.00	0.00	0.00
1,900.00	6.00	1.50	1,896.17	83.60	2.20	-83.58	0.00	0.00	0.00
2,000.00	6.00	1.50	1,995.62	94.04	2.47	-94.02	0.00	0.00	0.00
2,100.00	6.00	1.50	2,095.07	104.48	2.74	-104.46	0.00	0.00	0.00
2,200.00	6.00	1.50	2,194.53	114.93	3.02	-114.91	0.00	0.00	0.00
2,300.00	6.00	1.50	2,293.98	125.37	3.29	-125.35	0.00	0.00	0.00
2,400.00	6.00	1.50	2,393.43	135.82	3.57	-135.79	0.00	0.00	0.00
2,500.00	6.00	1.50	2,492.88	146.26	3.84	-146.23	0.00	0.00	0.00
2,600.00	6.00	1.50	2,592.34	156.70	4.12	-156.67	0.00	0.00	0.00
2,700.00	6.00	1.50	2,691.79	167.15	4.39	-167.12	0.00	0.00	0.00
2,722.26	6.00	1.50	2,713.93	169.47	4.45	-169.44	0.00	0.00	0.00
Begin 1.50°/100' Drop									
2,800.00	4.83	1.50	2,791.32	176.81	4.64	-176.77	1.50	-1.50	0.00
2,900.00	3.33	1.50	2,891.06	183.92	4.83	-183.88	1.50	-1.50	0.00
3,000.00	1.83	1.50	2,990.96	188.42	4.95	-188.38	1.50	-1.50	0.00
3,100.00	0.33	1.50	3,090.94	190.31	5.00	-190.27	1.50	-1.50	0.00
3,122.06	0.00	0.00	3,113.00	190.37	5.00	-190.33	1.50	-1.50	0.00
Begin Vertical Hold									
3,200.00	0.00	0.00	3,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,300.00	0.00	0.00	3,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,400.00	0.00	0.00	3,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,500.00	0.00	0.00	3,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,600.00	0.00	0.00	3,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,700.00	0.00	0.00	3,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,800.00	0.00	0.00	3,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
3,900.00	0.00	0.00	3,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,000.00	0.00	0.00	3,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,100.00	0.00	0.00	4,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,200.00	0.00	0.00	4,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,300.00	0.00	0.00	4,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,400.00	0.00	0.00	4,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,500.00	0.00	0.00	4,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,600.00	0.00	0.00	4,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,700.00	0.00	0.00	4,690.94	190.37	5.00	-190.33	0.00	0.00	0.00



MS Directional
Planning Report



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	0.00	0.00	4,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
4,900.00	0.00	0.00	4,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,000.00	0.00	0.00	4,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,100.00	0.00	0.00	5,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,200.00	0.00	0.00	5,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,300.00	0.00	0.00	5,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,400.00	0.00	0.00	5,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,500.00	0.00	0.00	5,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,600.00	0.00	0.00	5,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,700.00	0.00	0.00	5,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,800.00	0.00	0.00	5,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
5,900.00	0.00	0.00	5,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,000.00	0.00	0.00	5,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,100.00	0.00	0.00	6,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,200.00	0.00	0.00	6,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,300.00	0.00	0.00	6,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,400.00	0.00	0.00	6,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,500.00	0.00	0.00	6,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,600.00	0.00	0.00	6,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,700.00	0.00	0.00	6,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,800.00	0.00	0.00	6,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
6,900.00	0.00	0.00	6,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,000.00	0.00	0.00	6,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,100.00	0.00	0.00	7,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,200.00	0.00	0.00	7,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,300.00	0.00	0.00	7,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,400.00	0.00	0.00	7,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,500.00	0.00	0.00	7,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,600.00	0.00	0.00	7,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,700.00	0.00	0.00	7,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,800.00	0.00	0.00	7,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
7,900.00	0.00	0.00	7,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,000.00	0.00	0.00	7,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,100.00	0.00	0.00	8,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,200.00	0.00	0.00	8,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,300.00	0.00	0.00	8,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,400.00	0.00	0.00	8,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,500.00	0.00	0.00	8,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,600.00	0.00	0.00	8,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,700.00	0.00	0.00	8,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,800.00	0.00	0.00	8,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
8,900.00	0.00	0.00	8,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,000.00	0.00	0.00	8,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,100.00	0.00	0.00	9,090.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,200.00	0.00	0.00	9,190.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,300.00	0.00	0.00	9,290.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,400.00	0.00	0.00	9,390.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,500.00	0.00	0.00	9,490.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,600.00	0.00	0.00	9,590.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,700.00	0.00	0.00	9,690.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,800.00	0.00	0.00	9,790.94	190.37	5.00	-190.33	0.00	0.00	0.00
9,900.00	0.00	0.00	9,890.94	190.37	5.00	-190.33	0.00	0.00	0.00
10,000.00	0.00	0.00	9,990.94	190.37	5.00	-190.33	0.00	0.00	0.00
10,100.00	0.00	0.00	10,090.94	190.37	5.00	-190.33	0.00	0.00	0.00



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,187.06	0.00	0.00	10,178.00	190.37	5.00	-190.33	0.00	0.00	0.00
Begin 10.00°/100' Build									
10,200.00	1.29	187.20	10,190.94	190.23	4.98	-190.19	10.00	10.00	0.00
10,250.00	6.29	187.20	10,240.81	186.94	4.57	-186.91	10.00	10.00	0.00
10,300.00	11.29	187.20	10,290.21	179.36	3.61	-179.33	10.00	10.00	0.00
10,350.00	16.29	187.20	10,338.75	167.54	2.12	-167.52	10.00	10.00	0.00
10,400.00	21.29	187.20	10,386.07	151.56	0.10	-151.56	10.00	10.00	0.00
10,450.00	26.29	187.20	10,431.81	131.56	-2.43	-131.57	10.00	10.00	0.00
10,500.00	31.29	187.20	10,475.61	107.67	-5.45	-107.70	10.00	10.00	0.00
10,550.00	36.29	187.20	10,517.15	80.09	-8.93	-80.15	10.00	10.00	0.00
10,600.00	41.29	187.20	10,556.11	49.02	-12.86	-49.10	10.00	10.00	0.00
10,650.00	46.29	187.20	10,592.19	14.70	-17.19	-14.81	10.00	10.00	0.00
10,700.00	51.29	187.20	10,625.12	-22.61	-21.91	22.46	10.00	10.00	0.00
10,750.00	56.29	187.20	10,654.64	-62.62	-26.96	62.44	10.00	10.00	0.00
10,800.00	61.29	187.20	10,680.54	-105.04	-32.32	104.82	10.00	10.00	0.00
10,850.00	66.29	187.20	10,702.61	-149.53	-37.94	149.28	10.00	10.00	0.00
10,900.00	71.29	187.20	10,720.69	-195.76	-43.78	195.47	10.00	10.00	0.00
10,950.00	76.29	187.20	10,734.64	-243.38	-49.80	243.05	10.00	10.00	0.00
11,000.00	81.29	187.20	10,744.36	-292.03	-55.94	291.65	10.00	10.00	0.00
11,050.00	86.29	187.20	10,749.76	-341.33	-62.17	340.91	10.00	10.00	0.00
11,082.06	89.50	187.20	10,750.94	-373.11	-66.18	372.66	10.00	10.00	0.00
Begin 89.50° Lateral; Begin 2.00°/100' Turn									
11,100.00	89.50	186.84	10,751.09	-390.91	-68.38	390.45	2.00	0.00	-2.00
11,200.00	89.50	184.84	10,751.97	-490.35	-78.55	489.85	2.00	0.00	-2.00
11,300.00	89.50	182.84	10,752.84	-590.15	-85.25	589.57	2.00	0.00	-2.00
11,400.00	89.50	180.84	10,753.72	-690.09	-88.46	689.49	2.00	0.00	-2.00
11,461.17	89.50	179.62	10,754.26	-751.25	-88.71	750.65	2.00	0.00	-2.00
Hold 179.62° Azm									
11,500.00	89.50	179.62	10,754.60	-790.08	-88.45	789.48	0.00	0.00	0.00
11,600.00	89.50	179.62	10,755.47	-890.08	-87.78	889.48	0.00	0.00	0.00
11,700.00	89.50	179.62	10,756.35	-990.07	-87.11	989.47	0.00	0.00	0.00
11,800.00	89.50	179.62	10,757.22	-1,090.07	-86.45	1,089.47	0.00	0.00	0.00
11,900.00	89.50	179.62	10,758.10	-1,190.06	-85.78	1,189.46	0.00	0.00	0.00
12,000.00	89.50	179.62	10,758.97	-1,290.05	-85.11	1,289.46	0.00	0.00	0.00
12,100.00	89.50	179.62	10,759.85	-1,390.05	-84.45	1,389.46	0.00	0.00	0.00
12,200.00	89.50	179.62	10,760.73	-1,490.04	-83.78	1,489.45	0.00	0.00	0.00
12,300.00	89.50	179.62	10,761.60	-1,590.04	-83.11	1,589.45	0.00	0.00	0.00
12,400.00	89.50	179.62	10,762.48	-1,690.03	-82.44	1,689.45	0.00	0.00	0.00
12,500.00	89.50	179.62	10,763.35	-1,790.02	-81.78	1,789.44	0.00	0.00	0.00
12,600.00	89.50	179.62	10,764.23	-1,890.02	-81.11	1,889.44	0.00	0.00	0.00
12,700.00	89.50	179.62	10,765.10	-1,990.01	-80.44	1,989.43	0.00	0.00	0.00
12,800.00	89.50	179.62	10,765.98	-2,090.01	-79.77	2,089.43	0.00	0.00	0.00
12,900.00	89.50	179.62	10,766.86	-2,190.00	-79.11	2,189.43	0.00	0.00	0.00
13,000.00	89.50	179.62	10,767.73	-2,289.99	-78.44	2,289.42	0.00	0.00	0.00
13,100.00	89.50	179.62	10,768.61	-2,389.99	-77.77	2,389.42	0.00	0.00	0.00
13,200.00	89.50	179.62	10,769.48	-2,489.98	-77.10	2,489.41	0.00	0.00	0.00
13,300.00	89.50	179.62	10,770.36	-2,589.97	-76.44	2,589.41	0.00	0.00	0.00
13,400.00	89.50	179.62	10,771.23	-2,689.97	-75.77	2,689.41	0.00	0.00	0.00
13,500.00	89.50	179.62	10,772.11	-2,789.96	-75.10	2,789.40	0.00	0.00	0.00
13,600.00	89.50	179.62	10,772.99	-2,889.96	-74.44	2,889.40	0.00	0.00	0.00
13,700.00	89.50	179.62	10,773.86	-2,989.95	-73.77	2,989.40	0.00	0.00	0.00
13,800.00	89.50	179.62	10,774.74	-3,089.94	-73.10	3,089.39	0.00	0.00	0.00
13,900.00	89.50	179.62	10,775.61	-3,189.94	-72.43	3,189.39	0.00	0.00	0.00



MS Directional Planning Report



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Wellbore: Wellbore #1
Design: Design #1

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TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.00	89.50	179.62	10,776.49	-3,289.93	-71.77	3,289.38	0.00	0.00	0.00
14,100.00	89.50	179.62	10,777.37	-3,389.93	-71.10	3,389.38	0.00	0.00	0.00
14,200.00	89.50	179.62	10,778.24	-3,489.92	-70.43	3,489.38	0.00	0.00	0.00
14,300.00	89.50	179.62	10,779.12	-3,589.91	-69.76	3,589.37	0.00	0.00	0.00
14,400.00	89.50	179.62	10,779.99	-3,689.91	-69.10	3,689.37	0.00	0.00	0.00
14,500.00	89.50	179.62	10,780.87	-3,789.90	-68.43	3,789.36	0.00	0.00	0.00
14,600.00	89.50	179.62	10,781.74	-3,889.90	-67.76	3,889.36	0.00	0.00	0.00
14,700.00	89.50	179.62	10,782.62	-3,989.89	-67.10	3,989.36	0.00	0.00	0.00
14,800.00	89.50	179.62	10,783.50	-4,089.88	-66.43	4,089.35	0.00	0.00	0.00
14,900.00	89.50	179.62	10,784.37	-4,189.88	-65.76	4,189.35	0.00	0.00	0.00
15,000.00	89.50	179.62	10,785.25	-4,289.87	-65.09	4,289.35	0.00	0.00	0.00
15,100.00	89.50	179.62	10,786.12	-4,389.87	-64.43	4,389.34	0.00	0.00	0.00
15,200.00	89.50	179.62	10,787.00	-4,489.86	-63.76	4,489.34	0.00	0.00	0.00
15,300.00	89.50	179.62	10,787.87	-4,589.85	-63.09	4,589.33	0.00	0.00	0.00
15,400.00	89.50	179.62	10,788.75	-4,689.85	-62.42	4,689.33	0.00	0.00	0.00
15,500.00	89.50	179.62	10,789.63	-4,789.84	-61.76	4,789.33	0.00	0.00	0.00
15,600.00	89.50	179.62	10,790.50	-4,889.84	-61.09	4,889.32	0.00	0.00	0.00
15,700.00	89.50	179.62	10,791.38	-4,989.83	-60.42	4,989.32	0.00	0.00	0.00
15,800.00	89.50	179.62	10,792.25	-5,089.82	-59.76	5,089.32	0.00	0.00	0.00
15,900.00	89.50	179.62	10,793.13	-5,189.82	-59.09	5,189.31	0.00	0.00	0.00
16,000.00	89.50	179.62	10,794.00	-5,289.81	-58.42	5,289.31	0.00	0.00	0.00
16,100.00	89.50	179.62	10,794.88	-5,389.81	-57.75	5,389.30	0.00	0.00	0.00
16,200.00	89.50	179.62	10,795.76	-5,489.80	-57.09	5,489.30	0.00	0.00	0.00
16,300.00	89.50	179.62	10,796.63	-5,589.79	-56.42	5,589.30	0.00	0.00	0.00
16,400.00	89.50	179.62	10,797.51	-5,689.79	-55.75	5,689.29	0.00	0.00	0.00
16,500.00	89.50	179.62	10,798.38	-5,789.78	-55.08	5,789.29	0.00	0.00	0.00
16,600.00	89.50	179.62	10,799.26	-5,889.77	-54.42	5,889.28	0.00	0.00	0.00
16,700.00	89.50	179.62	10,800.14	-5,989.77	-53.75	5,989.28	0.00	0.00	0.00
16,800.00	89.50	179.62	10,801.01	-6,089.76	-53.08	6,089.28	0.00	0.00	0.00
16,900.00	89.50	179.62	10,801.89	-6,189.76	-52.41	6,189.27	0.00	0.00	0.00
17,000.00	89.50	179.62	10,802.76	-6,289.75	-51.75	6,289.27	0.00	0.00	0.00
17,100.00	89.50	179.62	10,803.64	-6,389.74	-51.08	6,389.27	0.00	0.00	0.00
17,200.00	89.50	179.62	10,804.51	-6,489.74	-50.41	6,489.26	0.00	0.00	0.00
17,300.00	89.50	179.62	10,805.39	-6,589.73	-49.75	6,589.26	0.00	0.00	0.00
17,400.00	89.50	179.62	10,806.27	-6,689.73	-49.08	6,689.25	0.00	0.00	0.00
17,500.00	89.50	179.62	10,807.14	-6,789.72	-48.41	6,789.25	0.00	0.00	0.00
17,600.00	89.50	179.62	10,808.02	-6,889.71	-47.74	6,889.25	0.00	0.00	0.00
17,700.00	89.50	179.62	10,808.89	-6,989.71	-47.08	6,989.24	0.00	0.00	0.00
17,800.00	89.50	179.62	10,809.77	-7,089.70	-46.41	7,089.24	0.00	0.00	0.00
17,900.00	89.50	179.62	10,810.64	-7,189.70	-45.74	7,189.23	0.00	0.00	0.00
18,000.00	89.50	179.62	10,811.52	-7,289.69	-45.07	7,289.23	0.00	0.00	0.00
18,100.00	89.50	179.62	10,812.40	-7,389.68	-44.41	7,389.23	0.00	0.00	0.00
18,200.00	89.50	179.62	10,813.27	-7,489.68	-43.74	7,489.22	0.00	0.00	0.00
18,300.00	89.50	179.62	10,814.15	-7,589.67	-43.07	7,589.22	0.00	0.00	0.00
18,400.00	89.50	179.62	10,815.02	-7,689.67	-42.41	7,689.22	0.00	0.00	0.00
18,500.00	89.50	179.62	10,815.90	-7,789.66	-41.74	7,789.21	0.00	0.00	0.00
18,600.00	89.50	179.62	10,816.77	-7,889.65	-41.07	7,889.21	0.00	0.00	0.00
18,700.00	89.50	179.62	10,817.65	-7,989.65	-40.40	7,989.20	0.00	0.00	0.00
18,800.00	89.50	179.62	10,818.53	-8,089.64	-39.74	8,089.20	0.00	0.00	0.00
18,900.00	89.50	179.62	10,819.40	-8,189.64	-39.07	8,189.20	0.00	0.00	0.00
19,000.00	89.50	179.62	10,820.28	-8,289.63	-38.40	8,289.19	0.00	0.00	0.00
19,100.00	89.50	179.62	10,821.15	-8,389.62	-37.73	8,389.19	0.00	0.00	0.00
19,200.00	89.50	179.62	10,822.03	-8,489.62	-37.07	8,489.18	0.00	0.00	0.00
19,300.00	89.50	179.62	10,822.90	-8,589.61	-36.40	8,589.18	0.00	0.00	0.00



MS Directional Planning Report



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Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
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MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,400.00	89.50	179.62	10,823.78	-8,689.61	-35.73	8,689.18	0.00	0.00	0.00
19,500.00	89.50	179.62	10,824.66	-8,789.60	-35.07	8,789.17	0.00	0.00	0.00
19,600.00	89.50	179.62	10,825.53	-8,889.59	-34.40	8,889.17	0.00	0.00	0.00
19,700.00	89.50	179.62	10,826.41	-8,989.59	-33.73	8,989.17	0.00	0.00	0.00
19,800.00	89.50	179.62	10,827.28	-9,089.58	-33.06	9,089.16	0.00	0.00	0.00
19,900.00	89.50	179.62	10,828.16	-9,189.57	-32.40	9,189.16	0.00	0.00	0.00
20,000.00	89.50	179.62	10,829.04	-9,289.57	-31.73	9,289.15	0.00	0.00	0.00
20,100.00	89.50	179.62	10,829.91	-9,389.56	-31.06	9,389.15	0.00	0.00	0.00
20,200.00	89.50	179.62	10,830.79	-9,489.56	-30.39	9,489.15	0.00	0.00	0.00
20,300.00	89.50	179.62	10,831.66	-9,589.55	-29.73	9,589.14	0.00	0.00	0.00
20,400.00	89.50	179.62	10,832.54	-9,689.54	-29.06	9,689.14	0.00	0.00	0.00
20,500.00	89.50	179.62	10,833.41	-9,789.54	-28.39	9,789.13	0.00	0.00	0.00
20,600.00	89.50	179.62	10,834.29	-9,889.53	-27.72	9,889.13	0.00	0.00	0.00
20,700.00	89.50	179.62	10,835.17	-9,989.53	-27.06	9,989.13	0.00	0.00	0.00
20,800.00	89.50	179.62	10,836.04	-10,089.52	-26.39	10,089.12	0.00	0.00	0.00
20,900.00	89.50	179.62	10,836.92	-10,189.51	-25.72	10,189.12	0.00	0.00	0.00
20,972.39	89.50	179.62	10,837.55	-10,261.90	-25.24	10,261.51	0.00	0.00	0.00
PBHL									

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
VP - Rodney Robinso - plan hits target center - Point	0.00	0.00	3,113.00	190.37	5.00	488,449.37	722,463.00	32° 20' 26.904 N	103° 36' 46.907 W
PBHL - Rodney Robir - plan hits target center - Point	0.00	0.00	10,837.55	-10,261.90	-25.24	477,997.10	722,432.76	32° 18' 43.476 N	103° 36' 48.078 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
756.50	756.50	Z (Dewey Lake (P))		0.500	179.62
1,271.86	1,271.33	Z (Rustler)		0.500	179.62
1,781.06	1,777.88	Z (Salado)		0.500	179.62
3,451.90	3,442.84	Z (Castile (T))		0.500	179.62
5,017.90	5,008.84	Z (G30:CS14-CSB)		0.500	179.62
5,053.90	5,044.84	Z (G26: Bell Cyn.)		0.500	179.62
5,899.90	5,890.84	Z (G13: Cherry Cyn.)		0.500	179.62
7,231.90	7,222.84	Z (G7: Brushy Cyn.) Antelope Ridge		0.500	179.62
8,816.90	8,807.84	Z (G4: BSG (CS9))		0.500	179.62
9,860.90	9,851.84	Z (L5.3: FBSC)		0.500	179.62
9,975.90	9,966.84	Z (L5.1: FBSC)		0.500	179.62
10,246.03	10,236.87	Z (L4.3: SBSC)		0.500	179.62
10,761.88	10,661.13	Z (L4.1: SBSC)		0.500	179.62



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Planning Report



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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
800.00	800.00	0.00	0.00	KOP, 1.00°/100' Build
1,399.70	1,398.60	31.34	0.82	Begin 6.00° Tangent
2,722.26	2,713.93	169.47	4.45	Begin 1.50°/100' Drop
3,122.06	3,113.00	190.37	5.00	Begin Vertical Hold
10,187.06	10,178.00	190.37	5.00	Begin 10.00°/100' Build
11,082.06	10,750.94	-373.11	-66.18	Begin 89.50° Lateral; Begin 2.00°/100' Turn
11,461.17	10,754.26	-751.25	-88.71	Hold 179.62° Azm
20,972.39	10,837.55	-10,261.90	-25.24	PBHL



Matador Resources

**Lea County, New Mexico (NAD 27)
Rodney Robinson Federal (East)
Rodney Robinson Federal 122H**

**Wellbore #1
Design #1**

Anticollision Report

05 March, 2019





MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Reference	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.00usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program **Date** 3/4/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,972.02	Design #1 (Wellbore #1)	MWD	OWSG MWD - Standard

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Rodney Robinson Federal (East)						
Rodney Robinson Federal 022H - Wellbore #1 - Design #	700.00	700.00	60.00	55.44	13.164	CC
Rodney Robinson Federal 022H - Wellbore #1 - Design #	8,200.00	8,200.00	99.68	41.23	1.705	ES, SF
Rodney Robinson Federal 102H - Wellbore #1 - Design #	836.93	837.18	28.97	23.44	5.243	CC
Rodney Robinson Federal 102H - Wellbore #1 - Design #	900.00	900.22	29.40	23.42	4.921	ES
Rodney Robinson Federal 102H - Wellbore #1 - Design #	1,000.00	1,000.00	32.06	25.37	4.792	SF
Rodney Robinson Federal 112H - Wellbore #1 - Design #	600.00	600.00	91.00	87.16	23.692	CC
Rodney Robinson Federal 112H - Wellbore #1 - Design #	700.00	699.25	91.41	86.85	20.072	ES
Rodney Robinson Federal 112H - Wellbore #1 - Design #	9,604.70	9,608.48	194.35	125.97	2.842	SF
Rodney Robinson Federal 132H - Wellbore #1 - Design #	800.00	800.00	30.00	24.73	5.687	CC
Rodney Robinson Federal 132H - Wellbore #1 - Design #	1,000.00	999.96	30.29	23.59	4.516	ES
Rodney Robinson Federal 132H - Wellbore #1 - Design #	1,200.00	1,199.68	33.42	25.28	4.104	SF
Rodney Robinson Federal 202H - Wellbore #1 - Design #	600.00	599.00	30.00	26.16	7.818	CC
Rodney Robinson Federal 202H - Wellbore #1 - Design #	700.00	698.75	30.40	25.85	6.679	ES
Rodney Robinson Federal 202H - Wellbore #1 - Design #	10,250.00	10,250.20	125.51	52.47	1.719	SF
Rodney Robinson Federal 216H - Wellbore #1 - Design #	600.00	599.00	41.73	37.89	10.873	CC
Rodney Robinson Federal 216H - Wellbore #1 - Design #	700.00	698.81	41.94	37.39	9.219	ES
Rodney Robinson Federal 216H - Wellbore #1 - Design #	10,300.00	10,310.39	385.25	311.98	5.258	SF
Rodney Robinson Federal (West)						
Rodney Robinson Federal 101H - Wellbore #1 - Design #	800.00	806.00	1,100.02	1,094.72	207.691	CC
Rodney Robinson Federal 101H - Wellbore #1 - Design #	1,200.00	1,200.00	1,100.56	1,092.42	135.147	ES
Rodney Robinson Federal 101H - Wellbore #1 - Design #	20,972.39	19,984.75	1,677.15	1,381.01	5.663	SF
Rodney Robinson Federal 111H - Wellbore #1 - Design #	514.54	520.54	1,190.02	1,186.77	366.178	CC
Rodney Robinson Federal 111H - Wellbore #1 - Design #	600.00	600.00	1,190.03	1,186.19	309.819	ES
Rodney Robinson Federal 111H - Wellbore #1 - Design #	20,972.39	20,236.45	1,686.41	1,366.10	5.265	SF
Rodney Robinson Federal 121H - Wellbore #1 - Design #	800.00	806.00	1,100.59	1,095.29	207.799	CC
Rodney Robinson Federal 121H - Wellbore #1 - Design #	1,300.00	1,300.00	1,102.10	1,093.24	124.324	ES
Rodney Robinson Federal 121H - Wellbore #1 - Design #	20,972.39	20,992.92	1,503.45	1,156.10	4.328	SF
Rodney Robinson Federal 131H - Wellbore #1 - Design #	800.00	806.00	1,130.57	1,125.28	213.460	CC
Rodney Robinson Federal 131H - Wellbore #1 - Design #	1,200.00	1,200.00	1,131.48	1,123.34	138.944	ES
Rodney Robinson Federal 131H - Wellbore #1 - Design #	20,972.39	22,022.70	1,830.20	1,529.08	6.078	SF
Rodney Robinson Federal 201H - Wellbore #1 - Design #	514.54	520.54	1,130.02	1,126.77	347.716	CC
Rodney Robinson Federal 201H - Wellbore #1 - Design #	10,618.25	10,587.15	1,173.02	1,097.81	15.597	ES
Rodney Robinson Federal 201H - Wellbore #1 - Design #	20,972.39	22,514.89	1,896.82	1,653.81	7.806	SF
Rodney Robinson Federal 215H - Wellbore #1 - Design #	10,555.60	10,549.32	868.04	793.37	11.626	CC, ES
Rodney Robinson Federal 215H - Wellbore #1 - Design #	20,972.39	22,645.46	1,830.79	1,620.41	8.703	SF

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 022H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-90.000	0.00	-60.00	60.00						
100.00	100.00	100.00	100.00	0.13	0.13	-90.000	0.00	-60.00	60.00	59.74	0.26	234.094			
200.00	200.00	200.00	200.00	0.49	0.49	-90.000	0.00	-60.00	60.00	59.03	0.97	61.649			
300.00	300.00	300.00	300.00	0.85	0.85	-90.000	0.00	-60.00	60.00	58.31	1.69	35.499			
400.00	400.00	400.00	400.00	1.20	1.20	-90.000	0.00	-60.00	60.00	57.59	2.41	24.926			
500.00	500.00	500.00	500.00	1.56	1.56	-90.000	0.00	-60.00	60.00	56.88	3.12	19.206			
600.00	600.00	600.00	600.00	1.92	1.92	-90.000	0.00	-60.00	60.00	56.16	3.84	15.621			
700.00	700.00	700.00	700.00	2.28	2.28	-90.000	0.00	-60.00	60.00	55.44	4.56	13.164	CC		
800.00	800.00	799.80	799.80	2.64	2.64	-89.186	0.86	-60.16	60.16	54.89	5.27	11.408			
900.00	899.99	899.57	899.53	3.00	2.99	-87.596	3.42	-60.62	60.70	54.71	5.99	10.136			
1,000.00	999.96	999.30	999.17	3.36	3.35	-86.093	7.69	-61.40	61.64	54.94	6.70	9.195			
1,100.00	1,099.86	1,099.00	1,098.68	3.71	3.71	-84.704	13.66	-62.49	62.98	55.56	7.42	8.487			
1,200.00	1,199.68	1,198.66	1,198.03	4.07	4.07	-83.447	21.33	-63.90	64.70	56.56	8.14	7.947			
1,300.00	1,299.37	1,298.29	1,297.20	4.44	4.44	-82.335	30.70	-65.61	66.81	57.94	8.87	7.533			
1,399.70	1,398.60	1,397.95	1,396.32	4.80	4.81	-81.992	40.95	-67.48	69.01	59.41	9.60	7.186			
1,400.00	1,398.90	1,398.25	1,396.62	4.80	4.81	-81.994	40.98	-67.48	69.02	59.41	9.61	7.185			
1,500.00	1,498.36	1,498.23	1,496.05	5.17	5.19	-82.362	51.27	-69.36	71.13	60.78	10.35	6.872			
1,600.00	1,597.81	1,598.21	1,595.48	5.55	5.56	-82.710	61.55	-71.24	73.24	62.14	11.10	6.598			
1,700.00	1,697.26	1,698.19	1,694.91	5.92	5.94	-83.038	71.84	-73.12	75.35	63.50	11.85	6.357			
1,800.00	1,796.71	1,798.16	1,794.33	6.30	6.32	-83.348	82.12	-74.99	77.47	64.86	12.61	6.144			
1,900.00	1,896.17	1,898.14	1,893.76	6.68	6.71	-83.642	92.41	-76.87	79.59	66.22	13.37	5.953			
2,000.00	1,995.62	1,998.12	1,993.19	7.06	7.09	-83.920	102.69	-78.75	81.71	67.58	14.13	5.782			
2,100.00	2,095.07	2,098.09	2,092.62	7.44	7.47	-84.185	112.98	-80.63	83.84	68.94	14.90	5.628			
2,200.00	2,194.53	2,198.07	2,192.05	7.83	7.86	-84.436	123.26	-82.50	85.96	70.30	15.66	5.488			
2,300.00	2,293.98	2,298.05	2,291.48	8.21	8.24	-84.675	133.54	-84.38	88.09	71.66	16.43	5.361			
2,400.00	2,393.43	2,398.02	2,390.91	8.59	8.63	-84.903	143.83	-86.26	90.22	73.02	17.20	5.245			
2,500.00	2,492.88	2,498.00	2,490.33	8.98	9.02	-85.120	154.11	-88.14	92.35	74.38	17.97	5.139			
2,600.00	2,592.34	2,597.98	2,589.76	9.36	9.40	-85.328	164.40	-90.01	94.48	75.74	18.74	5.041			
2,700.00	2,691.79	2,698.30	2,689.57	9.75	9.79	-85.717	174.35	-91.83	96.52	77.00	19.51	4.946			
2,722.26	2,713.93	2,720.69	2,711.88	9.84	9.87	-85.966	176.29	-92.19	96.90	77.21	19.69	4.922			
2,800.00	2,791.32	2,798.88	2,789.85	10.13	10.17	-86.945	182.03	-93.23	98.03	77.75	20.28	4.834			
2,900.00	2,891.06	2,899.43	2,890.26	10.51	10.53	-88.157	187.10	-94.16	99.05	78.02	21.02	4.711			
3,000.00	2,990.96	2,999.93	2,990.73	10.87	10.89	-89.335	189.58	-94.61	99.57	77.82	21.74	4.579			
3,100.00	3,090.94	3,100.14	3,090.94	11.22	11.24	-90.268	189.84	-94.66	99.66	77.22	22.44	4.440			
3,122.06	3,113.00	3,122.20	3,113.00	11.30	11.31	-90.305	189.84	-94.66	99.66	77.06	22.60	4.410			
3,200.00	3,190.94	3,200.14	3,190.94	11.57	11.58	-90.305	189.84	-94.66	99.66	76.53	23.13	4.308			
3,300.00	3,290.94	3,300.14	3,290.94	11.91	11.93	-90.305	189.84	-94.66	99.66	75.84	23.83	4.183			
3,400.00	3,390.94	3,400.14	3,390.94	12.26	12.27	-90.305	189.84	-94.66	99.66	75.14	24.52	4.065			
3,500.00	3,490.94	3,500.14	3,490.94	12.61	12.62	-90.305	189.84	-94.66	99.66	74.45	25.21	3.953			
3,600.00	3,590.94	3,600.14	3,590.94	12.95	12.97	-90.305	189.84	-94.66	99.66	73.75	25.91	3.847			
3,700.00	3,690.94	3,700.14	3,690.94	13.30	13.31	-90.305	189.84	-94.66	99.66	73.06	26.61	3.746			
3,800.00	3,790.94	3,800.14	3,790.94	13.65	13.66	-90.305	189.84	-94.66	99.66	72.36	27.30	3.650			
3,900.00	3,890.94	3,900.14	3,890.94	14.00	14.01	-90.305	189.84	-94.66	99.66	71.66	28.00	3.559			
4,000.00	3,990.94	4,000.14	3,990.94	14.35	14.36	-90.305	189.84	-94.66	99.66	70.96	28.70	3.472			
4,100.00	4,090.94	4,100.14	4,090.94	14.70	14.71	-90.305	189.84	-94.66	99.66	70.26	29.40	3.390			
4,200.00	4,190.94	4,200.14	4,190.94	15.05	15.06	-90.305	189.84	-94.66	99.66	69.56	30.10	3.311			
4,300.00	4,290.94	4,300.14	4,290.94	15.40	15.41	-90.305	189.84	-94.66	99.66	68.86	30.81	3.235			
4,400.00	4,390.94	4,400.14	4,390.94	15.75	15.76	-90.305	189.84	-94.66	99.66	68.15	31.51	3.163			
4,500.00	4,490.94	4,500.14	4,490.94	16.11	16.12	-90.305	189.84	-94.66	99.66	67.45	32.21	3.094			
4,600.00	4,590.94	4,600.14	4,590.94	16.46	16.47	-90.305	189.84	-94.66	99.66	66.75	32.91	3.028			
4,700.00	4,690.94	4,700.14	4,690.94	16.81	16.82	-90.305	189.84	-94.66	99.66	66.04	33.62	2.964			

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 022H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
4,800.00	4,790.94	4,800.14	4,790.94	17.16	17.17	-90.305	189.84	-94.66	99.66	65.34	34.32	2.904		
4,900.00	4,890.94	4,900.14	4,890.94	17.52	17.52	-90.305	189.84	-94.66	99.66	64.63	35.03	2.845		
5,000.00	4,990.94	5,000.14	4,990.94	17.87	17.88	-90.305	189.84	-94.66	99.66	63.93	35.74	2.789		
5,100.00	5,090.94	5,100.14	5,090.94	18.22	18.23	-90.305	189.84	-94.66	99.66	63.22	36.44	2.735		
5,200.00	5,190.94	5,200.14	5,190.94	18.58	18.58	-90.305	189.84	-94.66	99.66	62.51	37.15	2.683		
5,300.00	5,290.94	5,300.14	5,290.94	18.93	18.94	-90.305	189.84	-94.66	99.66	61.81	37.86	2.633		
5,400.00	5,390.94	5,400.14	5,390.94	19.28	19.29	-90.305	189.84	-94.66	99.66	61.10	38.56	2.584		
5,500.00	5,490.94	5,500.14	5,490.94	19.64	19.64	-90.305	189.84	-94.66	99.66	60.39	39.27	2.538		
5,600.00	5,590.94	5,600.14	5,590.94	19.99	20.00	-90.305	189.84	-94.66	99.66	59.68	39.98	2.493		
5,700.00	5,690.94	5,700.14	5,690.94	20.34	20.35	-90.305	189.84	-94.66	99.66	58.97	40.69	2.449		
5,800.00	5,790.94	5,800.14	5,790.94	20.70	20.71	-90.305	189.84	-94.66	99.66	58.27	41.40	2.408		
5,900.00	5,890.94	5,900.14	5,890.94	21.05	21.06	-90.305	189.84	-94.66	99.66	57.56	42.10	2.367		
6,000.00	5,990.94	6,000.14	5,990.94	21.41	21.42	-90.305	189.84	-94.66	99.66	56.85	42.81	2.328		
6,100.00	6,090.94	6,100.14	6,090.94	21.76	21.77	-90.305	189.84	-94.66	99.66	56.14	43.52	2.290		
6,200.00	6,190.94	6,200.14	6,190.94	22.12	22.13	-90.305	189.84	-94.66	99.66	55.43	44.23	2.253		
6,300.00	6,290.94	6,300.14	6,290.94	22.47	22.48	-90.305	189.84	-94.66	99.66	54.72	44.94	2.217		
6,400.00	6,390.94	6,400.14	6,390.94	22.83	22.84	-90.305	189.84	-94.66	99.66	54.01	45.65	2.183		
6,500.00	6,490.94	6,500.14	6,490.94	23.18	23.19	-90.305	189.84	-94.66	99.66	53.30	46.36	2.150		
6,600.00	6,590.94	6,600.14	6,590.94	23.54	23.55	-90.305	189.84	-94.66	99.66	52.59	47.07	2.117		
6,700.00	6,690.94	6,700.14	6,690.94	23.89	23.90	-90.305	189.84	-94.66	99.66	51.88	47.79	2.086		
6,800.00	6,790.94	6,800.14	6,790.94	24.25	24.26	-90.305	189.84	-94.66	99.66	51.17	48.50	2.055		
6,900.00	6,890.94	6,900.14	6,890.94	24.61	24.61	-90.305	189.84	-94.66	99.66	50.45	49.21	2.025		
7,000.00	6,990.94	7,000.14	6,990.94	24.96	24.97	-90.305	189.84	-94.66	99.66	49.74	49.92	1.996		
7,100.00	7,090.94	7,100.14	7,090.94	25.32	25.32	-90.305	189.84	-94.66	99.66	49.03	50.63	1.968		
7,200.00	7,190.94	7,200.14	7,190.94	25.67	25.68	-90.305	189.84	-94.66	99.66	48.32	51.34	1.941		
7,300.00	7,290.94	7,300.14	7,290.94	26.03	26.03	-90.305	189.84	-94.66	99.66	47.61	52.05	1.915		
7,400.00	7,390.94	7,400.14	7,390.94	26.38	26.39	-90.305	189.84	-94.66	99.66	46.90	52.77	1.889		
7,500.00	7,490.94	7,500.14	7,490.94	26.74	26.75	-90.305	189.84	-94.66	99.66	46.18	53.48	1.864		
7,600.00	7,590.94	7,600.14	7,590.94	27.10	27.10	-90.305	189.84	-94.66	99.66	45.47	54.19	1.839		
7,700.00	7,690.94	7,700.14	7,690.94	27.45	27.46	-90.305	189.84	-94.66	99.66	44.76	54.90	1.815		
7,800.00	7,790.94	7,800.14	7,790.94	27.81	27.81	-90.305	189.84	-94.66	99.66	44.05	55.61	1.792		
7,900.00	7,890.94	7,900.14	7,890.94	28.17	28.17	-90.305	189.84	-94.66	99.66	43.33	56.33	1.769		
8,000.00	7,990.94	8,000.14	7,990.94	28.52	28.53	-90.305	189.84	-94.66	99.66	42.62	57.04	1.747		
8,100.00	8,090.94	8,100.14	8,090.94	28.88	28.88	-90.305	189.84	-94.66	99.66	41.91	57.75	1.726		
8,162.72	8,153.66	8,162.86	8,153.66	29.10	29.10	-90.381	189.71	-94.66	99.66	41.46	58.20	1.712		
8,200.00	8,190.94	8,200.00	8,190.74	29.23	29.23	-91.530	187.71	-94.65	99.68	41.23	58.45	1.705 ES, SF		
8,300.00	8,290.94	8,296.91	8,286.12	29.59	29.51	-100.872	171.25	-94.54	101.47	42.43	59.04	1.719		
8,400.00	8,390.94	8,385.99	8,370.22	29.95	29.75	-115.891	142.15	-94.34	112.35	53.54	58.82	1.910		
8,500.00	8,490.94	8,464.51	8,439.83	30.30	29.94	-130.422	105.96	-94.10	139.85	83.03	56.82	2.461		
8,600.00	8,590.94	8,531.83	8,495.10	30.66	30.09	-141.160	67.60	-93.85	184.46	130.75	53.72	3.434		
8,700.00	8,690.94	8,588.70	8,538.03	31.02	30.22	-148.363	30.33	-93.60	242.31	191.71	50.60	4.788		
8,800.00	8,790.94	8,636.49	8,571.10	31.37	30.33	-153.174	-4.15	-93.37	309.59	261.69	47.90	6.463		
8,900.00	8,890.94	8,676.69	8,596.61	31.73	30.43	-156.483	-35.22	-93.17	383.61	337.93	45.68	8.398		
9,000.00	8,990.94	8,700.00	8,610.38	32.09	30.48	-158.141	-54.02	-93.04	462.78	419.61	43.17	10.720		
9,100.00	9,090.94	8,750.00	8,637.28	32.44	30.61	-161.160	-96.14	-92.76	545.40	502.38	43.02	12.678		
9,200.00	9,190.94	8,764.32	8,644.29	32.80	30.65	-161.909	-108.63	-92.68	630.68	589.40	41.28	15.278		
9,300.00	9,290.94	8,785.70	8,654.18	33.16	30.70	-162.943	-127.58	-92.55	718.38	678.00	40.37	17.793		
9,400.00	9,390.94	8,800.00	8,660.40	33.51	30.74	-163.584	-140.46	-92.47	807.86	768.35	39.51	20.447		
9,500.00	9,490.94	8,820.58	8,668.78	33.87	30.80	-164.442	-159.25	-92.34	898.70	859.58	39.12	22.975		
9,600.00	9,590.94	8,850.00	8,679.57	34.23	30.88	-165.548	-186.62	-92.16	991.03	951.91	39.13	25.329		
9,700.00	9,690.94	8,850.00	8,679.57	34.59	30.88	-165.548	-186.62	-92.16	1,083.71	1,045.26	38.45	28.185		
9,800.00	9,790.94	8,850.00	8,679.57	34.94	30.88	-165.548	-186.62	-92.16	1,177.58	1,139.60	37.97	31.010		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
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Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 022H - Wellbore #1 - Design #1

Survey Program: 0-MWD				Rule Assigned:					Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
9,900.00	9,890.94	8,869.27	8,685.88	35.30	30.94	-166.204	-204.83	-92.04	1,271.92	1,233.88	38.03	33.443
10,000.00	9,990.94	8,878.48	8,688.67	35.66	30.97	-166.501	-213.60	-91.98	1,366.93	1,328.98	37.95	36.015
10,100.00	10,090.94	8,900.00	8,694.65	36.01	31.03	-167.153	-234.27	-91.84	1,462.64	1,424.49	38.15	38.341
10,187.06	10,178.00	8,900.00	8,694.65	36.33	31.03	-167.153	-234.27	-91.84	1,545.97	1,507.93	38.04	40.636
10,200.00	10,190.94	8,900.00	8,694.65	36.37	31.03	-167.151	-234.27	-91.84	1,558.35	1,520.32	38.03	40.976
10,250.00	10,240.81	8,900.00	8,694.65	36.52	31.03	-167.108	-234.27	-91.84	1,605.41	1,567.45	37.95	42.298
10,300.00	10,290.21	8,900.00	8,694.65	36.67	31.03	-167.006	-234.27	-91.84	1,651.06	1,613.22	37.85	43.627
10,350.00	10,338.75	8,900.00	8,694.65	36.82	31.03	-166.839	-234.27	-91.84	1,695.09	1,657.38	37.71	44.948
10,400.00	10,386.07	8,900.00	8,694.65	36.95	31.03	-166.597	-234.27	-91.84	1,737.30	1,699.74	37.56	46.251
10,450.00	10,431.81	8,924.07	8,700.41	37.08	31.11	-167.083	-257.64	-91.69	1,776.84	1,739.17	37.67	47.166
10,500.00	10,475.61	8,950.00	8,705.52	37.21	31.19	-167.577	-283.06	-91.52	1,814.75	1,776.98	37.77	48.051
10,550.00	10,517.15	8,950.00	8,705.52	37.32	31.19	-167.188	-283.06	-91.52	1,849.52	1,811.96	37.56	49.244
10,600.00	10,556.11	8,950.00	8,705.52	37.44	31.19	-166.673	-283.06	-91.52	1,881.79	1,844.44	37.36	50.374
10,650.00	10,592.19	8,950.00	8,705.52	37.55	31.19	-165.984	-283.06	-91.52	1,911.47	1,874.30	37.17	51.428
10,700.00	10,625.12	8,950.00	8,705.52	37.67	31.19	-165.036	-283.06	-91.52	1,938.44	1,901.44	37.00	52.390
10,750.00	10,654.64	8,977.99	8,709.73	37.78	31.28	-165.454	-310.73	-91.34	1,961.73	1,924.69	37.04	52.958
10,800.00	10,680.54	9,000.00	8,712.09	37.90	31.36	-165.496	-332.61	-91.19	1,982.43	1,945.39	37.04	53.523
10,850.00	10,702.61	9,000.00	8,712.09	38.02	31.36	-163.782	-332.61	-91.19	1,999.63	1,962.72	36.91	54.169
10,900.00	10,720.69	9,000.00	8,712.09	38.14	31.36	-160.891	-332.61	-91.19	2,013.82	1,976.98	36.83	54.676
10,950.00	10,734.64	9,019.78	8,713.49	38.27	31.42	-159.258	-352.34	-91.06	2,024.50	1,987.64	36.86	54.917
11,000.00	10,744.36	9,045.56	8,714.30	38.40	31.51	-157.903	-378.11	-90.89	2,032.18	1,995.25	36.93	55.024
11,050.00	10,749.76	9,045.56	8,714.30	38.53	31.51	-142.016	-378.11	-90.89	2,036.00	1,999.04	36.95	55.099
11,082.06	10,750.94	9,058.50	8,714.41	38.62	31.56	-126.077	-391.05	-90.80	2,036.75	1,999.74	37.01	55.025
11,100.00	10,751.09	9,076.29	8,714.57	38.67	31.63	-128.778	-408.83	-90.68	2,036.73	1,999.66	37.07	54.939
11,200.00	10,751.97	9,175.70	8,715.43	39.00	32.05	-147.273	-508.23	-90.02	2,036.64	1,999.21	37.43	54.407
11,300.00	10,752.84	9,275.42	8,716.30	39.39	32.55	-166.998	-607.95	-89.36	2,036.62	1,998.76	37.86	53.795
11,341.14	10,753.20	9,316.51	8,716.66	39.57	32.78	-173.287	-649.03	-89.09	2,036.62	1,998.56	38.06	53.518
11,400.00	10,753.72	9,375.34	8,717.18	39.84	33.13	-179.246	-707.86	-88.70	2,036.62	1,998.27	38.35	53.110
11,461.17	10,754.26	9,436.50	8,717.71	40.15	33.51	-178.656	-769.02	-88.29	2,036.62	1,997.95	38.68	52.658
11,500.00	10,754.60	9,475.34	8,718.05	40.35	33.77	-178.660	-807.85	-88.03	2,036.62	1,997.73	38.89	52.362
11,600.00	10,755.47	9,575.34	8,718.92	40.92	34.49	-178.670	-907.85	-87.37	2,036.63	1,997.13	39.50	51.564
11,700.00	10,756.35	9,675.34	8,719.79	41.55	35.26	-178.680	-1,007.84	-86.71	2,036.63	1,996.48	40.15	50.722
11,800.00	10,757.22	9,775.34	8,720.67	42.24	36.10	-178.690	-1,107.84	-86.04	2,036.63	1,995.78	40.86	49.846
11,900.00	10,758.10	9,875.34	8,721.54	42.98	36.99	-178.700	-1,207.83	-85.38	2,036.64	1,995.03	41.61	48.944
12,000.00	10,758.97	9,975.34	8,722.41	43.77	37.93	-178.711	-1,307.82	-84.71	2,036.64	1,994.23	42.41	48.024
12,100.00	10,759.85	10,075.34	8,723.28	44.60	38.92	-178.721	-1,407.82	-84.05	2,036.64	1,993.39	43.25	47.091
12,200.00	10,760.73	10,175.34	8,724.16	45.48	39.95	-178.731	-1,507.81	-83.38	2,036.65	1,992.52	44.13	46.153
12,300.00	10,761.60	10,275.34	8,725.03	46.41	41.03	-178.741	-1,607.81	-82.72	2,036.65	1,991.60	45.04	45.214
12,400.00	10,762.48	10,375.34	8,725.90	47.37	42.14	-178.751	-1,707.80	-82.06	2,036.65	1,990.66	46.00	44.278
12,500.00	10,763.35	10,475.34	8,726.77	48.37	43.28	-178.761	-1,807.79	-81.39	2,036.66	1,989.67	46.98	43.350
12,600.00	10,764.23	10,575.34	8,727.65	49.41	44.46	-178.771	-1,907.79	-80.73	2,036.66	1,988.66	48.00	42.433
12,700.00	10,765.10	10,675.34	8,728.52	50.48	45.67	-178.781	-2,007.78	-80.06	2,036.66	1,987.62	49.04	41.530
12,800.00	10,765.98	10,775.34	8,729.39	51.58	46.91	-178.792	-2,107.78	-79.40	2,036.66	1,986.55	50.11	40.642
12,900.00	10,766.86	10,875.34	8,730.27	52.70	48.17	-178.802	-2,207.77	-78.74	2,036.67	1,985.46	51.21	39.772
13,000.00	10,767.73	10,975.34	8,731.14	53.86	49.45	-178.812	-2,307.76	-78.07	2,036.67	1,984.34	52.33	38.920
13,100.00	10,768.61	11,075.34	8,732.01	55.04	50.75	-178.822	-2,407.76	-77.41	2,036.67	1,983.20	53.47	38.089
13,200.00	10,769.48	11,175.34	8,732.88	56.25	52.08	-178.832	-2,507.75	-76.74	2,036.68	1,982.04	54.64	37.278
13,300.00	10,770.36	11,275.34	8,733.76	57.47	53.42	-178.842	-2,607.75	-76.08	2,036.68	1,980.86	55.82	36.487
13,400.00	10,771.23	11,375.34	8,734.63	58.72	54.78	-178.852	-2,707.74	-75.41	2,036.68	1,979.66	57.02	35.719
13,500.00	10,772.11	11,475.34	8,735.50	59.99	56.16	-178.863	-2,807.73	-74.75	2,036.69	1,978.45	58.24	34.971
13,600.00	10,772.99	11,575.34	8,736.37	61.28	57.55	-178.873	-2,907.73	-74.09	2,036.69	1,977.22	59.47	34.245
13,700.00	10,773.86	11,675.34	8,737.25	62.58	58.95	-178.883	-3,007.72	-73.42	2,036.69	1,975.97	60.72	33.540

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 022H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:		Offset Site Error:
Reference										Distance		Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Warning
13,800.00	10,774.74	11,775.34	8,738.12	63.90	60.37	178.893	-3,107.72	-72.76	2,036.70	1,974.71	61.99	32.856
13,900.00	10,775.61	11,875.34	8,738.99	65.23	61.80	178.903	-3,207.71	-72.09	2,036.70	1,973.43	63.27	32.193
14,000.00	10,776.49	11,975.34	8,739.86	66.58	63.24	178.913	-3,307.70	-71.43	2,036.70	1,972.15	64.56	31.549
14,100.00	10,777.37	12,075.34	8,740.74	67.95	64.69	178.923	-3,407.70	-70.77	2,036.71	1,970.85	65.86	30.925
14,200.00	10,778.24	12,175.34	8,741.61	69.32	66.15	178.933	-3,507.69	-70.10	2,036.71	1,969.54	67.17	30.320
14,300.00	10,779.12	12,275.34	8,742.48	70.71	67.61	178.944	-3,607.69	-69.44	2,036.71	1,968.21	68.50	29.734
14,400.00	10,779.99	12,375.34	8,743.36	72.11	69.09	178.954	-3,707.68	-68.77	2,036.71	1,966.88	69.83	29.166
14,500.00	10,780.87	12,475.34	8,744.23	73.52	70.58	178.964	-3,807.67	-68.11	2,036.72	1,965.54	71.18	28.616
14,600.00	10,781.74	12,575.34	8,745.10	74.94	72.07	178.974	-3,907.67	-67.44	2,036.72	1,964.19	72.53	28.082
14,700.00	10,782.62	12,675.34	8,745.97	76.36	73.57	178.984	-4,007.66	-66.78	2,036.72	1,962.83	73.89	27.565
14,800.00	10,783.50	12,775.34	8,746.85	77.80	75.07	178.994	-4,107.66	-66.12	2,036.73	1,961.47	75.26	27.063
14,900.00	10,784.37	12,875.34	8,747.72	79.25	76.58	179.004	-4,207.65	-65.45	2,036.73	1,960.10	76.64	26.577
15,000.00	10,785.25	12,975.34	8,748.59	80.70	78.10	179.014	-4,307.64	-64.79	2,036.73	1,958.71	78.02	26.106
15,100.00	10,786.12	13,075.34	8,749.46	82.16	79.62	179.025	-4,407.64	-64.12	2,036.74	1,957.33	79.41	25.648
15,200.00	10,787.00	13,175.34	8,750.34	83.63	81.15	179.035	-4,507.63	-63.46	2,036.74	1,955.93	80.81	25.205
15,300.00	10,787.87	13,275.34	8,751.21	85.11	82.68	179.045	-4,607.63	-62.80	2,036.74	1,954.53	82.21	24.775
15,400.00	10,788.75	13,375.34	8,752.08	86.59	84.22	179.055	-4,707.62	-62.13	2,036.75	1,953.13	83.62	24.357
15,500.00	10,789.63	13,475.34	8,752.95	88.08	85.76	179.065	-4,807.61	-61.47	2,036.75	1,951.71	85.03	23.952
15,600.00	10,790.50	13,575.34	8,753.83	89.57	87.31	179.075	-4,907.61	-60.80	2,036.75	1,950.30	86.45	23.559
15,700.00	10,791.38	13,675.34	8,754.70	91.07	88.86	179.085	-5,007.60	-60.14	2,036.76	1,948.88	87.88	23.177
15,800.00	10,792.25	13,775.34	8,755.57	92.58	90.41	179.095	-5,107.60	-59.47	2,036.76	1,947.45	89.31	22.806
15,900.00	10,793.13	13,875.34	8,756.45	94.09	91.97	179.106	-5,207.59	-58.81	2,036.76	1,946.02	90.74	22.445
16,000.00	10,794.00	13,975.34	8,757.32	95.60	93.53	179.116	-5,307.58	-58.15	2,036.76	1,944.58	92.18	22.095
16,100.00	10,794.88	14,075.34	8,758.19	97.12	95.09	179.126	-5,407.58	-57.48	2,036.77	1,943.14	93.63	21.754
16,200.00	10,795.76	14,175.34	8,759.06	98.64	96.66	179.136	-5,507.57	-56.82	2,036.77	1,941.70	95.07	21.423
16,300.00	10,796.63	14,275.34	8,759.94	100.17	98.23	179.146	-5,607.57	-56.15	2,036.77	1,940.25	96.52	21.101
16,400.00	10,797.51	14,375.34	8,760.81	101.70	99.80	179.156	-5,707.56	-55.49	2,036.78	1,938.80	97.98	20.788
16,500.00	10,798.38	14,475.34	8,761.68	103.24	101.37	179.166	-5,807.55	-54.83	2,036.78	1,937.34	99.44	20.483
16,600.00	10,799.26	14,575.34	8,762.55	104.78	102.95	179.177	-5,907.55	-54.16	2,036.78	1,935.89	100.90	20.187
16,700.00	10,800.14	14,675.34	8,763.43	106.32	104.53	179.187	-6,007.54	-53.50	2,036.79	1,934.43	102.36	19.898
16,800.00	10,801.01	14,775.34	8,764.30	107.86	106.11	179.197	-6,107.54	-52.83	2,036.79	1,932.96	103.83	19.617
16,900.00	10,801.89	14,875.34	8,765.17	109.41	107.70	179.207	-6,207.53	-52.17	2,036.79	1,931.49	105.30	19.343
17,000.00	10,802.76	14,975.34	8,766.04	110.97	109.28	179.217	-6,307.52	-51.50	2,036.80	1,930.02	106.77	19.076
17,100.00	10,803.64	15,075.34	8,766.92	112.52	110.87	179.227	-6,407.52	-50.84	2,036.80	1,928.55	108.25	18.816
17,200.00	10,804.51	15,175.34	8,767.79	114.08	112.46	179.237	-6,507.51	-50.18	2,036.80	1,927.08	109.73	18.563
17,300.00	10,805.39	15,275.34	8,768.66	115.64	114.05	179.247	-6,607.51	-49.51	2,036.80	1,925.60	111.21	18.315
17,400.00	10,806.27	15,375.34	8,769.53	117.20	115.65	179.258	-6,707.50	-48.85	2,036.81	1,924.12	112.69	18.074
17,500.00	10,807.14	15,475.34	8,770.41	118.77	117.24	179.268	-6,807.49	-48.18	2,036.81	1,922.64	114.18	17.839
17,600.00	10,808.02	15,575.34	8,771.28	120.33	118.84	179.278	-6,907.49	-47.52	2,036.81	1,921.15	115.66	17.610
17,700.00	10,808.89	15,675.34	8,772.15	121.90	120.44	179.288	-7,007.48	-46.86	2,036.82	1,919.66	117.15	17.386
17,800.00	10,809.77	15,775.34	8,773.03	123.48	122.03	179.298	-7,107.48	-46.19	2,036.82	1,918.18	118.64	17.167
17,900.00	10,810.64	15,875.34	8,773.90	125.05	123.64	179.308	-7,207.47	-45.53	2,036.82	1,916.68	120.14	16.954
18,000.00	10,811.52	15,975.34	8,774.77	126.63	125.24	179.318	-7,307.46	-44.86	2,036.83	1,915.19	121.63	16.745
18,100.00	10,812.40	16,075.34	8,775.64	128.20	126.84	179.328	-7,407.46	-44.20	2,036.83	1,913.70	123.13	16.542
18,200.00	10,813.27	16,175.34	8,776.52	129.78	128.45	179.339	-7,507.45	-43.53	2,036.83	1,912.20	124.63	16.343
18,300.00	10,814.15	16,275.34	8,777.39	131.37	130.05	179.349	-7,607.45	-42.87	2,036.84	1,910.70	126.13	16.148
18,400.00	10,815.02	16,375.34	8,778.26	132.95	131.66	179.359	-7,707.44	-42.21	2,036.84	1,909.20	127.63	15.958
18,500.00	10,815.90	16,475.34	8,779.13	134.53	133.27	179.369	-7,807.43	-41.54	2,036.84	1,907.70	129.14	15.772
18,600.00	10,816.77	16,575.34	8,780.01	136.12	134.88	179.379	-7,907.43	-40.88	2,036.85	1,906.20	130.64	15.591
18,700.00	10,817.65	16,675.34	8,780.88	137.71	136.49	179.389	-8,007.42	-40.21	2,036.85	1,904.70	132.15	15.413
18,800.00	10,818.53	16,775.34	8,781.75	139.30	138.10	179.399	-8,107.42	-39.55	2,036.85	1,903.19	133.66	15.239
18,900.00	10,819.40	16,875.34	8,782.62	140.89	139.71	179.410	-8,207.41	-38.89	2,036.85	1,901.68	135.17	15.069

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 022H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:		Offset Site Error:
Reference										Distance		Offset Well Error:
Measured	Vertical	Offset	Vertical	Semi Major Axis		Azimuth	Offset Wellbore Centre		Between		Minimum	Warning
Depth	Depth	Measured	Depth	Reference	Offset	from North	+N/-S	+E/-W	Centres	Ellipses	Separation	
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
19,000.00	10,820.28	16,975.34	8,783.50	142.49	141.33	179.420	-8,307.40	-38.22	2,036.86	1,900.18	136.68	14.902
19,100.00	10,821.15	17,075.34	8,784.37	144.08	142.94	179.430	-8,407.40	-37.56	2,036.86	1,898.67	138.20	14.739
19,200.00	10,822.03	17,175.34	8,785.24	145.68	144.56	179.440	-8,507.39	-36.89	2,036.86	1,897.16	139.71	14.579
19,300.00	10,822.90	17,275.34	8,786.12	147.27	146.18	179.450	-8,607.39	-36.23	2,036.87	1,895.64	141.22	14.423
19,400.00	10,823.78	17,375.34	8,786.99	148.87	147.79	179.460	-8,707.38	-35.57	2,036.87	1,894.13	142.74	14.270
19,500.00	10,824.66	17,475.34	8,787.86	150.47	149.41	179.470	-8,807.37	-34.90	2,036.87	1,892.62	144.26	14.120
19,600.00	10,825.53	17,575.34	8,788.73	152.07	151.03	179.480	-8,907.37	-34.24	2,036.88	1,891.10	145.78	13.973
19,700.00	10,826.41	17,675.34	8,789.61	153.67	152.65	179.491	-9,007.36	-33.57	2,036.88	1,889.58	147.30	13.828
19,800.00	10,827.28	17,775.34	8,790.48	155.27	154.27	179.501	-9,107.36	-32.91	2,036.88	1,888.07	148.82	13.687
19,900.00	10,828.16	17,875.34	8,791.35	156.88	155.89	179.511	-9,207.35	-32.24	2,036.89	1,886.55	150.34	13.549
20,000.00	10,829.04	17,975.34	8,792.22	158.48	157.51	179.521	-9,307.34	-31.58	2,036.89	1,885.03	151.86	13.413
20,100.00	10,829.91	18,075.34	8,793.10	160.09	159.13	179.531	-9,407.34	-30.92	2,036.89	1,883.51	153.38	13.280
20,200.00	10,830.79	18,175.34	8,793.97	161.70	160.76	179.541	-9,507.33	-30.25	2,036.90	1,881.99	154.91	13.149
20,300.00	10,831.66	18,275.34	8,794.84	163.30	162.38	179.551	-9,607.33	-29.59	2,036.90	1,880.46	156.43	13.021
20,400.00	10,832.54	18,375.34	8,795.71	164.91	164.00	179.561	-9,707.32	-28.92	2,036.90	1,878.94	157.96	12.895
20,500.00	10,833.41	18,475.34	8,796.59	166.52	165.63	179.572	-9,807.31	-28.26	2,036.90	1,877.42	159.49	12.772
20,600.00	10,834.29	18,575.34	8,797.46	168.13	167.25	179.582	-9,907.31	-27.60	2,036.91	1,875.89	161.02	12.650
20,700.00	10,835.17	18,675.34	8,798.33	169.74	168.88	179.592	-10,007.30	-26.93	2,036.91	1,874.37	162.54	12.531
20,800.00	10,836.04	18,775.34	8,799.21	171.36	170.51	179.602	-10,107.30	-26.27	2,036.91	1,872.84	164.07	12.415
20,900.00	10,836.92	18,875.34	8,800.08	172.97	172.13	179.612	-10,207.29	-25.60	2,036.92	1,871.31	165.60	12.300
20,900.02	10,836.92	18,875.36	8,800.08	172.97	172.13	179.612	-10,207.31	-25.60	2,036.92	1,871.31	165.60	12.300
20,972.39	10,837.55	18,929.95	8,800.55	174.00	173.02	0.000	-10,261.90	-25.24	2,037.00	1,870.67	166.32	12.247

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 102H - Wellbore #1 - Design #1

Survey Program: 0-MWD				Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+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	180.000	-30.00	0.00	30.00					
100.00	100.00	100.00	100.00	0.13	0.13	180.000	-30.00	0.00	30.00	29.74	0.26	117.047		
200.00	200.00	200.00	200.00	0.49	0.49	180.000	-30.00	0.00	30.00	29.03	0.97	30.825		
300.00	300.00	300.00	300.00	0.85	0.85	180.000	-30.00	0.00	30.00	28.31	1.69	17.749		
400.00	400.00	400.00	400.00	1.20	1.20	180.000	-30.00	0.00	30.00	27.59	2.41	12.463		
500.00	500.00	500.00	500.00	1.56	1.56	180.000	-30.00	0.00	30.00	26.88	3.12	9.603		
600.00	600.00	600.00	600.00	1.92	1.92	180.000	-30.00	0.00	30.00	26.16	3.84	7.810		
700.00	700.00	700.15	700.15	2.28	2.27	-178.397	-29.73	-0.83	29.74	25.19	4.55	6.532		
800.00	800.00	800.25	800.20	2.64	2.62	-173.439	-28.91	-3.32	29.10	23.84	5.26	5.531		
836.93	836.93	837.18	837.12	2.77	2.76	-170.728	-28.47	-4.66	28.97	23.44	5.52	5.243 CC		
900.00	899.99	900.22	900.09	3.00	2.98	-165.226	-27.55	-7.47	29.40	23.42	5.97	4.921 ES		
1,000.00	999.96	1,000.00	999.68	3.36	3.34	-155.381	-25.65	-13.26	32.06	25.37	6.69	4.792 SF		
1,100.00	1,099.86	1,099.61	1,098.97	3.71	3.70	-146.083	-23.22	-20.69	37.45	30.04	7.41	5.056		
1,200.00	1,199.68	1,198.88	1,197.79	4.07	4.06	-138.677	-20.26	-29.72	45.60	37.47	8.13	5.611		
1,300.00	1,299.37	1,297.80	1,296.08	4.44	4.44	-133.326	-16.78	-40.33	56.32	47.47	8.85	6.366		
1,399.70	1,398.60	1,396.00	1,393.45	4.80	4.81	-129.647	-12.81	-52.46	69.39	59.82	9.57	7.252		
1,400.00	1,398.90	1,396.30	1,393.74	4.80	4.82	-129.638	-12.80	-52.50	69.44	59.86	9.57	7.254		
1,500.00	1,498.36	1,495.18	1,491.66	5.17	5.20	-127.050	-8.51	-65.57	83.81	73.50	10.31	8.132		
1,600.00	1,597.81	1,594.08	1,589.59	5.55	5.60	-125.218	-4.23	-78.65	98.30	87.25	11.05	8.899		
1,700.00	1,697.26	1,692.98	1,687.53	5.92	5.99	-123.857	0.06	-91.73	112.87	101.08	11.79	9.573		
1,800.00	1,796.71	1,791.88	1,785.47	6.30	6.39	-122.808	4.35	-104.81	127.49	114.95	12.54	10.169		
1,900.00	1,896.17	1,890.78	1,883.41	6.68	6.79	-121.974	8.63	-117.89	142.14	128.85	13.29	10.697		
2,000.00	1,895.62	1,889.68	1,881.35	7.06	7.19	-121.296	12.92	-130.97	156.82	142.78	14.04	11.169		
2,100.00	2,095.07	2,088.59	2,079.29	7.44	7.60	-120.735	17.20	-144.05	171.51	156.72	14.79	11.593		
2,200.00	2,194.53	2,187.49	2,177.23	7.83	8.00	-120.261	21.49	-157.13	186.22	170.67	15.55	11.974		
2,300.00	2,293.98	2,286.39	2,275.17	8.21	8.41	-119.857	25.78	-170.21	200.94	184.63	16.31	12.321		
2,400.00	2,393.43	2,385.29	2,373.11	8.59	8.82	-119.508	30.06	-183.29	215.67	198.60	17.07	12.635		
2,500.00	2,492.88	2,484.19	2,471.04	8.98	9.23	-119.204	34.35	-196.37	230.40	212.57	17.83	12.923		
2,600.00	2,592.34	2,583.09	2,568.98	9.36	9.63	-118.936	38.63	-209.45	245.14	226.55	18.59	13.187		
2,700.00	2,691.79	2,681.99	2,666.82	9.75	10.04	-118.699	42.92	-222.53	259.89	240.54	19.35	13.429		
2,722.26	2,713.93	2,704.01	2,688.73	9.84	10.14	-118.650	43.87	-225.44	263.17	243.65	19.52	13.481		
2,800.00	2,791.32	2,780.94	2,764.91	10.13	10.45	-118.343	47.21	-235.61	274.26	254.14	20.11	13.636		
2,900.00	2,891.06	2,880.00	2,863.00	10.51	10.87	-117.577	51.50	-248.71	287.41	266.55	20.86	13.778		
3,000.00	2,990.96	2,979.10	2,961.14	10.87	11.28	-116.435	55.79	-261.82	299.41	277.81	21.60	13.864		
3,100.00	3,090.94	3,078.18	3,059.25	11.22	11.69	-114.948	60.09	-274.92	310.35	288.03	22.32	13.906		
3,122.06	3,113.00	3,100.03	3,080.89	11.30	11.78	-114.575	61.04	-277.81	312.64	290.16	22.47	13.911		
3,200.00	3,190.94	3,177.21	3,157.32	11.57	12.10	-113.266	64.38	-288.02	320.72	297.69	23.03	13.927		
3,300.00	3,290.94	3,276.24	3,255.38	11.91	12.52	-111.681	68.67	-301.11	331.33	307.59	23.74	13.957		
3,400.00	3,390.94	3,375.26	3,353.45	12.26	12.93	-110.194	72.96	-314.21	342.18	317.73	24.45	13.995		
3,500.00	3,490.94	3,474.29	3,451.51	12.61	13.34	-108.798	77.25	-327.31	353.24	328.08	25.16	14.040		
3,600.00	3,590.94	3,573.32	3,549.57	12.95	13.76	-107.488	81.55	-340.40	364.49	338.63	25.87	14.090		
3,700.00	3,690.94	3,672.35	3,647.64	13.30	14.17	-106.256	85.84	-353.50	375.93	349.35	26.58	14.144		
3,800.00	3,790.94	3,771.37	3,745.70	13.65	14.58	-105.097	90.13	-366.59	387.53	360.24	27.29	14.202		
3,900.00	3,890.94	3,870.40	3,843.76	14.00	15.00	-104.005	94.42	-379.69	399.27	371.28	28.00	14.262		
4,000.00	3,990.94	3,969.43	3,941.83	14.35	15.41	-102.976	98.71	-392.79	411.15	382.45	28.71	14.323		
4,100.00	4,090.94	4,068.45	4,039.89	14.70	15.83	-102.004	103.00	-405.88	423.16	393.74	29.42	14.386		
4,200.00	4,190.94	4,167.48	4,137.95	15.05	16.24	-101.086	107.29	-418.98	435.28	405.15	30.13	14.449		
4,300.00	4,290.94	4,266.51	4,236.02	15.40	16.66	-100.218	111.59	-432.07	447.50	416.67	30.84	14.513		
4,400.00	4,390.94	4,365.53	4,334.08	15.75	17.07	-99.396	115.88	-445.17	459.82	428.28	31.55	14.576		
4,500.00	4,490.94	4,464.56	4,432.14	16.11	17.49	-98.617	120.17	-458.27	472.23	439.97	32.26	14.640		
4,600.00	4,590.94	4,563.59	4,530.21	16.46	17.90	-97.877	124.46	-471.36	484.72	451.75	32.97	14.703		
4,700.00	4,690.94	4,662.61	4,628.27	16.81	18.32	-97.175	128.75	-484.46	497.29	463.61	33.68	14.765		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 102H - Wellbore #1 - Design #1

Survey Program		0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Distance (usft)			
4,800.00	4,790.94	4,761.64	4,726.33	17.16	18.73	-96.508	17.16	133.04	-497.55	509.92	475.53	34.39	14.827		
4,900.00	4,890.94	4,860.67	4,824.40	17.52	19.15	-95.872	17.52	137.33	-510.65	522.62	487.52	35.10	14.888		
5,000.00	4,990.94	4,959.70	4,922.46	17.87	19.56	-95.267	17.87	141.63	-523.75	535.39	499.57	35.82	14.948		
5,100.00	5,090.94	5,058.72	5,020.52	18.22	19.98	-94.690	18.22	145.92	-536.84	548.20	511.67	36.53	15.007		
5,200.00	5,190.94	5,157.75	5,118.59	18.58	20.40	-94.139	18.58	150.21	-549.94	561.07	523.83	37.24	15.065		
5,300.00	5,290.94	5,256.78	5,216.65	18.93	20.81	-93.613	18.93	154.50	-563.03	573.99	536.04	37.96	15.122		
5,400.00	5,390.94	5,355.80	5,314.71	19.28	21.23	-93.110	19.28	158.79	-576.13	586.96	548.29	38.67	15.178		
5,500.00	5,490.94	5,454.83	5,412.78	19.64	21.64	-92.629	19.64	163.08	-589.23	599.97	560.58	39.39	15.233		
5,600.00	5,590.94	5,553.86	5,510.84	19.99	22.06	-92.168	19.99	167.37	-602.32	613.01	572.91	40.10	15.287		
5,700.00	5,690.94	5,652.88	5,608.90	20.34	22.47	-91.727	20.34	171.67	-615.42	626.10	585.28	40.81	15.340		
5,800.00	5,790.94	5,755.42	5,710.45	20.70	22.90	-91.291	20.70	176.09	-628.92	639.17	597.61	41.56	15.380		
5,900.00	5,890.94	5,873.57	5,827.77	21.05	23.38	-90.880	21.05	180.43	-642.17	650.32	607.93	42.40	15.338		
6,000.00	5,990.94	5,992.48	5,946.22	21.41	23.84	-90.585	21.41	183.66	-652.02	658.58	615.37	43.21	15.242		
6,100.00	6,090.94	6,111.92	6,065.47	21.76	24.26	-90.399	21.76	185.75	-658.39	663.89	619.91	43.98	15.094		
6,200.00	6,190.94	6,231.67	6,185.18	22.12	24.66	-90.318	22.12	186.67	-661.21	666.24	621.52	44.72	14.898		
6,300.00	6,290.94	6,337.43	6,290.94	22.47	25.00	-90.314	22.47	186.72	-661.36	666.37	620.95	45.42	14.672		
6,400.00	6,390.94	6,437.43	6,390.94	22.83	25.31	-90.314	22.83	186.72	-661.36	666.37	620.26	46.11	14.453		
6,500.00	6,490.94	6,537.43	6,490.94	23.18	25.62	-90.314	23.18	186.72	-661.36	666.37	619.57	46.80	14.239		
6,600.00	6,590.94	6,637.43	6,590.94	23.54	25.94	-90.314	23.54	186.72	-661.36	666.37	618.88	47.49	14.031		
6,700.00	6,690.94	6,737.43	6,690.94	23.89	26.26	-90.314	23.89	186.72	-661.36	666.37	618.19	48.18	13.830		
6,800.00	6,790.94	6,837.43	6,790.94	24.25	26.57	-90.314	24.25	186.72	-661.36	666.37	617.49	48.88	13.633		
6,900.00	6,890.94	6,937.43	6,890.94	24.61	26.89	-90.314	24.61	186.72	-661.36	666.37	616.80	49.57	13.442		
7,000.00	6,990.94	7,037.43	6,990.94	24.96	27.21	-90.314	24.96	186.72	-661.36	666.37	616.10	50.27	13.257		
7,100.00	7,090.94	7,137.43	7,090.94	25.32	27.53	-90.314	25.32	186.72	-661.36	666.37	615.41	50.96	13.076		
7,200.00	7,190.94	7,237.43	7,190.94	25.67	27.86	-90.314	25.67	186.72	-661.36	666.37	614.71	51.66	12.900		
7,300.00	7,290.94	7,337.43	7,290.94	26.03	28.18	-90.314	26.03	186.72	-661.36	666.37	614.01	52.36	12.728		
7,400.00	7,390.94	7,437.43	7,390.94	26.38	28.50	-90.314	26.38	186.72	-661.36	666.37	613.32	53.05	12.561		
7,500.00	7,490.94	7,537.43	7,490.94	26.74	28.83	-90.314	26.74	186.72	-661.36	666.37	612.62	53.75	12.398		
7,600.00	7,590.94	7,637.43	7,590.94	27.10	29.15	-90.314	27.10	186.72	-661.36	666.37	611.92	54.45	12.239		
7,700.00	7,690.94	7,737.43	7,690.94	27.45	29.48	-90.314	27.45	186.72	-661.36	666.37	611.22	55.15	12.084		
7,800.00	7,790.94	7,837.43	7,790.94	27.81	29.80	-90.314	27.81	186.72	-661.36	666.37	610.52	55.85	11.932		
7,900.00	7,890.94	7,937.43	7,890.94	28.17	30.13	-90.314	28.17	186.72	-661.36	666.37	609.82	56.55	11.785		
8,000.00	7,990.94	8,037.43	7,990.94	28.52	30.46	-90.314	28.52	186.72	-661.36	666.37	609.12	57.25	11.641		
8,100.00	8,090.94	8,137.43	8,090.94	28.88	30.79	-90.314	28.88	186.72	-661.36	666.37	608.42	57.95	11.500		
8,200.00	8,190.94	8,237.43	8,190.94	29.23	31.12	-90.314	29.23	186.72	-661.36	666.37	607.72	58.65	11.362		
8,300.00	8,290.94	8,337.43	8,290.94	29.59	31.45	-90.314	29.59	186.72	-661.36	666.37	607.02	59.35	11.228		
8,400.00	8,390.94	8,437.43	8,390.94	29.95	31.78	-90.314	29.95	186.72	-661.36	666.37	606.32	60.05	11.097		
8,500.00	8,490.94	8,537.43	8,490.94	30.30	32.11	-90.314	30.30	186.72	-661.36	666.37	605.62	60.75	10.969		
8,600.00	8,590.94	8,637.43	8,590.94	30.66	32.44	-90.314	30.66	186.72	-661.36	666.37	604.92	61.45	10.843		
8,700.00	8,690.94	8,737.43	8,690.94	31.02	32.77	-90.314	31.02	186.72	-661.36	666.37	604.21	62.16	10.721		
8,800.00	8,790.94	8,837.43	8,790.94	31.37	33.11	-90.314	31.37	186.72	-661.36	666.37	603.51	62.86	10.601		
8,900.00	8,890.94	8,937.52	8,891.02	31.73	33.44	-90.331	31.73	186.52	-661.36	666.37	602.81	63.56	10.484		
8,947.45	8,938.39	8,985.01	8,938.39	31.90	33.58	-90.606	31.90	183.32	-661.32	666.36	602.48	63.88	10.431		
9,000.00	8,990.94	9,036.59	8,989.34	32.09	33.73	-91.286	32.09	175.41	-661.24	666.41	602.17	64.24	10.374		
9,100.00	9,090.94	9,129.26	9,078.31	32.44	33.97	-93.482	32.44	149.84	-660.97	667.32	602.42	64.91	10.281		
9,200.00	9,190.94	9,211.91	9,153.28	32.80	34.16	-96.443	32.80	115.20	-660.60	670.89	605.39	65.51	10.242		
9,300.00	9,290.94	9,283.26	9,213.41	33.16	34.29	-99.681	33.16	76.89	-660.20	679.25	613.33	65.92	10.304		
9,400.00	9,390.94	9,350.00	9,264.95	33.51	34.40	-103.192	33.51	34.55	-659.75	694.30	628.22	66.07	10.508		
9,500.00	9,490.94	9,400.00	9,300.14	33.87	34.47	-106.064	33.87	-0.94	-659.37	717.22	651.48	65.73	10.911		
9,600.00	9,590.94	9,437.11	9,324.19	34.23	34.51	-108.296	34.23	-29.20	-659.08	748.57	683.71	64.86	11.541		
9,700.00	9,690.94	9,473.04	9,345.68	34.59	34.55	-110.514	34.59	-57.98	-658.77	788.34	724.66	63.68	12.380		
9,800.00	9,790.94	9,500.00	9,360.60	34.94	34.58	-112.201	34.94	-80.43	-658.53	835.94	773.76	62.18	13.443		

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 102H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
9,900.00	9,890.94	9,529.55	9,375.72	35.30	34.61	-114.063	-105.81	-658.27	890.56	829.87	60.69	14.674		
10,000.00	9,990.94	9,550.00	9,385.41	35.66	34.63	-115.354	-123.82	-658.07	951.34	892.30	59.04	16.112		
10,100.00	10,090.94	9,571.38	9,394.84	36.01	34.65	-116.699	-143.01	-657.87	1,017.39	959.86	57.54	17.682		
10,187.06	10,178.00	9,600.00	9,406.34	36.33	34.68	-118.488	-169.21	-657.59	1,078.79	1,022.28	56.51	19.089		
10,200.00	10,190.94	9,600.00	9,406.34	36.37	34.68	-118.479	-169.21	-657.59	1,088.02	1,031.73	56.29	19.328		
10,250.00	10,240.81	9,600.00	9,406.34	36.52	34.68	-118.274	-169.21	-657.59	1,123.23	1,067.80	55.43	20.263		
10,300.00	10,290.21	9,600.00	9,406.34	36.67	34.68	-117.797	-169.21	-657.59	1,157.55	1,102.97	54.58	21.209		
10,350.00	10,338.75	9,617.60	9,412.76	36.82	34.70	-118.166	-185.60	-657.42	1,190.45	1,136.43	54.02	22.037		
10,400.00	10,386.07	9,628.88	9,416.60	36.95	34.71	-117.879	-196.20	-657.31	1,221.88	1,168.52	53.36	22.898		
10,450.00	10,431.81	9,650.00	9,423.24	37.08	34.73	-117.980	-216.25	-657.10	1,251.71	1,198.85	52.86	23.681		
10,500.00	10,475.61	9,650.00	9,423.24	37.21	34.73	-116.431	-216.25	-657.10	1,279.48	1,227.42	52.06	24.577		
10,550.00	10,517.15	9,650.00	9,423.24	37.32	34.73	-114.570	-216.25	-657.10	1,305.60	1,254.29	51.30	25.448		
10,600.00	10,556.11	9,679.51	9,431.26	37.44	34.77	-114.515	-244.64	-656.80	1,328.98	1,278.02	50.96	26.079		
10,650.00	10,592.19	9,700.00	9,435.97	37.55	34.80	-113.595	-264.58	-656.59	1,350.43	1,299.92	50.51	26.734		
10,700.00	10,625.12	9,700.00	9,435.97	37.67	34.80	-110.870	-264.58	-656.59	1,369.47	1,319.59	49.88	27.456		
10,750.00	10,654.64	9,721.53	9,440.14	37.78	34.84	-109.516	-285.70	-656.36	1,385.97	1,336.46	49.52	27.990		
10,800.00	10,680.54	9,750.00	9,444.44	37.90	34.89	-108.508	-313.84	-656.06	1,400.22	1,350.97	49.25	28.434		
10,850.00	10,702.61	9,750.00	9,444.44	38.02	34.89	-104.886	-313.84	-656.06	1,411.41	1,362.62	48.79	28.927		
10,900.00	10,720.69	9,750.00	9,444.44	38.14	34.89	-100.915	-313.84	-656.06	1,420.44	1,372.01	48.43	29.327		
10,950.00	10,734.64	9,780.59	9,447.49	38.27	34.95	-99.453	-344.27	-655.74	1,426.22	1,377.90	48.32	29.516		
11,000.00	10,744.36	9,800.00	9,448.58	38.40	35.00	-96.812	-363.65	-655.54	1,429.57	1,381.37	48.20	29.660		
11,050.00	10,749.76	9,810.76	9,448.90	38.53	35.02	-93.191	-374.40	-655.42	1,430.13	1,382.01	48.12	29.721		
11,082.06	10,750.94	9,827.06	9,449.09	38.62	35.06	-91.711	-390.70	-655.25	1,429.03	1,380.90	48.13	29.692		
11,100.00	10,751.09	9,844.84	9,449.24	38.67	35.11	-91.715	-408.48	-655.06	1,428.05	1,379.89	48.16	29.653		
11,200.00	10,751.97	9,944.20	9,450.11	39.00	35.44	-91.737	-507.83	-654.01	1,423.48	1,375.07	48.41	29.406		
11,300.00	10,752.84	10,043.90	9,450.98	39.39	35.86	-91.752	-607.52	-652.96	1,420.37	1,371.57	48.80	29.107		
11,400.00	10,753.72	10,143.80	9,451.85	39.84	36.36	-91.761	-707.41	-651.90	1,418.67	1,369.34	49.33	28.758		
11,461.17	10,754.26	10,204.96	9,452.38	40.15	36.70	-91.763	-768.56	-651.25	1,418.32	1,368.59	49.72	28.524		
11,500.00	10,754.60	10,243.79	9,452.72	40.35	36.94	-91.763	-807.40	-650.84	1,418.26	1,368.26	50.00	28.366		
11,600.00	10,755.47	10,343.79	9,453.60	40.92	37.58	-91.764	-907.39	-649.79	1,418.11	1,367.36	50.75	27.945		
11,700.00	10,756.35	10,443.79	9,454.47	41.55	38.28	-91.765	-1,007.38	-648.73	1,417.95	1,366.40	51.56	27.503		
11,800.00	10,757.22	10,543.79	9,455.34	42.24	39.04	-91.766	-1,107.36	-647.67	1,417.80	1,365.38	52.42	27.045		
11,900.00	10,758.10	10,643.79	9,456.21	42.98	39.85	-91.766	-1,207.35	-646.61	1,417.65	1,364.30	53.35	26.573		
12,000.00	10,758.97	10,743.79	9,457.09	43.77	40.71	-91.767	-1,307.34	-645.55	1,417.50	1,363.17	54.33	26.092		
12,100.00	10,759.85	10,843.79	9,457.96	44.60	41.63	-91.768	-1,407.33	-644.50	1,417.35	1,361.99	55.35	25.605		
12,200.00	10,760.73	10,943.79	9,458.83	45.48	42.58	-91.769	-1,507.32	-643.44	1,417.20	1,360.77	56.43	25.115		
12,300.00	10,761.60	11,043.79	9,459.70	46.41	43.58	-91.770	-1,607.31	-642.38	1,417.04	1,359.50	57.55	24.624		
12,400.00	10,762.48	11,143.78	9,460.58	47.37	44.62	-91.770	-1,707.30	-641.32	1,416.89	1,358.18	58.71	24.134		
12,500.00	10,763.35	11,243.78	9,461.45	48.37	45.69	-91.771	-1,807.29	-640.26	1,416.74	1,356.83	59.91	23.647		
12,600.00	10,764.23	11,343.78	9,462.32	49.41	46.80	-91.772	-1,907.28	-639.21	1,416.59	1,355.44	61.15	23.166		
12,700.00	10,765.10	11,443.78	9,463.20	50.48	47.93	-91.773	-2,007.27	-638.15	1,416.44	1,354.02	62.42	22.691		
12,800.00	10,765.98	11,543.78	9,464.07	51.58	49.10	-91.774	-2,107.26	-637.09	1,416.29	1,352.56	63.73	22.224		
12,900.00	10,766.86	11,643.78	9,464.94	52.70	50.30	-91.775	-2,207.25	-636.03	1,416.14	1,351.07	65.06	21.765		
13,000.00	10,767.73	11,743.78	9,465.81	53.86	51.52	-91.775	-2,307.24	-634.98	1,415.99	1,349.56	66.43	21.316		
13,100.00	10,768.61	11,843.78	9,466.69	55.04	52.76	-91.776	-2,407.23	-633.92	1,415.84	1,348.02	67.82	20.876		
13,200.00	10,769.48	11,943.78	9,467.56	56.25	54.02	-91.777	-2,507.22	-632.86	1,415.69	1,346.45	69.24	20.446		
13,300.00	10,770.36	12,043.78	9,468.43	57.47	55.31	-91.778	-2,607.21	-631.80	1,415.54	1,344.86	70.68	20.027		
13,400.00	10,771.23	12,143.78	9,469.30	58.72	56.61	-91.779	-2,707.20	-630.74	1,415.39	1,343.24	72.14	19.619		
13,500.00	10,772.11	12,243.78	9,470.18	59.99	57.94	-91.779	-2,807.19	-629.69	1,415.24	1,341.61	73.63	19.221		
13,600.00	10,772.99	12,343.78	9,471.05	61.28	59.28	-91.780	-2,907.18	-628.63	1,415.09	1,339.95	75.13	18.835		
13,700.00	10,773.86	12,443.77	9,471.92	62.58	60.63	-91.781	-3,007.17	-627.57	1,414.94	1,338.28	76.65	18.459		
13,800.00	10,774.74	12,543.77	9,472.79	63.90	62.00	-91.782	-3,107.16	-626.51	1,414.79	1,336.59	78.19	18.094		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 102H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 0-MWD		Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
13,900.00	10,775.61	12,643.77	9,473.67	65.23	63.38	-91.783	-3,207.15	-625.46	1,414.64	1,334.89	79.75	17.739			
14,000.00	10,776.49	12,743.77	9,474.54	66.58	64.78	-91.784	-3,307.14	-624.40	1,414.49	1,333.17	81.32	17.394			
14,100.00	10,777.37	12,843.77	9,475.41	67.95	66.19	-91.784	-3,407.13	-623.34	1,414.34	1,331.43	82.90	17.060			
14,200.00	10,778.24	12,943.77	9,476.29	69.32	67.60	-91.785	-3,507.12	-622.28	1,414.19	1,329.69	84.50	16.736			
14,300.00	10,779.12	13,043.77	9,477.16	70.71	69.03	-91.786	-3,607.11	-621.22	1,414.04	1,327.92	86.11	16.421			
14,400.00	10,779.99	13,143.77	9,478.03	72.11	70.47	-91.787	-3,707.10	-620.17	1,413.89	1,326.15	87.73	16.115			
14,500.00	10,780.87	13,243.77	9,478.90	73.52	71.92	-91.788	-3,807.09	-619.11	1,413.74	1,324.37	89.37	15.819			
14,600.00	10,781.74	13,343.77	9,479.78	74.94	73.38	-91.789	-3,907.08	-618.05	1,413.59	1,322.58	91.01	15.532			
14,700.00	10,782.62	13,443.77	9,480.65	76.36	74.84	-91.789	-4,007.07	-616.99	1,413.44	1,320.77	92.67	15.253			
14,800.00	10,783.50	13,543.77	9,481.52	77.80	76.32	-91.790	-4,107.06	-615.94	1,413.29	1,318.96	94.33	14.982			
14,900.00	10,784.37	13,643.77	9,482.39	79.25	77.80	-91.791	-4,207.05	-614.88	1,413.14	1,317.14	96.00	14.720			
15,000.00	10,785.25	13,743.77	9,483.27	80.70	79.28	-91.792	-4,307.04	-613.82	1,412.99	1,315.31	97.68	14.465			
15,100.00	10,786.12	13,843.76	9,484.14	82.16	80.78	-91.793	-4,407.03	-612.76	1,412.84	1,313.47	99.37	14.218			
15,200.00	10,787.00	13,943.76	9,485.01	83.63	82.28	-91.794	-4,507.02	-611.70	1,412.70	1,311.63	101.07	13.978			
15,300.00	10,787.87	14,043.76	9,485.88	85.11	83.78	-91.795	-4,607.01	-610.65	1,412.55	1,309.78	102.77	13.745			
15,400.00	10,788.75	14,143.76	9,486.76	86.59	85.29	-91.795	-4,707.00	-609.59	1,412.40	1,307.92	104.48	13.518			
15,500.00	10,789.63	14,243.76	9,487.63	88.08	86.81	-91.796	-4,806.99	-608.53	1,412.25	1,306.05	106.20	13.298			
15,600.00	10,790.50	14,343.76	9,488.50	89.57	88.33	-91.797	-4,906.98	-607.47	1,412.10	1,304.18	107.92	13.085			
15,700.00	10,791.38	14,443.76	9,489.37	91.07	89.86	-91.798	-5,006.97	-606.41	1,411.95	1,302.31	109.65	12.877			
15,800.00	10,792.25	14,543.76	9,490.25	92.58	91.39	-91.799	-5,106.96	-605.36	1,411.81	1,300.43	111.38	12.676			
15,900.00	10,793.13	14,643.76	9,491.12	94.09	92.92	-91.800	-5,206.95	-604.30	1,411.66	1,298.54	113.12	12.480			
16,000.00	10,794.00	14,743.76	9,491.99	95.60	94.46	-91.801	-5,306.94	-603.24	1,411.51	1,296.65	114.86	12.289			
16,100.00	10,794.88	14,843.76	9,492.87	97.12	96.00	-91.801	-5,406.93	-602.18	1,411.36	1,294.76	116.60	12.104			
16,200.00	10,795.76	14,943.76	9,493.74	98.64	97.55	-91.802	-5,506.92	-601.13	1,411.21	1,292.86	118.36	11.923			
16,300.00	10,796.63	15,043.76	9,494.61	100.17	99.10	-91.803	-5,606.91	-600.07	1,411.07	1,290.95	120.11	11.748			
16,400.00	10,797.51	15,143.75	9,495.48	101.70	100.65	-91.804	-5,706.90	-599.01	1,410.92	1,289.05	121.87	11.577			
16,500.00	10,798.38	15,243.75	9,496.36	103.24	102.21	-91.805	-5,806.89	-597.95	1,410.77	1,287.14	123.63	11.411			
16,600.00	10,799.26	15,343.75	9,497.23	104.78	103.77	-91.806	-5,906.88	-596.89	1,410.62	1,285.23	125.40	11.249			
16,700.00	10,800.14	15,443.75	9,498.10	106.32	105.33	-91.807	-6,006.87	-595.84	1,410.48	1,283.31	127.17	11.091			
16,800.00	10,801.01	15,543.75	9,498.97	107.86	106.89	-91.807	-6,106.86	-594.78	1,410.33	1,281.39	128.94	10.938			
16,900.00	10,801.89	15,643.75	9,499.85	109.41	108.46	-91.808	-6,206.85	-593.72	1,410.18	1,279.47	130.71	10.788			
17,000.00	10,802.76	15,743.75	9,500.72	110.97	110.03	-91.809	-6,306.84	-592.66	1,410.03	1,277.54	132.49	10.642			
17,100.00	10,803.64	15,843.75	9,501.59	112.52	111.60	-91.810	-6,406.83	-591.61	1,409.89	1,275.61	134.27	10.500			
17,200.00	10,804.51	15,943.75	9,502.46	114.08	113.18	-91.811	-6,506.82	-590.55	1,409.74	1,273.68	136.06	10.361			
17,300.00	10,805.39	16,043.75	9,503.34	115.64	114.76	-91.812	-6,606.81	-589.49	1,409.59	1,271.75	137.84	10.226			
17,400.00	10,806.27	16,143.75	9,504.21	117.20	116.34	-91.813	-6,706.80	-588.43	1,409.45	1,269.82	139.63	10.094			
17,500.00	10,807.14	16,243.75	9,505.08	118.77	117.92	-91.814	-6,806.79	-587.37	1,409.30	1,267.88	141.42	9.965			
17,600.00	10,808.02	16,343.75	9,505.96	120.33	119.50	-91.814	-6,906.78	-586.32	1,409.15	1,265.94	143.21	9.840			
17,700.00	10,808.89	16,443.74	9,506.83	121.90	121.09	-91.815	-7,006.77	-585.26	1,409.01	1,264.00	145.00	9.717			
17,800.00	10,809.77	16,543.74	9,507.70	123.48	122.67	-91.816	-7,106.76	-584.20	1,408.86	1,262.06	146.80	9.597			
17,900.00	10,810.64	16,643.74	9,508.57	125.05	124.26	-91.817	-7,206.75	-583.14	1,408.72	1,260.12	148.60	9.480			
18,000.00	10,811.52	16,743.74	9,509.45	126.63	125.85	-91.818	-7,306.73	-582.08	1,408.57	1,258.17	150.40	9.366			
18,100.00	10,812.40	16,843.74	9,510.32	128.20	127.44	-91.819	-7,406.72	-581.03	1,408.42	1,256.23	152.20	9.254			
18,200.00	10,813.27	16,943.74	9,511.19	129.78	129.04	-91.820	-7,506.71	-579.97	1,408.28	1,254.28	154.00	9.145			
18,300.00	10,814.15	17,043.74	9,512.06	131.37	130.63	-91.821	-7,606.70	-578.91	1,408.13	1,252.33	155.80	9.038			
18,400.00	10,815.02	17,143.74	9,512.94	132.95	132.23	-91.822	-7,706.69	-577.85	1,407.99	1,250.38	157.61	8.934			
18,500.00	10,815.90	17,243.74	9,513.81	134.53	133.83	-91.822	-7,806.68	-576.80	1,407.84	1,248.43	159.41	8.831			
18,600.00	10,816.77	17,343.74	9,514.68	136.12	135.43	-91.823	-7,906.67	-575.74	1,407.69	1,246.48	161.22	8.732			
18,700.00	10,817.65	17,443.74	9,515.55	137.71	137.03	-91.824	-8,006.66	-574.68	1,407.55	1,244.52	163.03	8.634			
18,800.00	10,818.53	17,543.74	9,516.43	139.30	138.63	-91.825	-8,106.65	-573.62	1,407.40	1,242.57	164.83	8.538			
18,900.00	10,819.40	17,643.74	9,517.30	140.89	140.24	-91.826	-8,206.64	-572.56	1,407.26	1,240.61	166.64	8.445			
19,000.00	10,820.28	17,743.73	9,518.17	142.49	141.84	-91.827	-8,306.63	-571.51	1,407.11	1,238.66	168.46	8.353			

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 102H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,100.00	10,821.15	17,843.73	9,519.04	144.08	143.45	-91.828	-8,406.62	-570.45	1,406.97	1,236.70	170.27	8.263	
19,200.00	10,822.03	17,943.73	9,519.92	145.68	145.05	-91.829	-8,506.61	-569.39	1,406.82	1,234.74	172.08	8.175	
19,300.00	10,822.90	18,043.73	9,520.79	147.27	146.66	-91.830	-8,606.60	-568.33	1,406.68	1,232.79	173.89	8.089	
19,400.00	10,823.78	18,143.73	9,521.66	148.87	148.27	-91.830	-8,706.59	-567.28	1,406.53	1,230.83	175.71	8.005	
19,500.00	10,824.66	18,243.73	9,522.54	150.47	149.88	-91.831	-8,806.58	-566.22	1,406.39	1,228.87	177.52	7.922	
19,600.00	10,825.53	18,343.73	9,523.41	152.07	151.49	-91.832	-8,906.57	-565.16	1,406.24	1,226.91	179.34	7.841	
19,700.00	10,826.41	18,443.73	9,524.28	153.67	153.10	-91.833	-9,006.56	-564.10	1,406.10	1,224.95	181.15	7.762	
19,800.00	10,827.28	18,543.73	9,525.15	155.27	154.71	-91.834	-9,106.55	-563.04	1,405.96	1,222.99	182.97	7.684	
19,900.00	10,828.16	18,643.73	9,526.03	156.88	156.33	-91.835	-9,206.54	-561.99	1,405.81	1,221.03	184.78	7.608	
20,000.00	10,829.04	18,743.73	9,526.90	158.48	157.94	-91.836	-9,306.53	-560.93	1,405.67	1,219.07	186.60	7.533	
20,100.00	10,829.91	18,843.73	9,527.77	160.09	159.56	-91.837	-9,406.52	-559.87	1,405.52	1,217.10	188.42	7.460	
20,200.00	10,830.79	18,943.73	9,528.64	161.70	161.17	-91.838	-9,506.51	-558.81	1,405.38	1,215.14	190.24	7.388	
20,300.00	10,831.66	19,043.72	9,529.52	163.30	162.79	-91.839	-9,606.50	-557.76	1,405.23	1,213.18	192.06	7.317	
20,400.00	10,832.54	19,143.72	9,530.39	164.91	164.41	-91.840	-9,706.49	-556.70	1,405.09	1,211.22	193.87	7.247	
20,500.00	10,833.41	19,243.72	9,531.26	166.52	166.03	-91.840	-9,806.48	-555.64	1,404.95	1,209.25	195.69	7.179	
20,600.00	10,834.29	19,343.72	9,532.13	168.13	167.65	-91.841	-9,906.47	-554.58	1,404.80	1,207.29	197.51	7.113	
20,700.00	10,835.17	19,443.72	9,533.01	169.74	169.27	-91.842	-10,006.46	-553.52	1,404.66	1,205.33	199.33	7.047	
20,800.00	10,836.04	19,543.72	9,533.88	171.36	170.89	-91.843	-10,106.45	-552.47	1,404.52	1,203.37	201.15	6.982	
20,900.00	10,836.92	19,643.72	9,534.75	172.97	172.51	-91.844	-10,206.44	-551.41	1,404.37	1,201.40	202.97	6.919	
20,960.46	10,837.45	19,702.16	9,535.26	173.83	173.45	-91.824	-10,264.87	-550.79	1,404.29	1,200.41	203.88	6.888	
20,972.39	10,837.55	19,702.16	9,535.26	174.00	173.45	-90.324	-10,264.87	-550.79	1,404.34	1,200.32	204.02	6.883	

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 112H - Wellbore #1 - Design #1

Survey Program: 0-MWD														Offset Site Error: 0.00 usft	
Reference														Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.00	0.00	-90.000	0.00	-91.00	91.00						
100.00	100.00	100.00	100.00	0.13	0.13	-90.000	0.00	-91.00	91.00	90.74	0.26	355.042			
200.00	200.00	200.00	200.00	0.49	0.49	-90.000	0.00	-91.00	91.00	90.03	0.97	93.501			
300.00	300.00	300.00	300.00	0.85	0.85	-90.000	0.00	-91.00	91.00	89.31	1.69	53.840			
400.00	400.00	400.00	400.00	1.20	1.20	-90.000	0.00	-91.00	91.00	88.59	2.41	37.804			
500.00	500.00	500.00	500.00	1.56	1.56	-90.000	0.00	-91.00	91.00	87.88	3.12	29.129			
600.00	600.00	600.00	600.00	1.92	1.92	-90.000	0.00	-91.00	91.00	87.16	3.84	23.692 CC			
700.00	700.00	699.25	699.25	2.28	2.28	-89.524	0.76	-91.40	91.41	86.85	4.55	20.072 ES			
800.00	800.00	798.45	798.41	2.64	2.63	-88.121	3.04	-92.61	92.67	87.40	5.27	17.597			
900.00	899.99	897.56	897.42	3.00	2.99	-86.397	6.83	-94.61	94.85	88.88	5.98	15.867			
1,000.00	999.96	996.59	996.27	3.36	3.34	-84.935	12.13	-97.41	97.95	91.26	6.69	14.641			
1,100.00	1,099.86	1,095.53	1,094.91	3.71	3.70	-83.749	18.94	-101.00	101.93	94.53	7.40	13.767			
1,200.00	1,199.68	1,194.38	1,193.31	4.07	4.07	-82.841	27.24	-105.39	106.77	98.65	8.12	13.148			
1,300.00	1,299.37	1,294.17	1,292.56	4.44	4.44	-82.463	36.46	-110.26	112.00	103.15	8.85	12.656			
1,399.70	1,398.60	1,393.74	1,391.58	4.80	4.82	-82.959	45.66	-115.12	117.04	107.45	9.58	12.211			
1,400.00	1,398.90	1,394.04	1,391.88	4.80	4.82	-82.962	45.69	-115.14	117.05	107.46	9.59	12.209			
1,500.00	1,498.36	1,493.90	1,491.19	5.17	5.20	-83.824	54.93	-120.01	122.03	111.70	10.33	11.812			
1,600.00	1,597.81	1,593.76	1,590.50	5.55	5.58	-84.619	64.16	-124.89	127.03	115.95	11.08	11.466			
1,700.00	1,697.26	1,693.62	1,689.82	5.92	5.96	-85.353	73.39	-129.77	132.06	120.23	11.83	11.161			
1,800.00	1,796.71	1,793.48	1,789.13	6.30	6.34	-86.033	82.62	-134.64	137.10	124.52	12.59	10.892			
1,900.00	1,896.17	1,893.34	1,888.44	6.68	6.72	-86.665	91.85	-139.52	142.17	128.82	13.35	10.653			
2,000.00	1,995.62	1,993.20	1,987.75	7.06	7.11	-87.253	101.09	-144.40	147.25	133.14	14.11	10.439			
2,100.00	2,095.07	2,093.06	2,087.07	7.44	7.50	-87.802	110.32	-149.27	152.34	137.47	14.87	10.246			
2,200.00	2,194.53	2,192.92	2,186.38	7.83	7.88	-88.315	119.55	-154.15	157.45	141.82	15.63	10.072			
2,300.00	2,293.98	2,292.78	2,285.69	8.21	8.27	-88.796	128.78	-159.03	162.57	146.17	16.40	9.914			
2,400.00	2,393.43	2,392.64	2,385.00	8.59	8.66	-89.247	138.02	-163.91	167.70	150.53	17.17	9.770			
2,500.00	2,492.88	2,492.50	2,484.32	8.98	9.04	-89.672	147.25	-168.78	172.84	154.91	17.93	9.638			
2,600.00	2,592.34	2,592.36	2,583.63	9.36	9.43	-90.072	156.48	-173.66	177.99	159.29	18.70	9.517			
2,700.00	2,691.79	2,692.22	2,682.94	9.75	9.82	-90.449	165.71	-178.54	183.15	163.67	19.47	9.406			
2,722.26	2,713.93	2,714.45	2,705.05	9.84	9.91	-90.530	167.77	-179.62	184.29	164.65	19.64	9.382			
2,800.00	2,791.32	2,793.12	2,783.32	10.13	10.21	-90.611	174.80	-183.34	188.16	167.92	20.24	9.295			
2,900.00	2,891.06	2,895.38	2,885.26	10.51	10.60	-90.583	181.97	-187.12	192.05	171.05	21.00	9.143			
3,000.00	2,990.96	2,997.73	2,987.46	10.87	10.97	-90.501	186.72	-189.63	194.62	172.88	21.74	8.952			
3,100.00	3,090.94	3,100.13	3,089.82	11.22	11.33	-90.367	189.05	-190.86	195.87	173.42	22.45	8.723			
3,122.06	3,113.00	3,122.73	3,112.42	11.30	11.41	-90.330	189.24	-190.96	195.97	173.36	22.61	8.668			
3,200.00	3,190.94	3,201.25	3,190.94	11.57	11.68	-90.310	189.31	-191.00	196.00	172.86	23.15	8.468			
3,300.00	3,290.94	3,301.25	3,290.94	11.91	12.02	-90.310	189.31	-191.00	196.00	172.17	23.84	8.223			
3,400.00	3,390.94	3,401.25	3,390.94	12.26	12.36	-90.310	189.31	-191.00	196.00	171.48	24.53	7.991			
3,500.00	3,490.94	3,501.25	3,490.94	12.61	12.71	-90.310	189.31	-191.00	196.00	170.78	25.22	7.772			
3,600.00	3,590.94	3,601.25	3,590.94	12.95	13.05	-90.310	189.31	-191.00	196.00	170.09	25.91	7.564			
3,700.00	3,690.94	3,701.25	3,690.94	13.30	13.40	-90.310	189.31	-191.00	196.00	169.39	26.61	7.366			
3,800.00	3,790.94	3,801.25	3,790.94	13.65	13.74	-90.310	189.31	-191.00	196.00	168.70	27.31	7.178			
3,900.00	3,890.94	3,901.25	3,890.94	14.00	14.09	-90.310	189.31	-191.00	196.00	168.00	28.00	6.999			
4,000.00	3,990.94	4,001.25	3,990.94	14.35	14.44	-90.310	189.31	-191.00	196.00	167.30	28.70	6.829			
4,100.00	4,090.94	4,101.25	4,090.94	14.70	14.78	-90.310	189.31	-191.00	196.00	166.60	29.40	6.667			
4,200.00	4,190.94	4,201.25	4,190.94	15.05	15.13	-90.310	189.31	-191.00	196.00	165.90	30.10	6.512			
4,300.00	4,290.94	4,301.25	4,290.94	15.40	15.48	-90.310	189.31	-191.00	196.00	165.20	30.80	6.363			
4,400.00	4,390.94	4,401.25	4,390.94	15.75	15.83	-90.310	189.31	-191.00	196.00	164.50	31.50	6.222			
4,500.00	4,490.94	4,501.25	4,490.94	16.11	16.18	-90.310	189.31	-191.00	196.00	163.80	32.21	6.086			
4,600.00	4,590.94	4,601.25	4,590.94	16.46	16.53	-90.310	189.31	-191.00	196.00	163.09	32.91	5.956			
4,700.00	4,690.94	4,701.25	4,690.94	16.81	16.88	-90.310	189.31	-191.00	196.00	162.39	33.61	5.831			
4,800.00	4,790.94	4,801.25	4,790.94	17.16	17.23	-90.310	189.31	-191.00	196.00	161.69	34.32	5.712			

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 112H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:			Offset Well Error: 0.00 usft	
Reference	Vertical	Measured	Vertical	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)								
4,900.00	4,890.94	4,901.25	4,890.94	17.52	17.58	-90.310	189.31	-191.00	196.00	160.98	35.02	5.597	
5,000.00	4,990.94	5,001.25	4,990.94	17.87	17.93	-90.310	189.31	-191.00	196.00	160.28	35.73	5.486	
5,100.00	5,090.94	5,101.25	5,090.94	18.22	18.28	-90.310	189.31	-191.00	196.00	159.57	36.43	5.380	
5,200.00	5,190.94	5,201.25	5,190.94	18.58	18.64	-90.310	189.31	-191.00	196.00	158.87	37.14	5.278	
5,300.00	5,290.94	5,301.25	5,290.94	18.93	18.99	-90.310	189.31	-191.00	196.00	158.16	37.84	5.179	
5,400.00	5,390.94	5,401.25	5,390.94	19.28	19.34	-90.310	189.31	-191.00	196.00	157.45	38.55	5.084	
5,500.00	5,490.94	5,501.25	5,490.94	19.64	19.69	-90.310	189.31	-191.00	196.00	156.74	39.26	4.993	
5,600.00	5,590.94	5,601.25	5,590.94	19.99	20.05	-90.310	189.31	-191.00	196.00	156.04	39.97	4.904	
5,700.00	5,690.94	5,701.25	5,690.94	20.34	20.40	-90.310	189.31	-191.00	196.00	155.33	40.67	4.819	
5,800.00	5,790.94	5,801.25	5,790.94	20.70	20.75	-90.310	189.31	-191.00	196.00	154.62	41.38	4.736	
5,900.00	5,890.94	5,901.25	5,890.94	21.05	21.11	-90.310	189.31	-191.00	196.00	153.91	42.09	4.657	
6,000.00	5,990.94	6,001.25	5,990.94	21.41	21.46	-90.310	189.31	-191.00	196.00	153.20	42.80	4.580	
6,100.00	6,090.94	6,101.25	6,090.94	21.76	21.81	-90.310	189.31	-191.00	196.00	152.49	43.51	4.505	
6,200.00	6,190.94	6,201.25	6,190.94	22.12	22.17	-90.310	189.31	-191.00	196.00	151.79	44.22	4.433	
6,300.00	6,290.94	6,301.25	6,290.94	22.47	22.52	-90.310	189.31	-191.00	196.00	151.08	44.93	4.363	
6,400.00	6,390.94	6,401.25	6,390.94	22.83	22.87	-90.310	189.31	-191.00	196.00	150.37	45.64	4.295	
6,500.00	6,490.94	6,501.25	6,490.94	23.18	23.23	-90.310	189.31	-191.00	196.00	149.66	46.35	4.229	
6,600.00	6,590.94	6,601.25	6,590.94	23.54	23.58	-90.310	189.31	-191.00	196.00	148.95	47.06	4.165	
6,700.00	6,690.94	6,701.25	6,690.94	23.89	23.94	-90.310	189.31	-191.00	196.00	148.24	47.77	4.103	
6,800.00	6,790.94	6,801.25	6,790.94	24.25	24.29	-90.310	189.31	-191.00	196.00	147.53	48.48	4.043	
6,900.00	6,890.94	6,901.25	6,890.94	24.61	24.65	-90.310	189.31	-191.00	196.00	146.81	49.19	3.985	
7,000.00	6,990.94	7,001.25	6,990.94	24.96	25.00	-90.310	189.31	-191.00	196.00	146.10	49.90	3.928	
7,100.00	7,090.94	7,101.25	7,090.94	25.32	25.36	-90.310	189.31	-191.00	196.00	145.39	50.61	3.873	
7,200.00	7,190.94	7,201.25	7,190.94	25.67	25.71	-90.310	189.31	-191.00	196.00	144.68	51.32	3.819	
7,300.00	7,290.94	7,301.25	7,290.94	26.03	26.07	-90.310	189.31	-191.00	196.00	143.97	52.03	3.767	
7,400.00	7,390.94	7,401.25	7,390.94	26.38	26.42	-90.310	189.31	-191.00	196.00	143.26	52.74	3.716	
7,500.00	7,490.94	7,501.25	7,490.94	26.74	26.78	-90.310	189.31	-191.00	196.00	142.55	53.46	3.667	
7,600.00	7,590.94	7,601.25	7,590.94	27.10	27.13	-90.310	189.31	-191.00	196.00	141.83	54.17	3.618	
7,700.00	7,690.94	7,701.25	7,690.94	27.45	27.49	-90.310	189.31	-191.00	196.00	141.12	54.88	3.571	
7,800.00	7,790.94	7,801.25	7,790.94	27.81	27.84	-90.310	189.31	-191.00	196.00	140.41	55.59	3.526	
7,900.00	7,890.94	7,901.25	7,890.94	28.17	28.20	-90.310	189.31	-191.00	196.00	139.70	56.30	3.481	
8,000.00	7,990.94	8,001.25	7,990.94	28.52	28.56	-90.310	189.31	-191.00	196.00	138.99	57.02	3.438	
8,100.00	8,090.94	8,101.25	8,090.94	28.88	28.91	-90.310	189.31	-191.00	196.00	138.27	57.73	3.395	
8,200.00	8,190.94	8,201.25	8,190.94	29.23	29.27	-90.310	189.31	-191.00	196.00	137.56	58.44	3.354	
8,300.00	8,290.94	8,301.25	8,290.94	29.59	29.62	-90.310	189.31	-191.00	196.00	136.85	59.15	3.313	
8,400.00	8,390.94	8,401.25	8,390.94	29.95	29.98	-90.310	189.31	-191.00	196.00	136.14	59.87	3.274	
8,500.00	8,490.94	8,501.25	8,490.94	30.30	30.34	-90.310	189.31	-191.00	196.00	135.42	60.58	3.235	
8,600.00	8,590.94	8,601.25	8,590.94	30.66	30.69	-90.310	189.31	-191.00	196.00	134.71	61.29	3.198	
8,700.00	8,690.94	8,701.25	8,690.94	31.02	31.05	-90.310	189.31	-191.00	196.00	134.00	62.01	3.161	
8,800.00	8,790.94	8,801.25	8,790.94	31.37	31.40	-90.310	189.31	-191.00	196.00	133.28	62.72	3.125	
8,900.00	8,890.94	8,901.25	8,890.94	31.73	31.76	-90.310	189.31	-191.00	196.00	132.57	63.43	3.090	
9,000.00	8,990.94	9,001.25	8,990.94	32.09	32.12	-90.310	189.31	-191.00	196.00	131.86	64.15	3.056	
9,100.00	9,090.94	9,101.25	9,090.94	32.44	32.47	-90.310	189.31	-191.00	196.00	131.14	64.86	3.022	
9,200.00	9,190.94	9,201.25	9,190.94	32.80	32.83	-90.310	189.31	-191.00	196.00	130.43	65.57	2.989	
9,300.00	9,290.94	9,301.25	9,290.94	33.16	33.19	-90.310	189.31	-191.00	196.00	129.72	66.29	2.957	
9,400.00	9,390.94	9,401.25	9,390.94	33.51	33.54	-90.310	189.31	-191.00	196.00	129.00	67.00	2.925	
9,500.00	9,490.94	9,503.91	9,493.45	33.87	33.88	-91.433	185.48	-190.48	195.56	127.86	67.69	2.889	
9,600.00	9,590.94	9,603.98	9,591.33	34.23	34.17	-97.364	165.46	-187.75	194.36	126.00	68.36	2.843	
9,604.70	9,595.64	9,608.48	9,595.64	34.25	34.19	-97.750	164.16	-187.58	194.35	125.97	68.39	2.842 SF	
9,700.00	9,690.94	9,694.65	9,675.78	34.59	34.41	-106.941	133.00	-183.34	197.46	128.65	68.81	2.870	
9,800.00	9,790.94	9,773.40	9,744.15	34.94	34.60	-117.662	94.40	-178.08	211.94	143.71	68.23	3.106	
9,900.00	9,890.94	9,840.04	9,797.38	35.30	34.75	-127.354	54.74	-172.69	242.32	176.32	66.00	3.671	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 112H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference										Offset Well Error: 0.00 usft				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
10,000.00	9,990.94	9,900.00	9,841.02	35.66	34.87	-135.688	14.04	-167.15	288.45	225.42	63.04	4.576		
10,100.00	10,090.94	9,950.00	9,873.96	36.01	34.98	-141.965	-23.21	-162.08	347.29	287.40	59.89	5.799		
10,187.06	10,178.00	9,976.34	9,889.96	36.33	35.04	-144.968	-43.94	-159.26	406.01	349.32	56.69	7.161		
10,200.00	10,190.94	9,981.06	9,892.73	36.37	35.05	-145.470	-47.72	-158.74	415.16	358.83	56.33	7.370		
10,250.00	10,240.81	10,000.00	9,903.50	36.52	35.09	-147.196	-63.16	-156.64	449.80	394.81	54.99	8.179		
10,300.00	10,290.21	10,018.52	9,913.54	36.67	35.13	-148.487	-78.58	-154.54	483.15	429.50	53.64	9.007		
10,350.00	10,338.75	10,037.81	9,923.44	36.82	35.18	-149.534	-94.98	-152.31	515.02	462.66	52.36	9.836		
10,400.00	10,386.07	10,050.00	9,929.42	36.95	35.21	-149.575	-105.51	-150.88	545.35	494.62	50.73	10.749		
10,450.00	10,431.81	10,077.20	9,941.93	37.08	35.28	-150.914	-129.45	-147.62	573.75	523.85	49.90	11.498		
10,500.00	10,475.61	10,100.00	9,951.51	37.21	35.33	-151.584	-149.94	-144.83	600.39	551.54	48.85	12.290		
10,550.00	10,517.15	10,117.43	9,958.28	37.32	35.38	-151.464	-165.85	-142.66	625.06	577.47	47.60	13.133		
10,600.00	10,556.11	10,150.00	9,969.61	37.44	35.46	-152.853	-196.11	-138.55	647.97	600.88	46.99	13.790		
10,650.00	10,592.19	10,150.00	9,969.61	37.55	35.46	-150.072	-196.11	-138.55	668.40	623.19	45.22	14.782		
10,700.00	10,625.12	10,178.80	9,978.17	37.67	35.54	-150.639	-223.35	-134.84	686.72	642.17	44.55	15.414		
10,750.00	10,654.64	10,200.00	9,983.58	37.78	35.60	-149.859	-243.66	-132.08	702.95	659.25	43.70	16.085		
10,800.00	10,680.54	10,220.17	9,988.03	37.90	35.66	-148.445	-263.16	-129.42	716.94	674.02	42.92	16.705		
10,850.00	10,702.61	10,250.00	9,993.32	38.02	35.75	-148.479	-292.24	-125.46	728.78	686.35	42.43	17.174		
10,900.00	10,720.69	10,250.00	9,993.32	38.14	35.75	-139.746	-292.24	-125.46	738.28	696.74	41.54	17.773		
10,950.00	10,734.64	10,282.63	9,997.35	38.27	35.85	-138.620	-324.32	-121.10	745.14	703.85	41.29	18.045		
11,000.00	10,744.36	10,300.00	9,998.74	38.40	35.90	-128.206	-341.47	-118.76	749.89	708.89	40.99	18.293		
11,050.00	10,749.76	10,332.31	9,999.94	38.53	36.01	-121.596	-373.46	-114.41	752.33	711.42	40.91	18.390		
11,082.06	10,750.94	10,344.81	10,000.05	38.62	36.05	-105.304	-385.85	-112.75	752.44	711.56	40.88	18.405		
11,100.00	10,751.09	10,361.92	10,000.19	38.67	36.11	-105.762	-402.82	-110.57	752.18	711.28	40.90	18.391		
11,200.00	10,751.97	10,458.63	10,001.04	39.00	36.48	-111.663	-498.96	-100.14	751.29	710.19	41.09	18.283		
11,300.00	10,752.84	10,557.12	10,001.90	39.39	36.92	-132.703	-597.17	-92.86	751.01	709.59	41.43	18.129		
11,400.00	10,753.72	10,656.72	10,002.78	39.84	37.42	-175.870	-696.68	-88.94	750.97	709.12	41.85	17.944		
11,415.29	10,753.85	10,672.00	10,002.91	39.92	37.50	179.972	-711.96	-88.64	750.97	709.05	41.92	17.913		
11,461.17	10,754.26	10,717.87	10,003.31	40.15	37.76	175.536	-757.83	-88.19	750.97	708.83	42.14	17.819		
11,500.00	10,754.60	10,756.70	10,003.65	40.35	37.99	175.553	-796.68	-87.94	750.97	708.63	42.34	17.736		
11,600.00	10,755.47	10,856.70	10,004.53	40.92	38.62	175.595	-896.65	-87.28	750.97	708.09	42.89	17.511		
11,700.00	10,756.35	10,956.70	10,005.40	41.55	39.31	175.638	-896.65	-86.61	750.97	707.49	43.48	17.272		
11,800.00	10,757.22	11,056.70	10,006.28	42.24	40.06	175.681	-1,096.64	-85.95	750.97	706.85	44.12	17.021		
11,900.00	10,758.10	11,156.70	10,007.16	42.98	40.86	175.724	-1,196.63	-85.29	750.97	706.17	44.81	16.761		
12,000.00	10,758.97	11,256.70	10,008.03	43.77	41.71	175.767	-1,296.63	-84.63	750.97	705.44	45.54	16.492		
12,100.00	10,759.85	11,356.70	10,008.91	44.60	42.60	175.810	-1,396.62	-83.96	750.97	704.66	46.31	16.217		
12,200.00	10,760.73	11,456.70	10,009.78	45.48	43.55	175.852	-1,496.62	-83.30	750.97	703.85	47.12	15.937		
12,300.00	10,761.60	11,556.70	10,010.66	46.41	44.53	175.895	-1,596.61	-82.64	750.97	703.00	47.97	15.655		
12,400.00	10,762.48	11,656.70	10,011.53	47.37	45.55	175.938	-1,696.60	-81.98	750.97	702.12	48.86	15.371		
12,500.00	10,763.35	11,756.70	10,012.41	48.37	46.61	175.981	-1,796.60	-81.31	750.97	701.20	49.77	15.088		
12,600.00	10,764.23	11,856.70	10,013.29	49.41	47.70	176.024	-1,896.59	-80.65	750.97	700.25	50.73	14.805		
12,700.00	10,765.10	11,956.70	10,014.16	50.48	48.83	176.067	-1,996.59	-79.99	750.97	699.27	51.71	14.524		
12,800.00	10,765.98	12,056.70	10,015.04	51.58	49.98	176.109	-2,096.58	-79.33	750.97	698.26	52.72	14.246		
12,900.00	10,766.86	12,156.70	10,015.91	52.70	51.16	176.152	-2,196.57	-78.66	750.97	697.22	53.75	13.971		
13,000.00	10,767.73	12,256.70	10,016.79	53.86	52.37	176.195	-2,296.57	-78.00	750.97	696.16	54.81	13.701		
13,100.00	10,768.61	12,356.70	10,017.67	55.04	53.60	176.238	-2,396.56	-77.34	750.97	695.07	55.90	13.435		
13,200.00	10,769.48	12,456.70	10,018.54	56.25	54.85	176.281	-2,496.56	-76.68	750.97	693.96	57.01	13.173		
13,300.00	10,770.36	12,556.70	10,019.42	57.47	56.13	176.324	-2,596.55	-76.02	750.97	692.84	58.14	12.918		
13,400.00	10,771.23	12,656.70	10,020.29	58.72	57.42	176.367	-2,696.54	-75.35	750.97	691.69	59.28	12.667		
13,500.00	10,772.11	12,756.70	10,021.17	59.99	58.73	176.410	-2,796.54	-74.69	750.97	690.52	60.45	12.422		
13,600.00	10,772.99	12,856.70	10,022.04	61.28	60.06	176.452	-2,896.53	-74.03	750.97	689.33	61.64	12.183		
13,700.00	10,773.86	12,956.70	10,022.92	62.58	61.40	176.495	-2,996.53	-73.37	750.97	688.13	62.84	11.950		
13,800.00	10,774.74	13,056.70	10,023.80	63.90	62.76	176.538	-3,096.52	-72.70	750.97	686.91	64.06	11.723		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 112H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference										Distance				Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,900.00	10,775.61	13,156.70	10,024.67	65.23	64.14	176.581	-3,196.51	-72.04	750.97	685.68	65.29	11.502		
14,000.00	10,776.49	13,256.70	10,025.55	66.58	65.52	176.624	-3,296.51	-71.38	750.97	684.43	66.54	11.286		
14,100.00	10,777.37	13,356.70	10,026.42	67.95	66.92	176.667	-3,396.50	-70.72	750.97	683.17	67.80	11.076		
14,200.00	10,778.24	13,456.70	10,027.30	69.32	68.33	176.710	-3,496.50	-70.05	750.97	681.90	69.08	10.872		
14,300.00	10,779.12	13,556.70	10,028.18	70.71	69.75	176.753	-3,596.49	-69.39	750.97	680.61	70.36	10.673		
14,400.00	10,779.99	13,656.70	10,029.05	72.11	71.18	176.796	-3,696.48	-68.73	750.97	679.31	71.66	10.480		
14,500.00	10,780.87	13,756.70	10,029.93	73.52	72.62	176.839	-3,796.48	-68.07	750.97	678.01	72.97	10.292		
14,600.00	10,781.74	13,856.70	10,030.80	74.94	74.07	176.881	-3,896.47	-67.40	750.97	676.69	74.28	10.110		
14,700.00	10,782.62	13,956.70	10,031.68	76.36	75.52	176.924	-3,996.47	-66.74	750.97	675.36	75.61	9.932		
14,800.00	10,783.50	14,056.70	10,032.55	77.80	76.99	176.967	-4,096.46	-66.08	750.97	674.02	76.95	9.760		
14,900.00	10,784.37	14,156.70	10,033.43	79.25	78.46	177.010	-4,196.45	-65.42	750.97	672.68	78.29	9.592		
15,000.00	10,785.25	14,256.70	10,034.31	80.70	79.94	177.053	-4,296.45	-64.76	750.97	671.33	79.64	9.429		
15,100.00	10,786.12	14,356.70	10,035.18	82.16	81.43	177.096	-4,396.44	-64.09	750.97	669.96	81.01	9.271		
15,200.00	10,787.00	14,456.70	10,036.06	83.63	82.92	177.139	-4,496.43	-63.43	750.97	668.60	82.37	9.117		
15,300.00	10,787.87	14,556.70	10,036.93	85.11	84.42	177.182	-4,596.43	-62.77	750.97	667.22	83.75	8.967		
15,400.00	10,788.75	14,656.70	10,037.81	86.59	85.92	177.225	-4,696.42	-62.11	750.97	665.84	85.13	8.821		
15,500.00	10,789.63	14,756.70	10,038.69	88.08	87.43	177.268	-4,796.42	-61.44	750.97	664.45	86.52	8.680		
15,600.00	10,790.50	14,856.70	10,039.56	89.57	88.95	177.311	-4,896.41	-60.78	750.97	663.06	87.91	8.542		
15,700.00	10,791.38	14,956.70	10,040.44	91.07	90.47	177.354	-4,996.40	-60.12	750.97	661.65	89.31	8.408		
15,800.00	10,792.25	15,056.70	10,041.31	92.58	91.99	177.397	-5,096.40	-59.46	750.97	660.25	90.72	8.278		
15,900.00	10,793.13	15,156.70	10,042.19	94.09	93.52	177.440	-5,196.39	-58.79	750.97	658.84	92.13	8.151		
16,000.00	10,794.00	15,256.70	10,043.06	95.60	95.05	177.483	-5,296.39	-58.13	750.97	657.42	93.55	8.028		
16,100.00	10,794.88	15,356.70	10,043.94	97.12	96.59	177.525	-5,396.38	-57.47	750.97	656.00	94.97	7.908		
16,200.00	10,795.76	15,456.70	10,044.82	98.64	98.13	177.568	-5,496.37	-56.81	750.97	654.57	96.39	7.791		
16,300.00	10,796.63	15,556.70	10,045.69	100.17	99.68	177.611	-5,596.37	-56.14	750.97	653.14	97.82	7.677		
16,400.00	10,797.51	15,656.70	10,046.57	101.70	101.22	177.654	-5,696.36	-55.48	750.97	651.71	99.26	7.566		
16,500.00	10,798.38	15,756.70	10,047.44	103.24	102.78	177.697	-5,796.36	-54.82	750.97	650.27	100.70	7.458		
16,600.00	10,799.26	15,856.70	10,048.32	104.78	104.33	177.740	-5,896.35	-54.16	750.97	648.83	102.14	7.352		
16,700.00	10,800.14	15,956.70	10,049.19	106.32	105.89	177.783	-5,996.34	-53.50	750.97	647.38	103.59	7.250		
16,800.00	10,801.01	16,056.70	10,050.07	107.86	107.45	177.826	-6,096.34	-52.83	750.97	645.93	105.03	7.150		
16,900.00	10,801.89	16,156.70	10,050.95	109.41	109.01	177.869	-6,196.33	-52.17	750.97	644.48	106.49	7.052		
17,000.00	10,802.76	16,256.70	10,051.82	110.97	110.58	177.912	-6,296.33	-51.51	750.97	643.03	107.94	6.957		
17,100.00	10,803.64	16,356.70	10,052.70	112.52	112.14	177.955	-6,396.32	-50.85	750.97	641.57	109.40	6.864		
17,200.00	10,804.51	16,456.70	10,053.57	114.08	113.71	177.998	-6,496.31	-50.18	750.97	640.10	110.86	6.774		
17,300.00	10,805.39	16,556.70	10,054.45	115.64	115.29	178.041	-6,596.31	-49.52	750.97	638.64	112.33	6.685		
17,400.00	10,806.27	16,656.70	10,055.33	117.20	116.86	178.084	-6,696.30	-48.86	750.97	637.17	113.80	6.599		
17,500.00	10,807.14	16,756.70	10,056.20	118.77	118.44	178.127	-6,796.30	-48.20	750.97	635.70	115.27	6.515		
17,600.00	10,808.02	16,856.70	10,057.08	120.33	120.02	178.170	-6,896.29	-47.53	750.97	634.23	116.74	6.433		
17,700.00	10,808.89	16,956.70	10,057.95	121.90	121.60	178.213	-6,996.28	-46.87	750.97	632.75	118.22	6.352		
17,800.00	10,809.77	17,056.70	10,058.83	123.48	123.18	178.256	-7,096.28	-46.21	750.97	631.27	119.70	6.274		
17,900.00	10,810.64	17,156.70	10,059.70	125.05	124.77	178.299	-7,196.27	-45.55	750.97	629.79	121.18	6.197		
18,000.00	10,811.52	17,256.70	10,060.58	126.63	126.36	178.342	-7,296.27	-44.88	750.97	628.31	122.66	6.122		
18,100.00	10,812.40	17,356.70	10,061.46	128.20	127.94	178.385	-7,396.26	-44.22	750.97	626.83	124.14	6.049		
18,200.00	10,813.27	17,456.70	10,062.33	129.78	129.53	178.428	-7,496.25	-43.56	750.97	625.34	125.63	5.978		
18,300.00	10,814.15	17,556.70	10,063.21	131.37	131.13	178.471	-7,596.25	-42.90	750.97	623.85	127.12	5.908		
18,400.00	10,815.02	17,656.70	10,064.08	132.95	132.72	178.514	-7,696.24	-42.23	750.97	622.36	128.61	5.839		
18,500.00	10,815.90	17,756.70	10,064.96	134.53	134.31	178.557	-7,796.24	-41.57	750.97	620.87	130.10	5.772		
18,600.00	10,816.77	17,856.70	10,065.84	136.12	135.91	178.600	-7,896.23	-40.91	750.97	619.37	131.60	5.707		
18,700.00	10,817.65	17,956.70	10,066.71	137.71	137.51	178.643	-7,996.22	-40.25	750.97	617.88	133.09	5.642		
18,800.00	10,818.53	18,056.70	10,067.59	139.30	139.11	178.686	-8,096.22	-39.59	750.97	616.38	134.59	5.580		
18,900.00	10,819.40	18,156.70	10,068.46	140.89	140.71	178.729	-8,196.21	-38.92	750.97	614.88	136.09	5.518		
19,000.00	10,820.28	18,256.70	10,069.34	142.49	142.31	178.772	-8,296.21	-38.26	750.97	613.38	137.59	5.458		

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 112H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,100.00	10,821.15	18,356.70	10,070.21	144.08	143.91	178.815		178.815	-8,396.20	-37.60	750.97	611.88	139.09	5.399	
19,200.00	10,822.03	18,456.70	10,071.09	145.68	145.51	178.858		178.858	-8,496.19	-36.94	750.97	610.37	140.60	5.341	
19,300.00	10,822.90	18,556.70	10,071.97	147.27	147.12	178.901		178.901	-8,596.19	-36.27	750.97	608.87	142.10	5.285	
19,400.00	10,823.78	18,656.70	10,072.84	148.87	148.73	178.944		178.944	-8,696.18	-35.61	750.97	607.36	143.61	5.229	
19,500.00	10,824.66	18,756.70	10,073.72	150.47	150.33	178.987		178.987	-8,796.18	-34.95	750.97	605.85	145.12	5.175	
19,600.00	10,825.53	18,856.70	10,074.59	152.07	151.94	179.030		179.030	-8,896.17	-34.29	750.97	604.34	146.62	5.122	
19,700.00	10,826.41	18,956.70	10,075.47	153.67	153.55	179.073		179.073	-8,996.16	-33.62	750.97	602.83	148.13	5.069	
19,800.00	10,827.28	19,056.70	10,076.35	155.27	155.16	179.116		179.116	-9,096.16	-32.96	750.97	601.32	149.65	5.018	
19,900.00	10,828.16	19,156.70	10,077.22	156.88	156.77	179.159		179.159	-9,196.15	-32.30	750.97	599.81	151.16	4.968	
20,000.00	10,829.04	19,256.70	10,078.10	158.48	158.38	179.202		179.202	-9,296.15	-31.64	750.97	598.29	152.67	4.919	
20,100.00	10,829.91	19,356.70	10,078.97	160.09	159.99	179.245		179.245	-9,396.14	-30.97	750.97	596.78	154.19	4.870	
20,200.00	10,830.79	19,456.70	10,079.85	161.70	161.61	179.288		179.288	-9,496.13	-30.31	750.97	595.26	155.70	4.823	
20,300.00	10,831.66	19,556.70	10,080.72	163.30	163.22	179.331		179.331	-9,596.13	-29.65	750.97	593.74	157.22	4.776	
20,400.00	10,832.54	19,656.70	10,081.60	164.91	164.84	179.374		179.374	-9,696.12	-28.99	750.97	592.23	158.74	4.731	
20,500.00	10,833.41	19,756.70	10,082.48	166.52	166.45	179.417		179.417	-9,796.12	-28.33	750.97	590.71	160.26	4.686	
20,600.00	10,834.29	19,856.70	10,083.35	168.13	168.07	179.460		179.460	-9,896.11	-27.66	750.97	589.19	161.78	4.642	
20,700.00	10,835.17	19,956.70	10,084.23	169.74	169.69	179.503		179.503	-9,996.10	-27.00	750.97	587.66	163.30	4.599	
20,800.00	10,836.04	20,056.70	10,085.10	171.36	171.30	179.546		179.546	-10,096.10	-26.34	750.97	586.14	164.82	4.556	
20,900.00	10,836.92	20,156.70	10,085.98	172.97	172.92	179.589		179.589	-10,196.09	-25.68	750.97	584.62	166.35	4.514	
20,964.27	10,837.48	20,220.98	10,086.54	173.89	173.96	179.617		179.617	-10,260.36	-25.25	750.97	583.88	167.08	4.495	
20,972.39	10,837.55	20,223.33	10,086.56	174.00	174.00	179.620		179.620	-10,262.72	-25.23	750.99	583.85	167.14	4.493	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 132H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.00	0.00	-90.000		0.00	-30.00	30.00				
100.00	100.00	100.00	100.00	0.13	0.13	-90.000		0.00	-30.00	30.00	29.74	0.26	117.047	
200.00	200.00	200.00	200.00	0.49	0.49	-90.000		0.00	-30.00	30.00	29.03	0.97	30.825	
300.00	300.00	300.00	300.00	0.85	0.85	-90.000		0.00	-30.00	30.00	28.31	1.69	17.749	
400.00	400.00	400.00	400.00	1.20	1.20	-90.000		0.00	-30.00	30.00	27.59	2.41	12.463	
500.00	500.00	500.00	500.00	1.56	1.56	-90.000		0.00	-30.00	30.00	26.88	3.12	9.603	
600.00	600.00	600.00	600.00	1.92	1.92	-90.000		0.00	-30.00	30.00	26.16	3.84	7.810	
700.00	700.00	700.00	700.00	2.28	2.28	-90.000		0.00	-30.00	30.00	25.44	4.56	6.582	
800.00	800.00	800.00	800.00	2.64	2.64	-90.000		0.00	-30.00	30.00	24.73	5.27	5.687 CC	
900.00	899.99	899.99	899.99	3.00	3.00	-91.664		0.00	-30.00	30.04	24.04	5.99	5.013	
1,000.00	999.96	999.96	999.96	3.36	3.35	-96.614		0.00	-30.00	30.29	23.59	6.71	4.516 ES	
1,100.00	1,099.86	1,099.86	1,099.86	3.71	3.71	-104.567		0.00	-30.00	31.21	23.78	7.42	4.203	
1,200.00	1,199.68	1,199.68	1,199.68	4.07	4.07	-114.677		0.00	-30.00	33.42	25.28	8.14	4.104 SF	
1,300.00	1,299.37	1,299.37	1,299.37	4.44	4.43	-125.485		0.00	-30.00	37.55	28.68	8.86	4.237	
1,399.70	1,398.60	1,398.60	1,398.60	4.80	4.78	-135.481		0.00	-30.00	43.96	34.38	9.58	4.589	
1,400.00	1,398.90	1,398.90	1,398.90	4.80	4.78	-135.509		0.00	-30.00	43.98	34.40	9.58	4.590	
1,500.00	1,498.36	1,498.36	1,498.36	5.17	5.14	-143.365		0.00	-30.00	52.12	41.82	10.30	5.060	
1,600.00	1,597.81	1,597.68	1,597.67	5.55	5.49	-148.249		0.34	-30.76	61.06	50.05	11.01	5.545	
1,700.00	1,697.26	1,697.07	1,697.03	5.92	5.84	-150.469		1.38	-33.09	70.48	58.76	11.72	6.013	
1,800.00	1,796.71	1,796.49	1,796.35	6.30	6.19	-150.932		3.13	-37.00	80.12	67.68	12.43	6.443	
1,900.00	1,896.17	1,895.86	1,895.55	6.68	6.54	-150.203		5.58	-42.48	89.91	76.76	13.15	6.836	
2,000.00	1,995.62	1,995.14	1,994.52	7.06	6.89	-148.643		8.72	-49.52	99.92	86.05	13.87	7.203	
2,100.00	2,095.07	2,094.26	2,093.19	7.44	7.25	-146.495		12.56	-58.11	110.26	95.66	14.60	7.554	
2,200.00	2,194.53	2,193.57	2,191.96	7.83	7.61	-144.269		16.79	-67.58	120.92	105.59	15.33	7.889	
2,300.00	2,293.98	2,292.90	2,290.74	8.21	7.98	-142.404		21.02	-77.06	131.74	115.68	16.06	8.201	
2,400.00	2,393.43	2,392.22	2,389.53	8.59	8.35	-140.823		25.26	-86.53	142.68	125.88	16.80	8.492	
2,500.00	2,492.88	2,491.55	2,488.31	8.98	8.72	-139.468		29.49	-96.00	153.71	136.17	17.54	8.763	
2,600.00	2,592.34	2,590.88	2,587.10	9.36	9.09	-138.295		33.72	-105.48	164.81	146.53	18.28	9.015	
2,700.00	2,691.79	2,690.20	2,685.88	9.75	9.46	-137.270		37.95	-114.95	175.98	156.95	19.03	9.249	
2,722.26	2,713.93	2,712.32	2,707.87	9.84	9.54	-137.059		38.90	-117.06	178.47	159.28	19.19	9.299	
2,800.00	2,791.32	2,789.58	2,784.71	10.13	9.84	-136.204		42.19	-124.43	186.62	166.85	19.77	9.439	
2,900.00	2,891.06	2,889.06	2,883.65	10.51	10.21	-134.739		46.43	-133.92	195.48	174.96	20.51	9.530	
3,000.00	2,990.96	2,988.59	2,982.63	10.87	10.59	-132.876		50.67	-143.41	202.62	181.38	21.25	9.536	
3,100.00	3,090.94	3,088.10	3,081.60	11.22	10.97	-130.612		54.91	-152.91	208.21	186.24	21.98	9.473	
3,122.06	3,113.00	3,110.04	3,103.42	11.30	11.05	-130.057		55.84	-155.00	209.26	187.12	22.14	9.452	
3,200.00	3,190.94	3,187.55	3,180.51	11.57	11.35	-128.094		59.15	-162.39	212.95	190.25	22.70	9.380	
3,300.00	3,290.94	3,287.01	3,279.42	11.91	11.73	-125.675		63.39	-171.88	218.05	194.62	23.43	9.308	
3,400.00	3,390.94	3,386.46	3,378.32	12.26	12.11	-123.371		67.62	-181.36	223.51	199.37	24.15	9.257	
3,500.00	3,490.94	3,485.91	3,477.23	12.61	12.49	-121.178		71.86	-190.85	229.32	204.46	24.87	9.223	
3,600.00	3,590.94	3,585.36	3,576.14	12.95	12.87	-119.096		76.10	-200.34	235.46	209.87	25.58	9.204	
3,700.00	3,690.94	3,684.82	3,675.05	13.30	13.25	-117.122		80.34	-209.82	241.88	215.59	26.30	9.197	
3,800.00	3,790.94	3,784.27	3,773.96	13.65	13.64	-115.251		84.58	-219.31	248.59	221.57	27.01	9.202	
3,900.00	3,890.94	3,883.72	3,872.87	14.00	14.02	-113.479		88.81	-228.79	255.54	227.81	27.73	9.215	
4,000.00	3,990.94	3,983.18	3,971.78	14.35	14.41	-111.803		93.05	-238.28	262.72	234.28	28.44	9.237	
4,100.00	4,090.94	4,082.63	4,070.68	14.70	14.79	-110.216		97.29	-247.77	270.12	240.96	29.16	9.265	
4,200.00	4,190.94	4,182.08	4,169.59	15.05	15.18	-108.715		101.53	-257.25	277.71	247.85	29.87	9.298	
4,300.00	4,290.94	4,281.53	4,268.50	15.40	15.56	-107.294		105.77	-266.74	285.49	254.91	30.58	9.336	
4,400.00	4,390.94	4,380.99	4,367.41	15.75	15.95	-105.949		110.00	-276.23	293.43	262.14	31.29	9.377	
4,500.00	4,490.94	4,480.44	4,466.32	16.11	16.33	-104.675		114.24	-285.71	301.52	269.52	32.00	9.421	
4,600.00	4,590.94	4,579.89	4,565.23	16.46	16.72	-103.467		118.48	-295.20	309.75	277.04	32.72	9.468	
4,700.00	4,690.94	4,679.35	4,664.14	16.81	17.11	-102.323		122.72	-304.68	318.12	284.69	33.43	9.517	
4,800.00	4,790.94	4,778.80	4,763.04	17.16	17.49	-101.238		126.96	-314.17	326.60	292.46	34.14	9.567	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 132H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.00	4,890.94	4,878.25	4,861.95	17.52	17.88	-100.207	131.19	-323.66	335.20	300.35	34.85	9.619	
5,000.00	4,990.94	4,977.70	4,960.86	17.87	18.27	-99.228	135.43	-333.14	343.89	308.33	35.56	9.671	
5,100.00	5,090.94	5,077.16	5,059.77	18.22	18.66	-98.298	139.67	-342.63	352.69	316.41	36.27	9.723	
5,200.00	5,190.94	5,176.61	5,158.68	18.58	19.04	-97.413	143.91	-352.11	361.57	324.58	36.98	9.776	
5,300.00	5,290.94	5,276.06	5,257.59	18.93	19.43	-96.570	148.15	-361.60	370.53	332.83	37.70	9.830	
5,400.00	5,390.94	5,375.52	5,356.50	19.28	19.82	-95.768	152.38	-371.09	379.57	341.16	38.41	9.883	
5,500.00	5,490.94	5,474.97	5,455.40	19.64	20.21	-95.002	156.62	-380.57	388.67	349.56	39.12	9.936	
5,600.00	5,590.94	5,574.42	5,554.31	19.99	20.60	-94.272	160.86	-390.06	397.85	358.02	39.83	9.988	
5,700.00	5,690.94	5,673.87	5,653.22	20.34	20.98	-93.575	165.10	-399.54	407.08	366.54	40.54	10.041	
5,800.00	5,790.94	5,773.33	5,752.13	20.70	21.37	-92.908	169.34	-409.03	416.38	375.12	41.26	10.092	
5,900.00	5,890.94	5,872.78	5,851.04	21.05	21.76	-92.271	173.57	-418.52	425.72	383.75	41.97	10.144	
6,000.00	5,990.94	5,972.23	5,949.95	21.41	22.15	-91.661	177.81	-428.00	435.12	392.44	42.68	10.194	
6,100.00	6,090.94	6,079.13	6,056.33	21.76	22.57	-91.070	182.10	-437.61	444.03	400.58	43.45	10.218	
6,200.00	6,190.94	6,180.74	6,167.64	22.12	22.98	-90.639	185.36	-444.89	450.52	406.28	44.24	10.183	
6,300.00	6,290.94	6,302.72	6,279.52	22.47	23.39	-90.389	187.29	-449.21	454.36	409.36	45.00	10.097	
6,400.00	6,390.94	6,414.15	6,390.94	22.83	23.77	-90.313	187.88	-450.54	455.55	409.82	45.73	9.963	
6,500.00	6,490.94	6,514.15	6,490.94	23.18	24.11	-90.313	187.88	-450.54	455.55	409.12	46.43	9.812	
6,600.00	6,590.94	6,614.15	6,590.94	23.54	24.44	-90.313	187.88	-450.54	455.55	408.42	47.13	9.666	
6,700.00	6,690.94	6,714.15	6,690.94	23.89	24.78	-90.313	187.88	-450.54	455.55	407.72	47.83	9.524	
6,800.00	6,790.94	6,814.15	6,790.94	24.25	25.12	-90.313	187.88	-450.54	455.55	407.01	48.53	9.387	
6,900.00	6,890.94	6,914.15	6,890.94	24.61	25.46	-90.313	187.88	-450.54	455.55	406.31	49.23	9.253	
7,000.00	6,990.94	7,014.15	6,990.94	24.96	25.80	-90.313	187.88	-450.54	455.55	405.61	49.94	9.122	
7,100.00	7,090.94	7,114.15	7,090.94	25.32	26.14	-90.313	187.88	-450.54	455.55	404.91	50.64	8.996	
7,200.00	7,190.94	7,214.15	7,190.94	25.67	26.48	-90.313	187.88	-450.54	455.55	404.20	51.35	8.872	
7,300.00	7,290.94	7,314.15	7,290.94	26.03	26.82	-90.313	187.88	-450.54	455.55	403.50	52.05	8.752	
7,400.00	7,390.94	7,414.15	7,390.94	26.38	27.16	-90.313	187.88	-450.54	455.55	402.79	52.75	8.635	
7,500.00	7,490.94	7,514.15	7,490.94	26.74	27.50	-90.313	187.88	-450.54	455.55	402.09	53.46	8.521	
7,600.00	7,590.94	7,614.15	7,590.94	27.10	27.84	-90.313	187.88	-450.54	455.55	401.38	54.16	8.410	
7,700.00	7,690.94	7,714.15	7,690.94	27.45	28.18	-90.313	187.88	-450.54	455.55	400.68	54.87	8.302	
7,800.00	7,790.94	7,814.15	7,790.94	27.81	28.53	-90.313	187.88	-450.54	455.55	399.97	55.58	8.197	
7,900.00	7,890.94	7,914.15	7,890.94	28.17	28.87	-90.313	187.88	-450.54	455.55	399.27	56.28	8.094	
8,000.00	7,990.94	8,014.15	7,990.94	28.52	29.21	-90.313	187.88	-450.54	455.55	398.56	56.99	7.994	
8,100.00	8,090.94	8,114.15	8,090.94	28.88	29.56	-90.313	187.88	-450.54	455.55	397.85	57.69	7.896	
8,200.00	8,190.94	8,214.15	8,190.94	29.23	29.90	-90.313	187.88	-450.54	455.55	397.15	58.40	7.800	
8,300.00	8,290.94	8,314.15	8,290.94	29.59	30.25	-90.313	187.88	-450.54	455.55	396.44	59.11	7.707	
8,400.00	8,390.94	8,414.15	8,390.94	29.95	30.59	-90.313	187.88	-450.54	455.55	395.73	59.82	7.616	
8,500.00	8,490.94	8,514.15	8,490.94	30.30	30.94	-90.313	187.88	-450.54	455.55	395.02	60.52	7.527	
8,600.00	8,590.94	8,614.15	8,590.94	30.66	31.28	-90.313	187.88	-450.54	455.55	394.32	61.23	7.440	
8,700.00	8,690.94	8,714.15	8,690.94	31.02	31.63	-90.313	187.88	-450.54	455.55	393.61	61.94	7.355	
8,800.00	8,790.94	8,814.15	8,790.94	31.37	31.97	-90.313	187.88	-450.54	455.55	392.90	62.65	7.272	
8,900.00	8,890.94	8,914.15	8,890.94	31.73	32.32	-90.313	187.88	-450.54	455.55	392.19	63.36	7.190	
9,000.00	8,990.94	9,014.15	8,990.94	32.09	32.67	-90.313	187.88	-450.54	455.55	391.48	64.06	7.111	
9,100.00	9,090.94	9,114.15	9,090.94	32.44	33.01	-90.313	187.88	-450.54	455.55	390.77	64.77	7.033	
9,200.00	9,190.94	9,214.15	9,190.94	32.80	33.36	-90.313	187.88	-450.54	455.55	390.06	65.48	6.957	
9,300.00	9,290.94	9,314.15	9,290.94	33.16	33.71	-90.313	187.88	-450.54	455.55	389.36	66.19	6.882	
9,400.00	9,390.94	9,414.15	9,390.94	33.51	34.05	-90.313	187.88	-450.54	455.55	388.65	66.90	6.809	
9,500.00	9,490.94	9,514.15	9,490.94	33.87	34.40	-90.313	187.88	-450.54	455.55	387.94	67.61	6.738	
9,600.00	9,590.94	9,614.15	9,590.94	34.23	34.75	-90.313	187.88	-450.54	455.55	387.23	68.32	6.668	
9,700.00	9,690.94	9,714.15	9,690.94	34.59	35.10	-90.313	187.88	-450.54	455.55	386.52	69.03	6.599	
9,800.00	9,790.94	9,814.15	9,790.94	34.94	35.45	-90.313	187.88	-450.54	455.55	385.81	69.74	6.532	
9,900.00	9,890.94	9,914.15	9,890.94	35.30	35.79	-90.313	187.88	-450.54	455.55	385.10	70.45	6.466	
10,000.00	9,990.94	10,014.15	9,990.94	35.66	36.14	-90.313	187.88	-450.54	455.55	384.39	71.16	6.402	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 132H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:				Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,090.94	10,114.15	10,090.94	36.01	36.49	-90.313	187.88	-450.54	455.55	383.68	71.87	6.338	
10,187.06	10,178.00	10,201.21	10,178.00	36.33	36.80	-90.313	187.88	-450.54	455.55	383.06	72.49	6.284	
10,200.00	10,190.94	10,214.15	10,190.94	36.37	36.84	-90.295	187.88	-450.54	455.53	382.95	72.58	6.276	
10,250.00	10,240.81	10,264.02	10,240.81	36.52	37.02	-89.882	187.88	-450.54	455.11	382.20	72.91	6.242	
10,300.00	10,290.21	10,313.42	10,290.21	36.67	37.19	-88.926	187.88	-450.54	454.23	381.01	73.22	6.203	
10,350.00	10,338.75	10,361.96	10,338.75	36.82	37.36	-87.427	187.88	-450.54	453.11	379.59	73.53	6.162	
10,400.00	10,386.07	10,409.28	10,386.07	36.95	37.52	-85.392	187.88	-450.54	452.10	378.28	73.82	6.125	
10,450.00	10,431.81	10,455.02	10,431.81	37.08	37.68	-82.836	187.88	-450.54	451.64	377.54	74.09	6.095	
10,450.64	10,432.38	10,455.59	10,432.38	37.08	37.69	-82.800	187.88	-450.54	451.64	377.54	74.10	6.095	
10,500.00	10,475.61	10,498.82	10,475.61	37.21	37.84	-79.784	187.88	-450.54	452.26	377.90	74.36	6.082	
10,550.00	10,517.15	10,540.36	10,517.15	37.32	37.98	-76.283	187.88	-450.54	454.57	379.96	74.61	6.092	
10,600.00	10,556.11	10,579.32	10,556.11	37.44	38.12	-72.398	187.88	-450.54	459.18	384.32	74.86	6.134	
10,650.00	10,592.19	10,615.40	10,592.19	37.55	38.24	-68.217	187.88	-450.54	466.67	391.57	75.10	6.214	
10,700.00	10,625.12	10,648.33	10,625.12	37.67	38.36	-63.846	187.88	-450.54	477.53	402.20	75.33	6.339	
10,750.00	10,654.64	10,677.85	10,654.64	37.78	38.46	-59.400	187.88	-450.54	492.11	416.55	75.56	6.513	
10,800.00	10,680.54	10,703.75	10,680.54	37.90	38.55	-54.993	187.88	-450.54	510.60	434.83	75.77	6.739	
10,850.00	10,702.61	10,725.82	10,702.61	38.02	38.63	-50.725	187.88	-450.54	533.00	457.03	75.96	7.017	
10,900.00	10,720.69	10,743.90	10,720.69	38.14	38.69	-46.675	187.88	-450.54	559.14	483.00	76.13	7.344	
10,950.00	10,734.64	10,757.85	10,734.64	38.27	38.74	-42.899	187.88	-450.54	588.71	512.43	76.28	7.718	
11,000.00	10,744.36	10,767.57	10,744.36	38.40	38.78	-39.428	187.88	-450.54	621.30	544.90	76.40	8.132	
11,050.00	10,749.76	10,772.97	10,749.76	38.53	38.80	-36.274	187.88	-450.54	656.42	579.93	76.49	8.582	
11,082.06	10,750.94	10,774.15	10,750.94	38.62	38.80	-34.417	187.88	-450.54	680.03	603.49	76.54	8.885	
11,100.00	10,751.09	10,774.30	10,751.09	38.67	38.80	-33.436	187.88	-450.54	693.58	617.02	76.56	9.059	
11,200.00	10,751.97	10,775.18	10,751.97	39.00	38.80	-28.742	187.88	-450.54	773.57	696.91	76.67	10.090	
11,300.00	10,752.84	10,776.06	10,752.84	39.39	38.81	-25.150	187.88	-450.54	859.52	782.76	76.76	11.198	
11,400.00	10,753.72	10,776.93	10,753.72	39.84	38.81	-22.411	187.88	-450.54	949.70	872.87	76.83	12.361	
11,461.17	10,754.26	10,777.47	10,754.26	40.15	38.81	-21.071	187.88	-450.54	1,006.42	929.55	76.87	13.093	
11,500.00	10,754.60	10,777.81	10,754.60	40.35	38.81	-20.317	187.88	-450.54	1,042.84	965.95	76.89	13.563	
11,600.00	10,755.47	12,663.01	11,817.68	40.92	44.55	-89.084	-884.46	-439.41	1,118.91	1,066.25	52.66	21.246	
11,700.00	10,756.35	12,763.01	11,818.55	41.55	45.14	-89.083	-984.45	-438.37	1,118.79	1,065.53	53.26	21.007	
11,800.00	10,757.22	12,863.01	11,819.43	42.24	45.78	-89.081	-1,084.44	-437.33	1,118.67	1,064.76	53.91	20.751	
11,900.00	10,758.10	12,963.01	11,820.30	42.98	46.46	-89.080	-1,184.43	-436.29	1,118.55	1,063.94	54.61	20.483	
12,000.00	10,758.97	13,063.01	11,821.17	43.77	47.20	-89.078	-1,284.42	-435.25	1,118.43	1,063.07	55.36	20.202	
12,100.00	10,759.85	13,163.01	11,822.04	44.60	47.98	-89.076	-1,384.41	-434.21	1,118.32	1,062.15	56.16	19.912	
12,200.00	10,760.73	13,263.01	11,822.92	45.48	48.81	-89.075	-1,484.40	-433.18	1,118.20	1,061.19	57.01	19.615	
12,300.00	10,761.60	13,363.01	11,823.79	46.41	49.67	-89.073	-1,584.39	-432.14	1,118.08	1,060.18	57.90	19.312	
12,400.00	10,762.48	13,463.01	11,824.66	47.37	50.58	-89.072	-1,684.38	-431.10	1,117.96	1,059.13	58.83	19.004	
12,500.00	10,763.35	13,563.01	11,825.54	48.37	51.52	-89.070	-1,784.37	-430.06	1,117.84	1,058.04	59.80	18.694	
12,600.00	10,764.23	13,663.01	11,826.41	49.41	52.50	-89.068	-1,884.36	-429.02	1,117.72	1,056.91	60.81	18.382	
12,700.00	10,765.10	13,763.01	11,827.28	50.48	53.51	-89.067	-1,984.35	-427.99	1,117.60	1,055.75	61.85	18.069	
12,800.00	10,765.98	13,863.00	11,828.15	51.58	54.55	-89.065	-2,084.34	-426.95	1,117.49	1,054.56	62.93	17.758	
12,900.00	10,766.86	13,963.00	11,829.03	52.70	55.62	-89.063	-2,184.33	-425.91	1,117.37	1,053.33	64.04	17.448	
13,000.00	10,767.73	14,063.00	11,829.90	53.86	56.72	-89.062	-2,284.32	-424.87	1,117.25	1,052.07	65.18	17.141	
13,100.00	10,768.61	14,163.00	11,830.77	55.04	57.85	-89.060	-2,384.31	-423.83	1,117.13	1,050.78	66.35	16.837	
13,200.00	10,769.48	14,263.00	11,831.64	56.25	59.00	-89.059	-2,484.30	-422.79	1,117.01	1,049.47	67.55	16.537	
13,300.00	10,770.36	14,363.00	11,832.52	57.47	60.17	-89.057	-2,584.29	-421.76	1,116.90	1,048.13	68.77	16.242	
13,400.00	10,771.23	14,463.00	11,833.39	58.72	61.37	-89.055	-2,684.28	-420.72	1,116.78	1,046.76	70.01	15.951	
13,500.00	10,772.11	14,563.00	11,834.26	59.99	62.59	-89.054	-2,784.27	-419.68	1,116.66	1,045.38	71.28	15.665	
13,600.00	10,772.99	14,663.00	11,835.13	61.28	63.82	-89.052	-2,884.26	-418.64	1,116.54	1,043.97	72.58	15.385	
13,700.00	10,773.86	14,763.00	11,836.01	62.58	65.08	-89.050	-2,984.25	-417.60	1,116.43	1,042.54	73.89	15.110	
13,800.00	10,774.74	14,863.00	11,836.88	63.90	66.35	-89.049	-3,084.24	-416.57	1,116.31	1,041.09	75.22	14.841	
13,900.00	10,775.61	14,963.00	11,837.75	65.23	67.64	-89.047	-3,184.23	-415.53	1,116.19	1,039.62	76.57	14.578	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 132H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,000.00	10,776.49	15,063.00	11,838.63	66.58	68.95	-89.045	-3,284.22	-414.49	1,116.07	1,038.14	77.93	14.321	
14,100.00	10,777.37	15,163.00	11,839.50	67.95	70.27	-89.044	-3,384.21	-413.45	1,115.96	1,036.64	79.32	14.070	
14,200.00	10,778.24	15,263.00	11,840.37	69.32	71.60	-89.042	-3,484.20	-412.41	1,115.84	1,035.13	80.72	13.824	
14,300.00	10,779.12	15,362.99	11,841.24	70.71	72.95	-89.040	-3,584.19	-411.37	1,115.72	1,033.60	82.13	13.585	
14,400.00	10,779.99	15,462.99	11,842.12	72.11	74.30	-89.039	-3,684.18	-410.34	1,115.61	1,032.05	83.56	13.352	
14,500.00	10,780.87	15,562.99	11,842.99	73.52	75.68	-89.037	-3,784.17	-409.30	1,115.49	1,030.50	85.00	13.124	
14,600.00	10,781.74	15,662.99	11,843.86	74.94	77.06	-89.035	-3,884.16	-408.26	1,115.38	1,028.93	86.45	12.902	
14,700.00	10,782.62	15,762.99	11,844.73	76.36	78.45	-89.034	-3,984.15	-407.22	1,115.26	1,027.35	87.91	12.686	
14,800.00	10,783.50	15,862.99	11,845.61	77.80	79.85	-89.032	-4,084.14	-406.18	1,115.14	1,025.76	89.39	12.475	
14,900.00	10,784.37	15,962.99	11,846.48	79.25	81.26	-89.030	-4,184.13	-405.14	1,115.03	1,024.16	90.87	12.270	
15,000.00	10,785.25	16,062.99	11,847.35	80.70	82.69	-89.028	-4,284.12	-404.11	1,114.91	1,022.54	92.37	12.070	
15,100.00	10,786.12	16,162.99	11,848.22	82.16	84.11	-89.027	-4,384.11	-403.07	1,114.80	1,020.92	93.87	11.876	
15,200.00	10,787.00	16,262.99	11,849.10	83.63	85.55	-89.025	-4,484.10	-402.03	1,114.68	1,019.29	95.39	11.686	
15,300.00	10,787.87	16,362.99	11,849.97	85.11	87.00	-89.023	-4,584.09	-400.99	1,114.57	1,017.66	96.91	11.501	
15,400.00	10,788.75	16,462.99	11,850.84	86.59	88.45	-89.022	-4,684.08	-399.95	1,114.45	1,016.01	98.44	11.321	
15,500.00	10,789.63	16,562.99	11,851.71	88.08	89.91	-89.020	-4,784.07	-398.92	1,114.33	1,014.36	99.98	11.146	
15,600.00	10,790.50	16,662.99	11,852.59	89.57	91.38	-89.018	-4,884.06	-397.88	1,114.22	1,012.70	101.52	10.975	
15,700.00	10,791.38	16,762.99	11,853.46	91.07	92.85	-89.016	-4,984.05	-396.84	1,114.10	1,011.03	103.07	10.809	
15,800.00	10,792.25	16,862.98	11,854.33	92.58	94.33	-89.015	-5,084.04	-395.80	1,113.99	1,009.36	104.63	10.647	
15,900.00	10,793.13	16,962.98	11,855.21	94.09	95.81	-89.013	-5,184.03	-394.76	1,113.88	1,007.68	106.20	10.489	
16,000.00	10,794.00	17,062.98	11,856.08	95.60	97.30	-89.011	-5,284.02	-393.72	1,113.76	1,005.99	107.77	10.335	
16,100.00	10,794.88	17,162.98	11,856.95	97.12	98.80	-89.009	-5,384.01	-392.69	1,113.65	1,004.30	109.34	10.185	
16,200.00	10,795.76	17,262.98	11,857.82	98.64	100.30	-89.008	-5,484.00	-391.65	1,113.53	1,002.61	110.93	10.039	
16,300.00	10,796.63	17,362.98	11,858.70	100.17	101.80	-89.006	-5,583.99	-390.61	1,113.42	1,000.91	112.51	9.896	
16,400.00	10,797.51	17,462.98	11,859.57	101.70	103.31	-89.004	-5,683.98	-389.57	1,113.30	999.20	114.10	9.757	
16,500.00	10,798.38	17,562.98	11,860.44	103.24	104.83	-89.002	-5,783.97	-388.53	1,113.19	997.49	115.70	9.621	
16,600.00	10,799.26	17,662.98	11,861.31	104.78	106.34	-89.001	-5,883.96	-387.50	1,113.07	995.78	117.30	9.489	
16,700.00	10,800.14	17,762.98	11,862.19	106.32	107.87	-88.999	-5,983.95	-386.46	1,112.96	994.06	118.90	9.360	
16,800.00	10,801.01	17,862.98	11,863.06	107.86	109.39	-88.997	-6,083.94	-385.42	1,112.85	992.34	120.51	9.234	
16,900.00	10,801.89	17,962.98	11,863.93	109.41	110.92	-88.995	-6,183.93	-384.38	1,112.73	990.61	122.12	9.112	
17,000.00	10,802.76	18,062.98	11,864.80	110.97	112.46	-88.993	-6,283.92	-383.34	1,112.62	988.88	123.74	8.992	
17,100.00	10,803.64	18,162.98	11,865.68	112.52	113.99	-88.992	-6,383.91	-382.30	1,112.51	987.15	125.36	8.875	
17,200.00	10,804.51	18,262.97	11,866.55	114.08	115.53	-88.990	-6,483.91	-381.27	1,112.39	985.41	126.98	8.760	
17,300.00	10,805.39	18,362.97	11,867.42	115.64	117.07	-88.988	-6,583.90	-380.23	1,112.28	983.68	128.60	8.649	
17,400.00	10,806.27	18,462.97	11,868.30	117.20	118.62	-88.986	-6,683.89	-379.19	1,112.17	981.93	130.23	8.540	
17,500.00	10,807.14	18,562.97	11,869.17	118.77	120.17	-88.984	-6,783.88	-378.15	1,112.05	980.19	131.86	8.433	
17,600.00	10,808.02	18,662.97	11,870.04	120.33	121.72	-88.983	-6,883.87	-377.11	1,111.94	978.45	133.50	8.329	
17,700.00	10,808.89	18,762.97	11,870.91	121.90	123.28	-88.981	-6,983.86	-376.07	1,111.83	976.70	135.13	8.228	
17,800.00	10,809.77	18,862.97	11,871.79	123.48	124.83	-88.979	-7,083.85	-375.04	1,111.72	974.95	136.77	8.128	
17,900.00	10,810.64	18,962.97	11,872.66	125.05	126.39	-88.977	-7,183.84	-374.00	1,111.60	973.19	138.41	8.031	
18,000.00	10,811.52	19,062.97	11,873.53	126.63	127.95	-88.975	-7,283.83	-372.96	1,111.49	971.44	140.05	7.936	
18,100.00	10,812.40	19,162.97	11,874.40	128.20	129.52	-88.974	-7,383.82	-371.92	1,111.38	969.68	141.70	7.843	
18,200.00	10,813.27	19,262.97	11,875.28	129.78	131.08	-88.972	-7,483.81	-370.88	1,111.27	967.92	143.34	7.752	
18,300.00	10,814.15	19,362.97	11,876.15	131.37	132.65	-88.970	-7,583.80	-369.85	1,111.15	966.16	144.99	7.664	
18,400.00	10,815.02	19,462.97	11,877.02	132.95	134.22	-88.968	-7,683.79	-368.81	1,111.04	964.40	146.64	7.577	
18,500.00	10,815.90	19,562.97	11,877.89	134.53	135.80	-88.966	-7,783.78	-367.77	1,110.93	962.64	148.29	7.491	
18,600.00	10,816.77	19,662.97	11,878.77	136.12	137.37	-88.964	-7,883.77	-366.73	1,110.82	960.87	149.95	7.408	
18,700.00	10,817.65	19,762.96	11,879.64	137.71	138.95	-88.963	-7,983.76	-365.69	1,110.71	959.10	151.60	7.326	
18,800.00	10,818.53	19,862.96	11,880.51	139.30	140.53	-88.961	-8,083.75	-364.65	1,110.59	957.34	153.26	7.247	
18,900.00	10,819.40	19,962.96	11,881.38	140.89	142.11	-88.959	-8,183.74	-363.62	1,110.48	955.57	154.92	7.168	
19,000.00	10,820.28	20,062.96	11,882.26	142.49	143.69	-88.957	-8,283.73	-362.58	1,110.37	953.80	156.58	7.092	
19,100.00	10,821.15	20,162.96	11,883.13	144.08	145.27	-88.955	-8,383.72	-361.54	1,110.26	952.02	158.24	7.016	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 132H - Wellbore #1 - Design #1

Survey Program:		0-MWD								Rule Assigned:		Offset Site Error:		0.00 usft	
Reference	Offset	Reference	Offset	Semi Major Axis		Azimuth	Offset Wellbore Centre			Distance		Offset Wall Error:	0.00 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
19,200.00	10,822.03	20,262.96	11,884.00	145.68	146.86	-88.953	-8,483.71	-360.50	1,110.15	950.25	159.90	6.943			
19,300.00	10,822.90	20,362.96	11,884.88	147.27	148.44	-88.951	-8,583.70	-359.46	1,110.04	948.48	161.56	6.871			
19,400.00	10,823.78	20,462.96	11,885.75	148.87	150.03	-88.949	-8,683.69	-358.43	1,109.93	946.70	163.22	6.800			
19,500.00	10,824.66	20,562.96	11,886.62	150.47	151.62	-88.948	-8,783.68	-357.39	1,109.82	944.93	164.89	6.731			
19,600.00	10,825.53	20,662.96	11,887.49	152.07	153.21	-88.946	-8,883.67	-356.35	1,109.71	943.15	166.55	6.663			
19,700.00	10,826.41	20,762.96	11,888.37	153.67	154.80	-88.944	-8,983.66	-355.31	1,109.60	941.38	168.22	6.596			
19,800.00	10,827.28	20,862.96	11,889.24	155.27	156.40	-88.942	-9,083.65	-354.27	1,109.49	939.60	169.89	6.531			
19,900.00	10,828.16	20,962.96	11,890.11	156.88	157.99	-88.940	-9,183.64	-353.23	1,109.38	937.82	171.56	6.467			
20,000.00	10,829.04	21,062.96	11,890.98	158.48	159.59	-88.938	-9,283.63	-352.20	1,109.27	936.04	173.22	6.404			
20,100.00	10,829.91	21,162.95	11,891.86	160.09	161.18	-88.936	-9,383.62	-351.16	1,109.16	934.26	174.89	6.342			
20,200.00	10,830.79	21,262.95	11,892.73	161.70	162.78	-88.934	-9,483.61	-350.12	1,109.05	932.48	176.56	6.281			
20,300.00	10,831.66	21,362.95	11,893.60	163.30	164.38	-88.932	-9,583.60	-349.08	1,108.94	930.70	178.23	6.222			
20,400.00	10,832.54	21,462.95	11,894.47	164.91	165.98	-88.930	-9,683.59	-348.04	1,108.83	928.92	179.91	6.163			
20,500.00	10,833.41	21,562.95	11,895.35	166.52	167.58	-88.928	-9,783.58	-347.01	1,108.72	927.14	181.58	6.106			
20,600.00	10,834.29	21,662.95	11,896.22	168.13	169.18	-88.926	-9,883.57	-345.97	1,108.61	925.36	183.25	6.050			
20,700.00	10,835.17	21,762.95	11,897.09	169.74	170.79	-88.925	-9,983.56	-344.93	1,108.50	923.58	184.92	5.994			
20,800.00	10,836.04	21,862.95	11,897.97	171.36	172.39	-88.923	-10,083.55	-343.89	1,108.39	921.79	186.59	5.940			
20,900.00	10,836.92	21,962.95	11,898.84	172.97	174.00	-88.921	-10,183.54	-342.85	1,108.28	920.01	188.27	5.887			
20,972.39	10,837.55	22,035.34	11,899.47	174.00	175.16	-88.919	-10,255.92	-342.10	1,108.20	918.97	189.23	5.856			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 202H - Wellbore #1 - Design #1

Survey Program: Reference		0-MWD		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance		Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	90.000	0.00	30.00	30.02				
100.00	100.00	99.00	99.00	0.13	0.13	90.000	0.00	30.00	30.00	29.74	0.26	117.635	
200.00	200.00	199.00	199.00	0.49	0.48	90.000	0.00	30.00	30.00	29.03	0.97	30.938	
300.00	300.00	299.00	299.00	0.85	0.84	90.000	0.00	30.00	30.00	28.31	1.69	17.787	
400.00	400.00	399.00	399.00	1.20	1.20	90.000	0.00	30.00	30.00	27.60	2.40	12.482	
500.00	500.00	499.00	499.00	1.56	1.56	90.000	0.00	30.00	30.00	26.88	3.12	9.614	
600.00	600.00	599.00	599.00	1.92	1.92	90.000	0.00	30.00	30.00	26.16	3.84	7.818 CC	
700.00	700.00	698.75	698.75	2.28	2.27	88.579	0.75	30.39	30.40	25.85	4.55	6.679 ES	
800.00	800.00	798.44	798.40	2.64	2.63	84.495	3.04	31.59	31.74	26.48	5.27	6.028	
900.00	899.99	898.04	897.91	3.00	2.99	79.873	6.87	33.59	34.12	28.14	5.98	5.706	
1,000.00	999.96	997.57	997.25	3.36	3.35	76.477	12.22	36.39	37.37	30.68	6.69	5.585	
1,100.00	1,099.86	1,097.02	1,096.39	3.71	3.71	74.218	19.09	39.98	41.41	34.00	7.41	5.592	
1,200.00	1,199.68	1,196.37	1,195.29	4.07	4.07	72.912	27.48	44.37	46.16	38.04	8.12	5.684	
1,300.00	1,299.37	1,296.23	1,294.61	4.44	4.45	72.936	36.72	49.20	51.01	42.16	8.85	5.765	
1,399.70	1,398.60	1,395.82	1,393.66	4.80	4.82	74.658	45.94	54.02	55.30	45.72	9.58	5.772	
1,400.00	1,398.90	1,396.13	1,393.96	4.80	4.82	74.665	45.97	54.04	55.32	45.73	9.58	5.772	
1,500.00	1,498.36	1,496.01	1,493.30	5.17	5.20	76.948	55.21	58.87	59.44	49.12	10.33	5.756	
1,600.00	1,597.81	1,595.90	1,592.64	5.55	5.58	78.930	64.46	63.70	63.65	52.57	11.08	5.747	
1,700.00	1,697.26	1,695.79	1,691.98	5.92	5.96	80.664	73.70	68.54	67.92	56.10	11.83	5.742	
1,800.00	1,796.71	1,795.68	1,791.33	6.30	6.34	82.192	82.95	73.37	72.25	59.67	12.59	5.741	
1,900.00	1,896.17	1,895.57	1,890.67	6.68	6.73	83.545	92.20	78.21	76.63	63.28	13.34	5.742	
2,000.00	1,995.62	1,995.46	1,990.01	7.06	7.11	84.751	101.44	83.04	81.04	66.94	14.11	5.745	
2,100.00	2,095.07	2,095.35	2,089.35	7.44	7.50	85.832	110.69	87.88	85.49	70.62	14.87	5.749	
2,200.00	2,194.53	2,195.24	2,188.70	7.83	7.88	86.806	119.93	92.71	89.96	74.33	15.64	5.754	
2,300.00	2,293.98	2,295.12	2,288.04	8.21	8.27	87.687	129.18	97.54	94.46	78.06	16.40	5.759	
2,400.00	2,393.43	2,395.01	2,387.38	8.59	8.66	88.488	138.42	102.38	98.98	81.80	17.17	5.764	
2,500.00	2,492.88	2,494.90	2,486.72	8.98	9.04	89.218	147.67	107.21	103.51	85.57	17.94	5.770	
2,600.00	2,592.34	2,594.79	2,586.06	9.36	9.43	89.887	156.92	112.05	108.06	89.35	18.71	5.775	
2,700.00	2,691.79	2,694.68	2,685.41	9.75	9.82	90.502	166.16	116.88	112.83	93.14	19.48	5.781	
2,722.26	2,713.93	2,716.92	2,707.52	9.84	9.91	90.632	168.22	117.96	113.64	93.99	19.65	5.782	
2,800.00	2,791.32	2,794.98	2,785.17	10.13	10.21	90.714	175.35	121.68	117.16	96.91	20.25	5.785	
2,900.00	2,891.06	2,896.35	2,886.18	10.51	10.59	90.504	182.86	125.61	120.85	99.84	21.01	5.752	
3,000.00	2,990.96	2,997.80	2,987.47	10.87	10.96	90.199	187.99	128.30	123.37	101.63	21.74	5.674	
3,100.00	3,090.94	3,099.32	3,088.93	11.22	11.32	89.789	190.74	129.74	124.74	102.29	22.45	5.556	
3,122.06	3,113.00	3,121.72	3,111.33	11.30	11.40	89.698	191.03	129.88	124.89	102.28	22.61	5.525	
3,200.00	3,190.94	3,200.33	3,189.94	11.57	11.67	89.597	191.25	130.00	125.00	101.86	23.14	5.401	
3,300.00	3,290.94	3,300.33	3,289.94	11.91	12.01	89.597	191.25	130.00	125.00	101.17	23.83	5.245	
3,400.00	3,390.94	3,400.33	3,389.94	12.26	12.36	89.597	191.25	130.00	125.00	100.48	24.52	5.097	
3,500.00	3,490.94	3,500.33	3,489.94	12.61	12.70	89.597	191.25	130.00	125.00	99.79	25.22	4.957	
3,600.00	3,590.94	3,600.33	3,589.94	12.95	13.04	89.597	191.25	130.00	125.00	99.09	25.91	4.824	
3,700.00	3,690.94	3,700.33	3,689.94	13.30	13.39	89.597	191.25	130.00	125.00	98.40	26.61	4.698	
3,800.00	3,790.94	3,800.33	3,789.94	13.65	13.73	89.597	191.25	130.00	125.00	97.70	27.30	4.579	
3,900.00	3,890.94	3,900.33	3,889.94	14.00	14.08	89.597	191.25	130.00	125.00	97.00	28.00	4.465	
4,000.00	3,990.94	4,000.33	3,989.94	14.35	14.43	89.597	191.25	130.00	125.00	96.31	28.70	4.356	
4,100.00	4,090.94	4,100.33	4,089.94	14.70	14.78	89.597	191.25	130.00	125.00	95.61	29.40	4.252	
4,200.00	4,190.94	4,200.33	4,189.94	15.05	15.12	89.597	191.25	130.00	125.00	94.91	30.10	4.153	
4,300.00	4,290.94	4,300.33	4,289.94	15.40	15.47	89.597	191.25	130.00	125.00	94.21	30.80	4.059	
4,400.00	4,390.94	4,400.33	4,389.94	15.75	15.82	89.597	191.25	130.00	125.00	93.50	31.50	3.968	
4,500.00	4,490.94	4,500.33	4,489.94	16.11	16.17	89.597	191.25	130.00	125.00	92.80	32.20	3.882	
4,600.00	4,590.94	4,600.33	4,589.94	16.46	16.52	89.597	191.25	130.00	125.00	92.10	32.90	3.799	
4,700.00	4,690.94	4,700.33	4,689.94	16.81	16.87	89.597	191.25	130.00	125.00	91.40	33.61	3.719	
4,800.00	4,790.94	4,800.33	4,789.94	17.16	17.22	89.597	191.25	130.00	125.00	90.69	34.31	3.643	

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



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 202H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,900.00	4,890.94	4,900.33	4,889.94	17.52	17.57	89.597	191.25	130.00	125.00	89.99	35.02	3.570		
5,000.00	4,990.94	5,000.33	4,989.94	17.87	17.92	89.597	191.25	130.00	125.00	89.28	35.72	3.499		
5,100.00	5,090.94	5,100.33	5,089.94	18.22	18.27	89.597	191.25	130.00	125.00	88.58	36.43	3.432		
5,200.00	5,190.94	5,200.33	5,189.94	18.58	18.63	89.597	191.25	130.00	125.00	87.87	37.13	3.366		
5,300.00	5,290.94	5,300.33	5,289.94	18.93	18.98	89.597	191.25	130.00	125.00	87.16	37.84	3.304		
5,400.00	5,390.94	5,400.33	5,389.94	19.28	19.33	89.597	191.25	130.00	125.00	86.46	38.55	3.243		
5,500.00	5,490.94	5,500.33	5,489.94	19.64	19.68	89.597	191.25	130.00	125.00	85.75	39.25	3.185		
5,600.00	5,590.94	5,600.33	5,589.94	19.99	20.04	89.597	191.25	130.00	125.00	85.04	39.96	3.128		
5,700.00	5,690.94	5,700.33	5,689.94	20.34	20.39	89.597	191.25	130.00	125.00	84.34	40.67	3.074		
5,800.00	5,790.94	5,800.33	5,789.94	20.70	20.74	89.597	191.25	130.00	125.00	83.63	41.38	3.021		
5,900.00	5,890.94	5,900.33	5,889.94	21.05	21.09	89.597	191.25	130.00	125.00	82.92	42.08	2.970		
6,000.00	5,990.94	6,000.33	5,989.94	21.41	21.45	89.597	191.25	130.00	125.00	82.21	42.79	2.921		
6,100.00	6,090.94	6,100.33	6,089.94	21.76	21.80	89.597	191.25	130.00	125.00	81.50	43.50	2.873		
6,200.00	6,190.94	6,200.33	6,189.94	22.12	22.15	89.597	191.25	130.00	125.00	80.79	44.21	2.827		
6,300.00	6,290.94	6,300.33	6,289.94	22.47	22.51	89.597	191.25	130.00	125.00	80.08	44.92	2.783		
6,400.00	6,390.94	6,400.33	6,389.94	22.83	22.86	89.597	191.25	130.00	125.00	79.37	45.63	2.739		
6,500.00	6,490.94	6,500.33	6,489.94	23.18	23.22	89.597	191.25	130.00	125.00	78.66	46.34	2.697		
6,600.00	6,590.94	6,600.33	6,589.94	23.54	23.57	89.597	191.25	130.00	125.00	77.95	47.05	2.657		
6,700.00	6,690.94	6,700.33	6,689.94	23.89	23.93	89.597	191.25	130.00	125.00	77.24	47.76	2.617		
6,800.00	6,790.94	6,800.33	6,789.94	24.25	24.28	89.597	191.25	130.00	125.00	76.53	48.47	2.579		
6,900.00	6,890.94	6,900.33	6,889.94	24.61	24.63	89.597	191.25	130.00	125.00	75.82	49.18	2.542		
7,000.00	6,990.94	7,000.33	6,989.94	24.96	24.99	89.597	191.25	130.00	125.00	75.11	49.89	2.505		
7,100.00	7,090.94	7,100.33	7,089.94	25.32	25.34	89.597	191.25	130.00	125.00	74.40	50.60	2.470		
7,200.00	7,190.94	7,200.33	7,189.94	25.67	25.70	89.597	191.25	130.00	125.00	73.69	51.32	2.436		
7,300.00	7,290.94	7,300.33	7,289.94	26.03	26.05	89.597	191.25	130.00	125.00	72.98	52.03	2.403		
7,400.00	7,390.94	7,400.33	7,389.94	26.38	26.41	89.597	191.25	130.00	125.00	72.26	52.74	2.370		
7,500.00	7,490.94	7,500.33	7,489.94	26.74	26.76	89.597	191.25	130.00	125.00	71.55	53.45	2.339		
7,600.00	7,590.94	7,600.33	7,589.94	27.10	27.12	89.597	191.25	130.00	125.00	70.84	54.16	2.308		
7,700.00	7,690.94	7,700.33	7,689.94	27.45	27.48	89.597	191.25	130.00	125.00	70.13	54.87	2.278		
7,800.00	7,790.94	7,800.33	7,789.94	27.81	27.83	89.597	191.25	130.00	125.00	69.42	55.59	2.249		
7,900.00	7,890.94	7,900.33	7,889.94	28.17	28.19	89.597	191.25	130.00	125.00	68.71	56.30	2.220		
8,000.00	7,990.94	8,000.33	7,989.94	28.52	28.54	89.597	191.25	130.00	125.00	67.99	57.01	2.193		
8,100.00	8,090.94	8,100.33	8,089.94	28.88	28.90	89.597	191.25	130.00	125.00	67.28	57.72	2.166		
8,200.00	8,190.94	8,200.33	8,189.94	29.23	29.25	89.597	191.25	130.00	125.00	66.57	58.44	2.139		
8,300.00	8,290.94	8,300.33	8,289.94	29.59	29.61	89.597	191.25	130.00	125.00	65.86	59.15	2.113		
8,400.00	8,390.94	8,400.33	8,389.94	29.95	29.97	89.597	191.25	130.00	125.00	65.14	59.86	2.088		
8,500.00	8,490.94	8,500.33	8,489.94	30.30	30.32	89.597	191.25	130.00	125.00	64.43	60.57	2.064		
8,600.00	8,590.94	8,600.33	8,589.94	30.66	30.68	89.597	191.25	130.00	125.00	63.72	61.29	2.040		
8,700.00	8,690.94	8,700.33	8,689.94	31.02	31.03	89.597	191.25	130.00	125.00	63.00	62.00	2.016		
8,800.00	8,790.94	8,800.33	8,789.94	31.37	31.39	89.597	191.25	130.00	125.00	62.29	62.71	1.993		
8,900.00	8,890.94	8,900.33	8,889.94	31.73	31.75	89.597	191.25	130.00	125.00	61.58	63.43	1.971		
9,000.00	8,990.94	9,000.33	8,989.94	32.09	32.10	89.597	191.25	130.00	125.00	60.86	64.14	1.949		
9,100.00	9,090.94	9,100.33	9,089.94	32.44	32.46	89.597	191.25	130.00	125.00	60.15	64.85	1.928		
9,200.00	9,190.94	9,200.33	9,189.94	32.80	32.82	89.597	191.25	130.00	125.00	59.44	65.57	1.907		
9,300.00	9,290.94	9,300.33	9,289.94	33.16	33.17	89.597	191.25	130.00	125.00	58.72	66.28	1.886		
9,400.00	9,390.94	9,400.33	9,389.94	33.51	33.53	89.597	191.25	130.00	125.00	58.01	66.99	1.866		
9,500.00	9,490.94	9,500.33	9,489.94	33.87	33.88	89.597	191.25	130.00	125.00	57.30	67.71	1.846		
9,600.00	9,590.94	9,600.33	9,589.94	34.23	34.24	89.597	191.25	130.00	125.00	56.58	68.42	1.827		
9,700.00	9,690.94	9,700.33	9,689.94	34.59	34.60	89.597	191.25	130.00	125.00	55.87	69.13	1.808		
9,800.00	9,790.94	9,800.33	9,789.94	34.94	34.95	89.597	191.25	130.00	125.00	55.15	69.85	1.790		
9,900.00	9,890.94	9,900.33	9,889.94	35.30	35.31	89.597	191.25	130.00	125.00	54.44	70.56	1.772		
10,000.00	9,990.94	10,000.33	9,989.94	35.66	35.67	89.597	191.25	130.00	125.00	53.73	71.28	1.754		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 202H - Wellbore #1 - Design #1

Survey Program: 0-MWD												Offset Site Error: 0.00 usft	
Rule Assigned:												Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,090.94	10,100.33	10,089.94	36.01	36.02	89.597	191.25	130.00	125.00	53.01	71.99	1.736	
10,187.06	10,178.00	10,187.39	10,177.00	36.33	36.33	89.597	191.25	130.00	125.00	52.39	72.61	1.722	
10,200.00	10,190.94	10,200.33	10,189.94	36.37	36.38	89.530	191.25	130.00	125.02	52.32	72.70	1.720	
10,250.00	10,240.81	10,250.20	10,239.81	36.52	36.56	88.034	191.25	130.00	125.51	52.47	73.03	1.719 SF	
10,300.00	10,290.21	10,299.60	10,289.21	36.67	36.74	84.627	191.25	130.00	126.95	53.60	73.35	1.731	
10,350.00	10,338.75	10,348.14	10,337.75	36.82	36.91	79.496	191.25	130.00	130.06	56.41	73.66	1.766	
10,400.00	10,386.07	10,395.46	10,385.07	36.95	37.08	73.011	191.25	130.00	135.83	61.88	73.94	1.837	
10,450.00	10,431.81	10,441.19	10,430.81	37.08	37.24	65.736	191.25	130.00	145.26	71.04	74.22	1.957	
10,500.00	10,475.61	10,485.00	10,474.61	37.21	37.40	58.323	191.25	130.00	159.16	84.67	74.49	2.137	
10,550.00	10,517.15	10,526.54	10,516.15	37.32	37.54	51.336	191.25	130.00	177.93	103.19	74.74	2.381	
10,600.00	10,556.11	10,565.50	10,555.11	37.44	37.68	45.126	191.25	130.00	201.59	126.61	74.97	2.689	
10,650.00	10,592.19	10,601.58	10,591.19	37.55	37.81	39.818	191.25	130.00	229.86	154.67	75.19	3.057	
10,700.00	10,625.12	10,634.50	10,624.12	37.67	37.93	35.386	191.25	130.00	262.32	186.93	75.39	3.480	
10,750.00	10,654.64	10,664.03	10,653.64	37.78	38.04	31.727	191.25	130.00	298.48	222.92	75.56	3.950	
10,800.00	10,680.54	10,689.93	10,679.54	37.90	38.13	28.716	191.25	130.00	337.84	262.13	75.71	4.462	
10,850.00	10,702.61	10,712.00	10,701.61	38.02	38.21	26.234	191.25	130.00	379.91	304.09	75.83	5.010	
10,900.00	10,720.69	10,730.08	10,719.69	38.14	38.27	24.181	191.25	130.00	424.24	348.31	75.93	5.587	
10,950.00	10,734.64	10,744.03	10,733.64	38.27	38.32	22.474	191.25	130.00	470.35	394.35	76.00	6.189	
11,000.00	10,744.36	10,753.75	10,743.36	38.40	38.36	21.044	191.25	130.00	517.81	441.76	76.05	6.809	
11,050.00	10,749.76	10,759.15	10,748.76	38.53	38.38	19.841	191.25	130.00	566.19	490.11	76.08	7.442	
11,082.06	10,750.94	10,760.33	10,749.94	38.62	38.38	19.169	191.25	130.00	597.49	521.40	76.09	7.853	
11,100.00	10,751.09	10,760.48	10,750.09	38.67	38.38	18.817	191.25	130.00	615.03	538.94	76.09	8.083	
11,200.00	10,751.97	10,761.36	10,750.97	39.00	38.38	17.012	191.25	130.00	712.83	636.72	76.10	9.367	
11,300.00	10,752.84	10,762.23	10,751.84	39.39	38.39	15.401	191.25	130.00	810.51	734.39	76.12	10.648	
11,400.00	10,753.72	10,763.11	10,752.72	39.84	38.39	13.922	191.25	130.00	908.01	831.88	76.13	11.927	
11,461.17	10,754.26	10,763.64	10,753.26	40.15	38.39	13.064	191.25	130.00	967.54	891.40	76.14	12.707	
11,500.00	10,754.60	10,763.98	10,753.60	40.35	38.39	12.550	191.25	130.00	1,005.35	929.21	76.15	13.203	
11,600.00	10,755.47	10,764.86	10,754.47	40.92	38.40	11.387	191.25	130.00	1,103.04	1,026.87	76.17	14.482	
11,700.00	10,756.35	10,765.74	10,755.35	41.55	38.40	10.414	191.25	130.00	1,201.11	1,124.92	76.19	15.765	
11,800.00	10,757.22	10,766.61	10,756.22	42.24	38.40	9.588	191.25	130.00	1,299.47	1,223.26	76.21	17.052	
11,900.00	10,758.10	10,767.49	10,757.10	42.98	38.40	8.879	191.25	130.00	1,398.06	1,321.83	76.23	18.340	
12,000.00	10,758.97	10,768.36	10,757.97	43.77	38.41	8.263	191.25	130.00	1,496.84	1,420.59	76.25	19.631	
12,100.00	10,759.85	10,769.24	10,758.85	44.60	38.41	7.723	191.25	130.00	1,595.77	1,519.50	76.27	20.922	
12,200.00	10,760.73	10,770.11	10,759.73	45.48	38.41	7.246	191.25	130.00	1,694.83	1,618.53	76.30	22.214	
12,300.00	10,761.60	14,045.18	12,523.74	46.41	51.45	81.171	-1,573.86	21.03	1,766.29	1,710.70	55.59	31.775	
12,400.00	10,762.48	14,145.18	12,524.62	47.37	52.31	81.172	-1,673.85	21.70	1,766.29	1,709.92	56.36	31.338	
12,500.00	10,763.35	14,245.18	12,525.50	48.37	53.20	81.172	-1,773.85	22.37	1,766.29	1,709.12	57.17	30.895	
12,600.00	10,764.23	14,345.18	12,526.37	49.41	54.13	81.172	-1,873.84	23.04	1,766.29	1,708.28	58.01	30.448	
12,700.00	10,765.10	14,445.18	12,527.25	50.48	55.09	81.172	-1,973.84	23.71	1,766.29	1,707.41	58.88	29.997	
12,800.00	10,765.98	14,545.18	12,528.13	51.58	56.09	81.172	-2,073.83	24.38	1,766.30	1,706.52	59.78	29.546	
12,900.00	10,766.86	14,645.18	12,529.01	52.70	57.12	81.172	-2,173.82	25.05	1,766.30	1,705.59	60.71	29.095	
13,000.00	10,767.73	14,745.18	12,529.88	53.86	58.17	81.173	-2,273.82	25.72	1,766.30	1,704.64	61.66	28.645	
13,100.00	10,768.61	14,845.18	12,530.76	55.04	59.26	81.173	-2,373.81	26.38	1,766.30	1,703.66	62.64	28.198	
13,200.00	10,769.48	14,945.18	12,531.64	56.25	60.36	81.173	-2,473.81	27.05	1,766.30	1,702.66	63.64	27.754	
13,300.00	10,770.36	15,045.18	12,532.52	57.47	61.50	81.173	-2,573.80	27.72	1,766.31	1,701.64	64.67	27.314	
13,400.00	10,771.23	15,145.18	12,533.40	58.72	62.65	81.173	-2,673.79	28.39	1,766.31	1,700.59	65.71	26.879	
13,500.00	10,772.11	15,245.18	12,534.27	59.99	63.83	81.174	-2,773.79	29.06	1,766.31	1,699.53	66.78	26.449	
13,600.00	10,772.99	15,345.18	12,535.15	61.28	65.03	81.174	-2,873.78	29.73	1,766.31	1,698.44	67.87	26.025	
13,700.00	10,773.86	15,445.18	12,536.03	62.58	66.25	81.174	-2,973.78	30.40	1,766.32	1,697.34	68.98	25.608	
13,800.00	10,774.74	15,545.18	12,536.91	63.90	67.49	81.174	-3,073.77	31.07	1,766.32	1,696.22	70.10	25.197	
13,900.00	10,775.61	15,645.18	12,537.78	65.23	68.74	81.174	-3,173.76	31.74	1,766.32	1,695.08	71.24	24.793	
14,000.00	10,776.49	15,745.18	12,538.66	66.58	70.01	81.174	-3,273.76	32.41	1,766.32	1,693.92	72.40	24.397	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 202H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,100.00	10,777.37	15,845.18	12,539.54	67.95	71.30	81.175	-3,373.75	33.08	1,766.32	1,692.75	73.57	24.008	
14,200.00	10,778.24	15,945.18	12,540.42	69.32	72.60	81.175	-3,473.74	33.75	1,766.33	1,691.57	74.76	23.626	
14,300.00	10,779.12	16,045.18	12,541.30	70.71	73.92	81.175	-3,573.74	34.42	1,766.33	1,690.37	75.96	23.253	
14,400.00	10,779.99	16,145.18	12,542.17	72.11	75.25	81.175	-3,673.73	35.09	1,766.33	1,689.15	77.18	22.886	
14,500.00	10,780.87	16,245.18	12,543.05	73.52	76.59	81.175	-3,773.73	35.76	1,766.33	1,687.93	78.41	22.528	
14,600.00	10,781.74	16,345.18	12,543.93	74.94	77.95	81.176	-3,873.72	36.43	1,766.33	1,686.69	79.65	22.177	
14,700.00	10,782.62	16,445.18	12,544.81	76.36	79.31	81.176	-3,973.71	37.10	1,766.34	1,685.44	80.90	21.834	
14,800.00	10,783.50	16,545.18	12,545.68	77.80	80.69	81.176	-4,073.71	37.77	1,766.34	1,684.18	82.16	21.498	
14,900.00	10,784.37	16,645.18	12,546.56	79.25	82.07	81.176	-4,173.70	38.44	1,766.34	1,682.90	83.44	21.170	
15,000.00	10,785.25	16,745.18	12,547.44	80.70	83.47	81.176	-4,273.70	39.11	1,766.34	1,681.62	84.72	20.849	
15,100.00	10,786.12	16,845.18	12,548.32	82.16	84.88	81.176	-4,373.69	39.78	1,766.35	1,680.33	86.02	20.535	
15,200.00	10,787.00	16,945.18	12,549.20	83.63	86.29	81.177	-4,473.68	40.45	1,766.35	1,679.03	87.32	20.229	
15,300.00	10,787.87	17,045.18	12,550.07	85.11	87.71	81.177	-4,573.68	41.12	1,766.35	1,677.72	88.63	19.929	
15,400.00	10,788.75	17,145.18	12,550.95	86.59	89.14	81.177	-4,673.67	41.79	1,766.35	1,676.40	89.95	19.637	
15,500.00	10,789.63	17,245.18	12,551.83	88.08	90.58	81.177	-4,773.67	42.46	1,766.35	1,675.07	91.28	19.351	
15,600.00	10,790.50	17,345.18	12,552.71	89.57	92.03	81.177	-4,873.66	43.13	1,766.36	1,673.74	92.62	19.072	
15,700.00	10,791.38	17,445.18	12,553.58	91.07	93.48	81.178	-4,973.65	43.80	1,766.36	1,672.40	93.96	18.799	
15,800.00	10,792.25	17,545.18	12,554.46	92.58	94.94	81.178	-5,073.65	44.47	1,766.36	1,671.05	95.31	18.532	
15,900.00	10,793.13	17,645.18	12,555.34	94.09	96.40	81.178	-5,173.64	45.14	1,766.36	1,669.69	96.67	18.272	
16,000.00	10,794.00	17,745.18	12,556.22	95.60	97.88	81.178	-5,273.64	45.81	1,766.36	1,668.33	98.03	18.018	
16,100.00	10,794.88	17,845.18	12,557.10	97.12	99.35	81.178	-5,373.63	46.48	1,766.37	1,666.96	99.41	17.769	
16,200.00	10,795.76	17,945.18	12,557.97	98.64	100.84	81.178	-5,473.62	47.15	1,766.37	1,665.59	100.78	17.527	
16,300.00	10,796.63	18,045.18	12,558.85	100.17	102.32	81.179	-5,573.62	47.82	1,766.37	1,664.21	102.17	17.289	
16,400.00	10,797.51	18,145.18	12,559.73	101.70	103.82	81.179	-5,673.61	48.48	1,766.37	1,662.82	103.55	17.058	
16,500.00	10,798.38	18,245.18	12,560.61	103.24	105.31	81.179	-5,773.60	49.15	1,766.38	1,661.43	104.95	16.831	
16,600.00	10,799.26	18,345.18	12,561.48	104.78	106.82	81.179	-5,873.60	49.82	1,766.38	1,660.03	106.35	16.610	
16,700.00	10,800.14	18,445.18	12,562.36	106.32	108.32	81.179	-5,973.59	50.49	1,766.38	1,658.63	107.75	16.393	
16,800.00	10,801.01	18,545.18	12,563.24	107.86	109.83	81.180	-6,073.59	51.16	1,766.38	1,657.22	109.16	16.182	
16,900.00	10,801.89	18,645.18	12,564.12	109.41	111.35	81.180	-6,173.58	51.83	1,766.38	1,655.81	110.57	15.975	
17,000.00	10,802.76	18,745.18	12,565.00	110.97	112.87	81.180	-6,273.57	52.50	1,766.39	1,654.40	111.99	15.773	
17,100.00	10,803.64	18,845.18	12,565.87	112.52	114.39	81.180	-6,373.57	53.17	1,766.39	1,652.98	113.41	15.575	
17,200.00	10,804.51	18,945.18	12,566.75	114.08	115.92	81.180	-6,473.56	53.84	1,766.39	1,651.55	114.84	15.382	
17,300.00	10,805.39	19,045.18	12,567.63	115.64	117.45	81.180	-6,573.56	54.51	1,766.39	1,650.13	116.27	15.193	
17,400.00	10,806.27	19,145.18	12,568.51	117.20	118.98	81.181	-6,673.55	55.18	1,766.39	1,648.70	117.70	15.008	
17,500.00	10,807.14	19,245.18	12,569.38	118.77	120.52	81.181	-6,773.54	55.85	1,766.40	1,647.26	119.14	14.827	
17,600.00	10,808.02	19,345.18	12,570.26	120.33	122.06	81.181	-6,873.54	56.52	1,766.40	1,645.82	120.58	14.650	
17,700.00	10,808.89	19,445.18	12,571.14	121.90	123.60	81.181	-6,973.53	57.19	1,766.40	1,644.38	122.02	14.476	
17,800.00	10,809.77	19,545.18	12,572.02	123.48	125.14	81.181	-7,073.53	57.86	1,766.40	1,642.94	123.47	14.307	
17,900.00	10,810.64	19,645.18	12,572.89	125.05	126.69	81.182	-7,173.52	58.53	1,766.41	1,641.49	124.92	14.141	
18,000.00	10,811.52	19,745.18	12,573.77	126.63	128.24	81.182	-7,273.51	59.20	1,766.41	1,640.04	126.37	13.978	
18,100.00	10,812.40	19,845.18	12,574.65	128.20	129.79	81.182	-7,373.51	59.87	1,766.41	1,638.58	127.83	13.819	
18,200.00	10,813.27	19,945.18	12,575.53	129.78	131.35	81.182	-7,473.50	60.54	1,766.41	1,637.12	129.29	13.663	
18,300.00	10,814.15	20,045.18	12,576.41	131.37	132.91	81.182	-7,573.50	61.21	1,766.41	1,635.66	130.75	13.510	
18,400.00	10,815.02	20,145.18	12,577.28	132.95	134.47	81.182	-7,673.49	61.88	1,766.42	1,634.20	132.21	13.360	
18,500.00	10,815.90	20,245.18	12,578.16	134.53	136.03	81.183	-7,773.48	62.55	1,766.42	1,632.74	133.68	13.214	
18,600.00	10,816.77	20,345.18	12,579.04	136.12	137.59	81.183	-7,873.48	63.22	1,766.42	1,631.27	135.15	13.070	
18,700.00	10,817.65	20,445.18	12,579.92	137.71	139.16	81.183	-7,973.47	63.89	1,766.42	1,629.80	136.62	12.929	
18,800.00	10,818.53	20,545.18	12,580.79	139.30	140.73	81.183	-8,073.46	64.56	1,766.42	1,628.33	138.10	12.791	
18,900.00	10,819.40	20,645.18	12,581.67	140.89	142.30	81.183	-8,173.46	65.23	1,766.43	1,626.85	139.57	12.656	
19,000.00	10,820.28	20,745.18	12,582.55	142.49	143.87	81.184	-8,273.45	65.90	1,766.43	1,625.37	141.05	12.523	
19,100.00	10,821.15	20,845.18	12,583.43	144.08	145.45	81.184	-8,373.45	66.57	1,766.43	1,623.90	142.54	12.393	
19,200.00	10,822.03	20,945.18	12,584.31	145.68	147.02	81.184	-8,473.44	67.24	1,766.43	1,622.41	144.02	12.265	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 202H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
19,300.00	10,822.90	21,045.18	12,585.18	147.27	148.60	81.184	-8,573.43	67.91	1,766.44	1,620.93	145.50	12.140			
19,400.00	10,823.78	21,145.18	12,586.06	148.87	150.18	81.184	-8,673.43	68.58	1,766.44	1,619.45	146.99	12.017			
19,500.00	10,824.66	21,245.18	12,586.94	150.47	151.76	81.184	-8,773.42	69.25	1,766.44	1,617.96	148.48	11.897			
19,600.00	10,825.53	21,345.18	12,587.82	152.07	153.34	81.185	-8,873.42	69.91	1,766.44	1,616.47	149.97	11.779			
19,700.00	10,826.41	21,445.18	12,588.69	153.67	154.93	81.185	-8,973.41	70.58	1,766.44	1,614.98	151.46	11.663			
19,800.00	10,827.28	21,545.18	12,589.57	155.27	156.51	81.185	-9,073.40	71.25	1,766.45	1,613.49	152.96	11.549			
19,900.00	10,828.16	21,645.18	12,590.45	156.88	158.10	81.185	-9,173.40	71.92	1,766.45	1,611.99	154.45	11.437			
20,000.00	10,829.04	21,745.18	12,591.33	158.48	159.69	81.185	-9,273.39	72.59	1,766.45	1,610.50	155.95	11.327			
20,100.00	10,829.91	21,845.18	12,592.21	160.09	161.28	81.186	-9,373.39	73.26	1,766.45	1,609.00	157.45	11.219			
20,200.00	10,830.79	21,945.18	12,593.08	161.70	162.87	81.186	-9,473.38	73.93	1,766.45	1,607.50	158.95	11.113			
20,300.00	10,831.66	22,045.18	12,593.96	163.30	164.46	81.186	-9,573.37	74.60	1,766.46	1,606.00	160.45	11.009			
20,400.00	10,832.54	22,145.18	12,594.84	164.91	166.05	81.186	-9,673.37	75.27	1,766.46	1,604.50	161.96	10.907			
20,500.00	10,833.41	22,245.18	12,595.72	166.52	167.65	81.186	-9,773.36	75.94	1,766.46	1,603.00	163.46	10.806			
20,600.00	10,834.29	22,345.18	12,596.59	168.13	169.24	81.186	-9,873.36	76.61	1,766.46	1,601.49	164.97	10.708			
20,700.00	10,835.17	22,445.18	12,597.47	169.74	170.84	81.187	-9,973.35	77.28	1,766.47	1,599.99	166.48	10.611			
20,800.00	10,836.04	22,545.18	12,598.35	171.36	172.44	81.187	-10,073.34	77.95	1,766.47	1,598.48	167.99	10.516			
20,900.00	10,836.92	22,645.18	12,599.23	172.97	174.04	81.187	-10,173.34	78.62	1,766.47	1,596.97	169.50	10.422			
20,972.39	10,837.55	22,717.57	12,599.86	174.00	175.19	81.187	-10,245.72	79.11	1,766.47	1,596.15	170.32	10.372			



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 216H - Wellbore #1 - Design #1

Survey Program: 0-MWD														Offset Site Error: 0.00 usft	
Reference														Offset Well Error: 0.00 usft	
Measured	Vertical	Measured	Vertical	Semi Major Axis		Azimuth	Offset Wellbore Centre		Rule Assigned:		Minimum	Separation	Factor	Warning	
Depth	Depth	Depth	Depth	Reference	Offset		+N/-S	+E/-W	Distance	Between					
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	from North	(usft)	(usft)	Between	Ellipses	Separation				
						(°)			Centres	(usft)	(usft)				
0.00	0.00	0.00	0.00	0.00	0.00	134.029	-29.00	30.00	41.74						
100.00	100.00	99.00	99.00	0.13	0.13	134.029	-29.00	30.00	41.73	41.47	0.26	163.612			
200.00	200.00	199.00	199.00	0.49	0.48	134.029	-29.00	30.00	41.73	40.76	0.97	43.031			
300.00	300.00	299.00	299.00	0.85	0.84	134.029	-29.00	30.00	41.73	40.04	1.69	24.739			
400.00	400.00	399.00	399.00	1.20	1.20	134.029	-29.00	30.00	41.73	39.32	2.40	17.360			
500.00	500.00	499.00	499.00	1.56	1.56	134.029	-29.00	30.00	41.73	38.60	3.12	13.371			
600.00	600.00	599.00	599.00	1.92	1.92	134.029	-29.00	30.00	41.73	37.89	3.84	10.873 CC			
700.00	700.00	698.81	698.81	2.28	2.27	132.901	-28.55	30.72	41.94	37.39	4.55	9.219 ES			
800.00	800.00	798.56	798.52	2.64	2.62	129.551	-27.19	32.93	42.71	37.45	5.26	8.120			
900.00	899.99	898.21	898.08	3.00	2.98	125.191	-24.92	36.60	44.77	38.80	5.97	7.498			
1,000.00	999.96	997.74	997.42	3.36	3.33	121.214	-21.75	41.74	48.72	42.04	6.68	7.290			
1,100.00	1,099.86	1,097.09	1,096.47	3.71	3.70	117.939	-17.68	48.33	54.53	47.13	7.40	7.371			
1,200.00	1,199.68	1,196.24	1,195.16	4.07	4.06	115.460	-12.71	56.37	62.13	54.01	8.11	7.656			
1,300.00	1,299.37	1,295.81	1,294.19	4.44	4.43	114.186	-7.24	65.23	71.00	62.16	8.84	8.031			
1,399.70	1,398.60	1,395.05	1,392.88	4.80	4.81	114.345	-1.79	74.06	80.52	70.95	9.57	8.412			
1,400.00	1,398.90	1,395.35	1,393.18	4.80	4.81	114.347	-1.77	74.08	80.55	70.97	9.57	8.413			
1,500.00	1,498.36	1,494.86	1,492.14	5.17	5.19	114.980	3.69	82.93	90.43	80.12	10.31	8.768			
1,600.00	1,597.81	1,594.36	1,591.10	5.55	5.57	115.488	9.16	91.79	100.32	89.27	11.06	9.074			
1,700.00	1,697.26	1,693.87	1,690.06	5.92	5.95	115.905	14.63	100.64	110.22	98.42	11.80	9.339			
1,800.00	1,796.71	1,793.37	1,789.02	6.30	6.33	116.254	20.10	109.49	120.13	107.58	12.55	9.571			
1,900.00	1,896.17	1,892.88	1,887.98	6.68	6.71	116.549	25.56	118.34	130.04	116.73	13.30	9.775			
2,000.00	1,995.62	1,992.38	1,986.94	7.06	7.10	116.802	31.03	127.19	139.95	125.89	14.06	9.957			
2,100.00	2,095.07	2,091.89	2,085.91	7.44	7.48	117.022	36.50	136.05	149.86	135.05	14.81	10.119			
2,200.00	2,194.53	2,191.40	2,184.87	7.83	7.87	117.215	41.97	144.90	159.78	144.21	15.57	10.264			
2,300.00	2,293.98	2,290.90	2,283.83	8.21	8.25	117.385	47.43	153.75	169.69	153.37	16.32	10.396			
2,400.00	2,393.43	2,390.41	2,382.79	8.59	8.64	117.536	52.90	162.60	179.61	162.53	17.08	10.515			
2,500.00	2,492.88	2,489.91	2,481.75	8.98	9.03	117.671	58.37	171.45	189.53	171.69	17.84	10.624			
2,600.00	2,592.34	2,589.42	2,580.71	9.36	9.41	117.793	63.84	180.31	199.45	180.85	18.60	10.723			
2,700.00	2,691.79	2,688.93	2,679.67	9.75	9.80	117.904	69.30	189.16	209.37	190.01	19.36	10.814			
2,722.26	2,713.93	2,711.08	2,701.70	9.84	9.89	117.927	70.52	191.13	211.58	192.05	19.53	10.833			
2,800.00	2,791.32	2,788.46	2,778.66	10.13	10.19	117.819	74.77	198.01	218.95	198.83	20.12	10.883			
2,900.00	2,891.06	2,888.07	2,877.72	10.51	10.58	117.164	80.24	206.87	227.43	206.56	20.87	10.899			
3,000.00	2,990.96	2,987.67	2,976.78	10.87	10.97	115.977	85.72	215.74	234.85	213.24	21.60	10.870			
3,100.00	3,090.94	3,087.21	3,075.77	11.22	11.35	114.294	91.19	224.59	241.34	219.01	22.33	10.809			
3,122.06	3,113.00	3,109.16	3,097.60	11.30	11.44	113.858	92.39	226.54	242.67	220.18	22.49	10.792			
3,200.00	3,190.94	3,186.67	3,174.68	11.57	11.74	112.306	96.65	233.44	247.39	224.34	23.04	10.736			
3,300.00	3,290.94	3,286.12	3,273.59	11.91	12.13	110.402	102.12	242.28	253.69	229.94	23.76	10.679			
3,400.00	3,390.94	3,385.57	3,372.50	12.26	12.52	108.591	107.58	251.13	260.27	235.80	24.47	10.637			
3,500.00	3,490.94	3,485.02	3,471.40	12.61	12.91	106.871	113.04	259.98	267.09	241.91	25.18	10.608			
3,600.00	3,590.94	3,584.48	3,570.31	12.95	13.30	105.237	118.51	268.83	274.14	248.25	25.89	10.589			
3,700.00	3,690.94	3,683.93	3,669.22	13.30	13.69	103.685	123.97	277.67	281.41	254.81	26.60	10.580			
3,800.00	3,790.94	3,783.38	3,768.12	13.65	14.08	102.213	129.44	286.52	288.86	261.56	27.31	10.578			
3,900.00	3,890.94	3,882.83	3,867.03	14.00	14.47	100.815	134.90	295.37	296.50	268.49	28.02	10.583			
4,000.00	3,990.94	3,982.28	3,965.94	14.35	14.86	99.487	140.37	304.22	304.31	275.59	28.73	10.594			
4,100.00	4,090.94	4,081.73	4,064.84	14.70	15.24	98.227	145.83	313.06	312.28	282.84	29.43	10.610			
4,200.00	4,190.94	4,181.19	4,163.75	15.05	15.63	97.029	151.29	321.91	320.38	290.24	30.14	10.629			
4,300.00	4,290.94	4,280.64	4,262.66	15.40	16.02	95.891	156.76	330.76	328.62	297.77	30.85	10.652			
4,400.00	4,390.94	4,380.09	4,361.56	15.75	16.41	94.808	162.22	339.60	336.98	305.42	31.56	10.678			
4,500.00	4,490.94	4,479.54	4,460.47	16.11	16.80	93.778	167.69	348.45	345.46	313.19	32.27	10.706			
4,600.00	4,590.94	4,578.99	4,559.38	16.46	17.19	92.798	173.15	357.30	354.04	321.06	32.98	10.736			
4,700.00	4,690.94	4,678.45	4,658.28	16.81	17.58	91.864	178.62	366.15	362.72	329.03	33.69	10.768			
4,800.00	4,790.94	4,782.08	4,761.38	17.16	17.99	90.966	184.13	375.08	371.23	336.80	34.43	10.783			

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 216H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:		Offset Well Error:		0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
4,900.00	4,890.94	4,890.80	4,869.78	17.52	18.40	90.278	188.54	382.21	377.75	342.56	35.19	10.736			
5,000.00	4,990.94	4,999.91	4,978.76	17.87	18.79	89.857	191.32	386.72	381.89	345.96	35.93	10.629			
5,100.00	5,090.94	5,109.24	5,088.06	18.22	19.17	89.685	192.48	388.59	383.60	346.95	36.65	10.466			
5,200.00	5,190.94	5,211.12	5,189.94	18.58	19.51	89.680	192.51	388.64	383.65	346.30	37.35	10.273			
5,300.00	5,290.94	5,311.12	5,289.94	18.93	19.84	89.680	192.51	388.64	383.65	345.60	38.04	10.085			
5,400.00	5,390.94	5,411.12	5,389.94	19.28	20.17	89.680	192.51	388.64	383.65	344.91	38.74	9.903			
5,500.00	5,490.94	5,511.12	5,489.94	19.64	20.51	89.680	192.51	388.64	383.65	344.21	39.44	9.728			
5,600.00	5,590.94	5,611.12	5,589.94	19.99	20.84	89.680	192.51	388.64	383.65	343.51	40.13	9.559			
5,700.00	5,690.94	5,711.12	5,689.94	20.34	21.18	89.680	192.51	388.64	383.65	342.81	40.83	9.396			
5,800.00	5,790.94	5,811.12	5,789.94	20.70	21.51	89.680	192.51	388.64	383.65	342.12	41.53	9.238			
5,900.00	5,890.94	5,911.12	5,889.94	21.05	21.85	89.680	192.51	388.64	383.65	341.42	42.23	9.085			
6,000.00	5,990.94	6,011.12	5,989.94	21.41	22.19	89.680	192.51	388.64	383.65	340.72	42.93	8.937			
6,100.00	6,090.94	6,111.12	6,089.94	21.76	22.52	89.680	192.51	388.64	383.65	340.02	43.63	8.793			
6,200.00	6,190.94	6,211.12	6,189.94	22.12	22.86	89.680	192.51	388.64	383.65	339.31	44.33	8.654			
6,300.00	6,290.94	6,311.12	6,289.94	22.47	23.20	89.680	192.51	388.64	383.65	338.61	45.03	8.519			
6,400.00	6,390.94	6,411.12	6,389.94	22.83	23.54	89.680	192.51	388.64	383.65	337.91	45.74	8.388			
6,500.00	6,490.94	6,511.12	6,489.94	23.18	23.88	89.680	192.51	388.64	383.65	337.21	46.44	8.261			
6,600.00	6,590.94	6,611.12	6,589.94	23.54	24.22	89.680	192.51	388.64	383.65	336.50	47.14	8.138			
6,700.00	6,690.94	6,711.12	6,689.94	23.89	24.56	89.680	192.51	388.64	383.65	335.80	47.84	8.019			
6,800.00	6,790.94	6,811.12	6,789.94	24.25	24.91	89.680	192.51	388.64	383.65	335.10	48.55	7.902			
6,900.00	6,890.94	6,911.12	6,889.94	24.61	25.25	89.680	192.51	388.64	383.65	334.39	49.25	7.789			
7,000.00	6,990.94	7,011.12	6,989.94	24.96	25.59	89.680	192.51	388.64	383.65	333.69	49.96	7.679			
7,100.00	7,090.94	7,111.12	7,089.94	25.32	25.93	89.680	192.51	388.64	383.65	332.98	50.66	7.573			
7,200.00	7,190.94	7,211.12	7,189.94	25.67	26.28	89.680	192.51	388.64	383.65	332.28	51.37	7.469			
7,300.00	7,290.94	7,311.12	7,289.94	26.03	26.62	89.680	192.51	388.64	383.65	331.57	52.07	7.367			
7,400.00	7,390.94	7,411.12	7,389.94	26.38	26.97	89.680	192.51	388.64	383.65	330.87	52.78	7.269			
7,500.00	7,490.94	7,511.12	7,489.94	26.74	27.31	89.680	192.51	388.64	383.65	330.16	53.49	7.173			
7,600.00	7,590.94	7,611.12	7,589.94	27.10	27.66	89.680	192.51	388.64	383.65	329.45	54.19	7.079			
7,700.00	7,690.94	7,711.12	7,689.94	27.45	28.00	89.680	192.51	388.64	383.65	328.75	54.90	6.988			
7,800.00	7,790.94	7,811.12	7,789.94	27.81	28.35	89.680	192.51	388.64	383.65	328.04	55.61	6.899			
7,900.00	7,890.94	7,911.12	7,889.94	28.17	28.69	89.680	192.51	388.64	383.65	327.33	56.31	6.813			
8,000.00	7,990.94	8,011.12	7,989.94	28.52	29.04	89.680	192.51	388.64	383.65	326.63	57.02	6.728			
8,100.00	8,090.94	8,111.12	8,089.94	28.88	29.39	89.680	192.51	388.64	383.65	325.92	57.73	6.646			
8,200.00	8,190.94	8,211.12	8,189.94	29.23	29.73	89.680	192.51	388.64	383.65	325.21	58.44	6.565			
8,300.00	8,290.94	8,311.12	8,289.94	29.59	30.08	89.680	192.51	388.64	383.65	324.50	59.14	6.487			
8,400.00	8,390.94	8,411.12	8,389.94	29.95	30.43	89.680	192.51	388.64	383.65	323.79	59.85	6.410			
8,500.00	8,490.94	8,511.12	8,489.94	30.30	30.78	89.680	192.51	388.64	383.65	323.09	60.56	6.335			
8,600.00	8,590.94	8,611.12	8,589.94	30.66	31.12	89.680	192.51	388.64	383.65	322.38	61.27	6.262			
8,700.00	8,690.94	8,711.12	8,689.94	31.02	31.47	89.680	192.51	388.64	383.65	321.67	61.98	6.190			
8,800.00	8,790.94	8,811.12	8,789.94	31.37	31.82	89.680	192.51	388.64	383.65	320.96	62.69	6.120			
8,900.00	8,890.94	8,911.12	8,889.94	31.73	32.17	89.680	192.51	388.64	383.65	320.25	63.40	6.051			
9,000.00	8,990.94	9,011.12	8,989.94	32.09	32.52	89.680	192.51	388.64	383.65	319.54	64.11	5.985			
9,100.00	9,090.94	9,111.12	9,089.94	32.44	32.87	89.680	192.51	388.64	383.65	318.83	64.82	5.919			
9,200.00	9,190.94	9,211.12	9,189.94	32.80	33.22	89.680	192.51	388.64	383.65	318.12	65.53	5.855			
9,300.00	9,290.94	9,311.12	9,289.94	33.16	33.57	89.680	192.51	388.64	383.65	317.41	66.24	5.792			
9,400.00	9,390.94	9,411.12	9,389.94	33.51	33.92	89.680	192.51	388.64	383.65	316.70	66.95	5.731			
9,500.00	9,490.94	9,511.12	9,489.94	33.87	34.27	89.680	192.51	388.64	383.65	315.99	67.66	5.671			
9,600.00	9,590.94	9,611.12	9,589.94	34.23	34.62	89.680	192.51	388.64	383.65	315.28	68.37	5.612			
9,700.00	9,690.94	9,711.12	9,689.94	34.59	34.97	89.680	192.51	388.64	383.65	314.57	69.08	5.554			
9,800.00	9,790.94	9,811.12	9,789.94	34.94	35.32	89.680	192.51	388.64	383.65	313.86	69.79	5.497			
9,900.00	9,890.94	9,911.12	9,889.94	35.30	35.67	89.680	192.51	388.64	383.65	313.15	70.50	5.442			
10,000.00	9,990.94	10,011.12	9,989.94	35.66	36.02	89.680	192.51	388.64	383.65	312.44	71.21	5.388			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 216H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:		Offset Site Error: 0.00 usft	
Reference										Distance		Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,090.94	10,111.12	10,089.94	36.01	36.37	89.680	192.51	388.64	383.65	311.73	71.92	5.334	
10,187.06	10,178.00	10,198.18	10,177.00	36.33	36.68	89.680	192.51	388.64	383.65	311.11	72.54	5.289	
10,200.00	10,190.94	10,211.12	10,189.94	36.37	36.72	89.659	192.51	388.64	383.67	311.04	72.63	5.283	
10,250.00	10,240.81	10,260.99	10,239.81	36.52	36.90	89.170	192.51	388.64	384.11	311.16	72.96	5.265	
10,300.00	10,290.21	10,310.39	10,289.21	36.67	37.07	88.044	192.51	388.64	385.25	311.98	73.27	5.258 SF	
10,350.00	10,338.75	10,358.93	10,337.75	36.82	37.24	86.304	192.51	388.64	387.33	313.75	73.58	5.264	
10,400.00	10,386.07	10,406.25	10,385.07	36.95	37.41	83.984	192.51	388.64	390.69	316.83	73.86	5.289	
10,450.00	10,431.81	10,451.99	10,430.81	37.08	37.57	81.141	192.51	388.64	395.79	321.65	74.14	5.339	
10,500.00	10,475.61	10,495.79	10,474.61	37.21	37.72	77.851	192.51	388.64	403.12	328.72	74.40	5.418	
10,550.00	10,517.15	10,537.33	10,516.15	37.32	37.87	74.211	192.51	388.64	413.16	338.51	74.65	5.535	
10,600.00	10,556.11	10,576.29	10,555.11	37.44	38.00	70.334	192.51	388.64	426.37	351.48	74.89	5.693	
10,650.00	10,592.19	10,612.37	10,591.19	37.55	38.13	66.340	192.51	388.64	443.08	367.96	75.11	5.899	
10,700.00	10,625.12	10,645.30	10,624.12	37.67	38.25	62.346	192.51	388.64	463.49	388.17	75.32	6.153	
10,750.00	10,654.64	10,674.82	10,653.64	37.78	38.35	58.455	192.51	388.64	487.66	412.15	75.52	6.457	
10,800.00	10,680.54	10,700.72	10,679.54	37.90	38.44	54.746	192.51	388.64	515.50	439.81	75.69	6.810	
10,850.00	10,702.61	10,722.79	10,701.61	38.02	38.52	51.277	192.51	388.64	546.77	470.93	75.85	7.209	
10,900.00	10,720.69	10,740.87	10,719.69	38.14	38.58	48.079	192.51	388.64	581.16	505.18	75.98	7.649	
10,950.00	10,734.64	10,754.82	10,733.64	38.27	38.63	45.167	192.51	388.64	618.25	542.16	76.08	8.126	
11,000.00	10,744.36	10,764.54	10,743.36	38.40	38.67	42.538	192.51	388.64	657.59	581.43	76.16	8.634	
11,050.00	10,749.76	10,769.94	10,748.76	38.53	38.68	40.180	192.51	388.64	698.72	622.50	76.22	9.167	
11,082.06	10,750.94	10,771.12	10,749.94	38.62	38.69	38.803	192.51	388.64	725.80	649.56	76.24	9.520	
11,100.00	10,751.09	10,771.28	10,750.09	38.67	38.69	38.073	192.51	388.64	741.11	664.86	76.25	9.719	
11,200.00	10,751.97	10,772.15	10,750.97	39.00	38.69	34.377	192.51	388.64	827.41	751.10	76.31	10.843	
11,300.00	10,752.84	10,773.03	10,751.84	39.39	38.70	31.194	192.51	388.64	914.95	838.58	76.37	11.981	
11,400.00	10,753.72	10,773.90	10,752.72	39.84	38.70	28.394	192.51	388.64	1,003.30	926.88	76.42	13.128	
11,461.17	10,754.26	10,774.44	10,753.26	40.15	38.70	26.830	192.51	388.64	1,057.61	981.16	76.45	13.833	
11,500.00	10,754.60	10,774.78	10,753.60	40.35	38.70	25.898	192.51	388.64	1,092.29	1,015.82	76.48	14.283	
11,600.00	10,755.47	10,775.65	10,754.47	40.92	38.70	23.753	192.51	388.64	1,182.78	1,106.25	76.53	15.455	
11,700.00	10,756.35	10,776.53	10,755.35	41.55	38.71	21.915	192.51	388.64	1,274.69	1,198.11	76.58	16.646	
11,800.00	10,757.22	10,777.41	10,756.22	42.24	38.71	20.325	192.51	388.64	1,367.74	1,291.11	76.62	17.850	
11,900.00	10,758.10	10,778.28	10,757.10	42.98	38.71	18.939	192.51	388.64	1,461.70	1,385.03	76.67	19.065	
12,000.00	10,758.97	10,779.16	10,757.97	43.77	38.72	17.721	192.51	388.64	1,556.42	1,479.71	76.71	20.289	
12,100.00	10,759.85	10,780.03	10,758.85	44.60	38.72	16.643	192.51	388.64	1,651.76	1,575.00	76.75	21.521	
12,200.00	10,760.73	10,780.91	10,759.73	45.48	38.72	15.683	192.51	388.64	1,747.62	1,670.82	76.79	22.758	
12,300.00	10,761.60	13,971.35	12,448.59	46.41	51.24	87.676	-1,570.14	407.29	1,757.89	1,698.93	58.96	29.813	
12,400.00	10,762.48	14,071.35	12,449.46	47.37	52.10	87.678	-1,670.13	408.34	1,758.00	1,698.14	59.86	29.371	
12,500.00	10,763.35	14,171.35	12,450.33	48.37	53.00	87.679	-1,770.12	409.40	1,758.10	1,697.32	60.78	28.923	
12,600.00	10,764.23	14,271.35	12,451.20	49.41	53.94	87.680	-1,870.11	410.46	1,758.21	1,696.46	61.75	28.472	
12,700.00	10,765.10	14,371.35	12,452.07	50.48	54.90	87.682	-1,970.10	411.52	1,758.31	1,695.56	62.75	28.019	
12,800.00	10,765.98	14,471.35	12,452.95	51.58	55.90	87.683	-2,070.09	412.57	1,758.42	1,694.63	63.79	27.566	
12,900.00	10,766.86	14,571.35	12,453.82	52.70	56.94	87.685	-2,170.08	413.63	1,758.52	1,693.66	64.86	27.114	
13,000.00	10,767.73	14,671.35	12,454.69	53.86	58.00	87.686	-2,270.07	414.69	1,758.63	1,692.67	65.96	26.664	
13,100.00	10,768.61	14,771.34	12,455.56	55.04	59.08	87.687	-2,370.06	415.75	1,758.73	1,691.65	67.08	26.217	
13,200.00	10,769.48	14,871.34	12,456.43	56.25	60.19	87.689	-2,470.04	416.81	1,758.84	1,690.60	68.24	25.775	
13,300.00	10,770.36	14,971.34	12,457.30	57.47	61.33	87.690	-2,570.03	417.86	1,758.94	1,689.52	69.42	25.338	
13,400.00	10,771.23	15,071.34	12,458.17	58.72	62.49	87.691	-2,670.02	418.92	1,759.05	1,688.42	70.63	24.906	
13,500.00	10,772.11	15,171.34	12,459.05	59.99	63.67	87.693	-2,770.01	419.98	1,759.16	1,687.30	71.86	24.481	
13,600.00	10,772.99	15,271.34	12,459.92	61.28	64.88	87.694	-2,870.00	421.04	1,759.26	1,686.15	73.11	24.063	
13,700.00	10,773.86	15,371.34	12,460.79	62.58	66.10	87.695	-2,969.99	422.09	1,759.37	1,684.98	74.39	23.652	
13,800.00	10,774.74	15,471.34	12,461.66	63.90	67.34	87.697	-3,069.98	423.15	1,759.47	1,683.79	75.68	23.249	
13,900.00	10,775.61	15,571.34	12,462.53	65.23	68.60	87.698	-3,169.97	424.21	1,759.58	1,682.58	77.00	22.853	
14,000.00	10,776.49	15,671.34	12,463.40	66.58	69.87	87.699	-3,269.96	425.27	1,759.69	1,681.36	78.33	22.465	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 216H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error:
Reference										Distance				Offset Well Error:
Measured	Vertical	Offset	Semi Major Axis	Azimuth	Offset Wellbore Centre	Between	Between	Minimum	Separation	Warning				
Depth	Depth	Depth	Reference	from North	+N/-S	Centres	Ellipses	Separation	Factor					
(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)						
14,100.00	10,777.37	15,771.34	12,464.27	87.701	-3,369.95	426.33	1,759.79	1,680.11	79.68	22.085				
14,200.00	10,778.24	15,871.34	12,465.15	87.702	-3,469.94	427.38	1,759.90	1,678.85	81.05	21.714				
14,300.00	10,779.12	15,971.34	12,466.02	87.703	-3,569.93	428.44	1,760.00	1,677.57	82.43	21.351				
14,400.00	10,779.99	16,071.33	12,466.89	87.705	-3,669.92	429.50	1,760.11	1,676.28	83.83	20.995				
14,500.00	10,780.87	16,171.33	12,467.76	87.706	-3,769.91	430.56	1,760.22	1,674.97	85.25	20.648				
14,600.00	10,781.74	16,271.33	12,468.63	87.707	-3,869.90	431.61	1,760.32	1,673.65	86.68	20.309				
14,700.00	10,782.62	16,371.33	12,469.50	87.709	-3,969.89	432.67	1,760.43	1,672.31	88.12	19.978				
14,800.00	10,783.50	16,471.33	12,470.37	87.710	-4,069.88	433.73	1,760.54	1,670.97	89.57	19.655				
14,900.00	10,784.37	16,571.33	12,471.25	87.711	-4,169.87	434.79	1,760.64	1,669.61	91.04	19.340				
15,000.00	10,785.25	16,671.33	12,472.12	87.713	-4,269.86	435.84	1,760.75	1,668.24	92.52	19.032				
15,100.00	10,786.12	16,771.33	12,472.99	87.714	-4,369.85	436.90	1,760.86	1,666.85	94.00	18.732				
15,200.00	10,787.00	16,871.33	12,473.86	87.715	-4,469.84	437.96	1,760.97	1,665.46	95.50	18.439				
15,300.00	10,787.87	16,971.33	12,474.73	87.717	-4,569.83	439.02	1,761.07	1,664.06	97.01	18.153				
15,400.00	10,788.75	17,071.33	12,475.60	87.718	-4,669.82	440.08	1,761.18	1,662.65	98.53	17.874				
15,500.00	10,789.63	17,171.33	12,476.47	87.719	-4,769.81	441.13	1,761.29	1,661.23	100.06	17.602				
15,600.00	10,790.50	17,271.33	12,477.35	87.720	-4,869.80	442.19	1,761.39	1,659.80	101.60	17.337				
15,700.00	10,791.38	17,371.32	12,478.22	87.722	-4,969.79	443.25	1,761.50	1,658.36	103.14	17.078				
15,800.00	10,792.25	17,471.32	12,479.09	87.723	-5,069.78	444.31	1,761.61	1,656.91	104.70	16.826				
15,900.00	10,793.13	17,571.32	12,479.96	87.724	-5,169.77	445.36	1,761.72	1,655.46	106.26	16.579				
16,000.00	10,794.00	17,671.32	12,480.83	87.726	-5,269.76	446.42	1,761.83	1,653.99	107.83	16.339				
16,100.00	10,794.88	17,771.32	12,481.70	87.727	-5,369.75	447.48	1,761.93	1,652.53	109.41	16.104				
16,200.00	10,795.76	17,871.32	12,482.57	87.728	-5,469.74	448.54	1,762.04	1,651.05	110.99	15.876				
16,300.00	10,796.63	17,971.32	12,483.45	87.729	-5,569.73	449.60	1,762.15	1,649.57	112.58	15.652				
16,400.00	10,797.51	18,071.32	12,484.32	87.731	-5,669.72	450.65	1,762.26	1,648.08	114.18	15.434				
16,500.00	10,798.38	18,171.32	12,485.19	87.732	-5,769.71	451.71	1,762.37	1,646.58	115.78	15.221				
16,600.00	10,799.26	18,271.32	12,486.06	87.733	-5,869.70	452.77	1,762.47	1,645.08	117.39	15.014				
16,700.00	10,800.14	18,371.32	12,486.93	87.735	-5,969.69	453.83	1,762.58	1,643.58	119.01	14.811				
16,800.00	10,801.01	18,471.32	12,487.80	87.736	-6,069.68	454.88	1,762.69	1,642.06	120.63	14.613				
16,900.00	10,801.89	18,571.32	12,488.67	87.737	-6,169.67	455.94	1,762.80	1,640.55	122.25	14.419				
17,000.00	10,802.76	18,671.32	12,489.55	87.738	-6,269.66	457.00	1,762.91	1,639.02	123.88	14.230				
17,100.00	10,803.64	18,771.31	12,490.42	87.740	-6,369.65	458.06	1,763.02	1,637.50	125.52	14.046				
17,200.00	10,804.51	18,871.31	12,491.29	87.741	-6,469.64	459.12	1,763.12	1,635.96	127.16	13.865				
17,300.00	10,805.39	18,971.31	12,492.16	87.742	-6,569.63	460.17	1,763.23	1,634.43	128.81	13.689				
17,400.00	10,806.27	19,071.31	12,493.03	87.744	-6,669.62	461.23	1,763.34	1,632.89	130.46	13.517				
17,500.00	10,807.14	19,171.31	12,493.90	87.745	-6,769.61	462.29	1,763.45	1,631.34	132.11	13.348				
17,600.00	10,808.02	19,271.31	12,494.77	87.746	-6,869.60	463.35	1,763.56	1,629.79	133.77	13.184				
17,700.00	10,808.89	19,371.31	12,495.65	87.747	-6,969.59	464.40	1,763.67	1,628.24	135.43	13.022				
17,800.00	10,809.77	19,471.31	12,496.52	87.749	-7,069.58	465.46	1,763.78	1,626.68	137.10	12.865				
17,900.00	10,810.64	19,571.31	12,497.39	87.750	-7,169.57	466.52	1,763.89	1,625.12	138.77	12.711				
18,000.00	10,811.52	19,671.31	12,498.26	87.751	-7,269.56	467.58	1,764.00	1,623.55	140.45	12.560				
18,100.00	10,812.40	19,771.31	12,499.13	87.752	-7,369.55	468.63	1,764.11	1,621.98	142.12	12.413				
18,200.00	10,813.27	19,871.31	12,500.00	87.754	-7,469.54	469.69	1,764.22	1,620.41	143.81	12.268				
18,300.00	10,814.15	19,971.31	12,500.87	87.755	-7,569.53	470.75	1,764.33	1,618.84	145.49	12.127				
18,400.00	10,815.02	20,071.30	12,501.75	87.756	-7,669.52	471.81	1,764.44	1,617.26	147.18	11.988				
18,500.00	10,815.90	20,171.30	12,502.62	87.757	-7,769.51	472.87	1,764.55	1,615.67	148.87	11.853				
18,600.00	10,816.77	20,271.30	12,503.49	87.759	-7,869.50	473.92	1,764.65	1,614.09	150.57	11.720				
18,700.00	10,817.65	20,371.30	12,504.36	87.760	-7,969.49	474.98	1,764.76	1,612.50	152.26	11.590				
18,800.00	10,818.53	20,471.30	12,505.23	87.761	-8,069.48	476.04	1,764.87	1,610.91	153.96	11.463				
18,900.00	10,819.40	20,571.30	12,506.10	87.762	-8,169.47	477.10	1,764.98	1,609.32	155.67	11.338				
19,000.00	10,820.28	20,671.30	12,506.98	87.764	-8,269.46	478.15	1,765.09	1,607.72	157.37	11.216				
19,100.00	10,821.15	20,771.30	12,507.85	87.765	-8,369.45	479.21	1,765.21	1,606.12	159.08	11.096				
19,200.00	10,822.03	20,871.30	12,508.72	87.766	-8,469.44	480.27	1,765.32	1,604.52	160.80	10.979				

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (East) - Rodney Robinson Federal 216H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,300.00	10,822.90	20,971.30	12,509.59	147.27	148.57	87.767	-8,569.43	481.33	1,765.43	1,602.91	162.51	10.863	
19,400.00	10,823.78	21,071.30	12,510.46	148.87	150.15	87.768	-8,669.42	482.39	1,765.54	1,601.31	164.23	10.750	
19,500.00	10,824.66	21,171.30	12,511.33	150.47	151.73	87.770	-8,769.41	483.44	1,765.65	1,599.70	165.95	10.640	
19,600.00	10,825.53	21,271.30	12,512.20	152.07	153.32	87.771	-8,869.40	484.50	1,765.76	1,598.09	167.67	10.531	
19,700.00	10,826.41	21,371.29	12,513.08	153.67	154.90	87.772	-8,969.39	485.56	1,765.87	1,596.47	169.40	10.425	
19,800.00	10,827.28	21,471.29	12,513.95	155.27	156.49	87.773	-9,069.37	486.62	1,765.98	1,594.86	171.12	10.320	
19,900.00	10,828.16	21,571.29	12,514.82	156.88	158.08	87.775	-9,169.36	487.67	1,766.09	1,593.24	172.85	10.217	
20,000.00	10,829.04	21,671.29	12,515.69	158.48	159.67	87.776	-9,269.35	488.73	1,766.20	1,591.62	174.58	10.117	
20,100.00	10,829.91	21,771.29	12,516.56	160.09	161.26	87.777	-9,369.34	489.79	1,766.31	1,589.99	176.32	10.018	
20,200.00	10,830.79	21,871.29	12,517.43	161.70	162.85	87.778	-9,469.33	490.85	1,766.42	1,588.37	178.05	9.921	
20,300.00	10,831.66	21,971.29	12,518.30	163.30	164.44	87.779	-9,569.32	491.90	1,766.53	1,586.74	179.79	9.825	
20,400.00	10,832.54	22,071.29	12,519.18	164.91	166.04	87.781	-9,669.31	492.96	1,766.65	1,585.11	181.53	9.732	
20,500.00	10,833.41	22,171.29	12,520.05	166.52	167.63	87.782	-9,769.30	494.02	1,766.76	1,583.48	183.27	9.640	
20,600.00	10,834.29	22,271.29	12,520.92	168.13	169.23	87.783	-9,869.29	495.08	1,766.87	1,581.85	185.02	9.550	
20,700.00	10,835.17	22,371.29	12,521.79	169.74	170.83	87.784	-9,969.28	496.14	1,766.98	1,580.22	186.76	9.461	
20,800.00	10,836.04	22,471.29	12,522.66	171.36	172.43	87.785	-10,069.27	497.19	1,767.09	1,578.58	188.51	9.374	
20,900.00	10,836.92	22,571.29	12,523.53	172.97	174.03	87.787	-10,169.26	498.25	1,767.20	1,576.94	190.26	9.288	
20,972.39	10,837.55	22,643.68	12,524.16	174.00	175.19	87.788	-10,241.65	499.02	1,767.28	1,575.99	191.29	9.239	

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 101H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	6.00	6.00	0.00	0.01	-90.313	-6.00	-1,100.00	1,100.02				
100.00	100.00	106.00	106.00	0.13	0.15	-90.313	-6.00	-1,100.00	1,100.02	1,099.74	0.28	3,959.517	
200.00	200.00	206.00	206.00	0.49	0.51	-90.313	-6.00	-1,100.00	1,100.02	1,099.02	0.99	1,105.812	
300.00	300.00	306.00	306.00	0.85	0.87	-90.313	-6.00	-1,100.00	1,100.02	1,098.30	1.71	642.645	
400.00	400.00	406.00	406.00	1.20	1.23	-90.313	-6.00	-1,100.00	1,100.02	1,097.59	2.43	452.934	
500.00	500.00	506.00	506.00	1.56	1.58	-90.313	-6.00	-1,100.00	1,100.02	1,096.87	3.15	349.701	
600.00	600.00	606.00	606.00	1.92	1.94	-90.313	-6.00	-1,100.00	1,100.02	1,096.15	3.86	284.792	
700.00	700.00	706.00	706.00	2.28	2.30	-90.313	-6.00	-1,100.00	1,100.02	1,095.44	4.58	240.206	
800.00	800.00	806.00	806.00	2.64	2.66	-90.313	-6.00	-1,100.00	1,100.02	1,094.72	5.30	207.691 CC	
900.00	899.99	905.99	905.99	3.00	3.02	-90.358	-6.00	-1,100.00	1,100.04	1,094.03	6.01	182.942	
1,000.00	999.96	1,005.96	1,005.96	3.36	3.38	-90.494	-6.00	-1,100.00	1,100.13	1,093.40	6.73	163.482	
1,100.00	1,099.86	1,105.86	1,105.86	3.71	3.73	-90.721	-6.00	-1,100.00	1,100.29	1,092.85	7.45	147.770	
1,200.00	1,199.68	1,200.00	1,200.00	4.07	4.07	-91.039	-6.00	-1,100.00	1,100.56	1,092.42	8.14	135.147 ES	
1,300.00	1,299.37	1,293.30	1,293.30	4.44	4.40	-91.417	-5.45	-1,100.52	1,101.50	1,092.66	8.84	124.632	
1,399.70	1,398.60	1,381.33	1,381.30	4.80	4.72	-91.832	-3.93	-1,101.98	1,103.61	1,094.10	9.51	115.997	
1,400.00	1,398.90	1,381.59	1,381.56	4.80	4.72	-91.833	-3.92	-1,101.99	1,103.62	1,094.11	9.52	115.973	
1,500.00	1,498.36	1,469.93	1,469.83	5.17	5.03	-92.239	-1.40	-1,104.39	1,106.87	1,096.67	10.20	108.537	
1,600.00	1,597.81	1,558.34	1,558.11	5.55	5.35	-92.590	2.10	-1,107.74	1,111.18	1,100.30	10.88	102.106	
1,700.00	1,697.26	1,646.78	1,646.33	5.92	5.66	-92.885	6.59	-1,112.03	1,116.54	1,104.97	11.57	96.508	
1,800.00	1,796.71	1,735.21	1,734.43	6.30	5.98	-93.124	12.06	-1,117.25	1,122.92	1,110.66	12.26	91.607	
1,900.00	1,896.17	1,826.62	1,825.37	6.68	6.32	-93.299	18.71	-1,123.60	1,130.28	1,117.32	12.96	87.205	
2,000.00	1,995.62	1,926.29	1,924.51	7.06	6.69	-93.424	26.24	-1,130.80	1,137.91	1,124.21	13.70	83.045	
2,100.00	2,095.07	2,025.97	2,023.64	7.44	7.06	-93.547	33.78	-1,137.99	1,145.55	1,131.10	14.45	79.296	
2,200.00	2,194.53	2,125.65	2,122.77	7.83	7.43	-93.669	41.31	-1,145.19	1,153.19	1,138.00	15.19	75.901	
2,300.00	2,293.98	2,225.33	2,221.90	8.21	7.80	-93.789	48.84	-1,152.39	1,160.84	1,144.90	15.94	72.815	
2,400.00	2,393.43	2,325.00	2,321.03	8.59	8.18	-93.907	56.38	-1,159.58	1,168.49	1,151.80	16.69	69.997	
2,500.00	2,492.88	2,424.68	2,420.16	8.98	8.55	-94.024	63.91	-1,166.78	1,176.15	1,158.70	17.45	67.416	
2,600.00	2,592.34	2,524.36	2,519.30	9.36	8.93	-94.139	71.44	-1,173.98	1,183.81	1,165.61	18.20	65.043	
2,700.00	2,691.79	2,624.04	2,618.43	9.75	9.31	-94.253	78.98	-1,181.17	1,191.48	1,172.53	18.96	62.855	
2,722.26	2,713.93	2,646.23	2,640.50	9.84	9.40	-94.278	80.66	-1,182.77	1,193.19	1,174.07	19.12	62.391	
2,800.00	2,791.32	2,723.73	2,717.58	10.13	9.69	-94.328	86.51	-1,188.37	1,199.08	1,179.37	19.71	60.837	
2,900.00	2,891.06	2,823.45	2,816.75	10.51	10.08	-94.281	94.05	-1,195.57	1,206.43	1,185.98	20.45	58.983	
3,000.00	2,990.96	2,923.13	2,915.89	10.87	10.46	-94.113	101.58	-1,202.77	1,213.54	1,192.36	21.19	57.276	
3,100.00	3,090.94	3,022.71	3,014.91	11.22	10.84	-93.823	109.11	-1,209.95	1,220.42	1,198.51	21.91	55.700	
3,122.06	3,113.00	3,044.65	3,036.74	11.30	10.92	-93.744	110.77	-1,211.54	1,221.91	1,199.84	22.07	55.369	
3,200.00	3,190.94	3,122.16	3,113.82	11.57	11.22	-93.453	116.63	-1,217.13	1,227.17	1,204.55	22.63	54.237	
3,300.00	3,290.94	3,221.61	3,212.73	11.91	11.61	-93.084	124.14	-1,224.31	1,233.97	1,210.63	23.34	52.864	
3,400.00	3,390.94	3,321.07	3,311.64	12.26	11.99	-92.718	131.66	-1,231.49	1,240.82	1,216.76	24.06	51.574	
3,500.00	3,490.94	3,420.52	3,410.55	12.61	12.37	-92.357	139.18	-1,238.67	1,247.72	1,222.94	24.78	50.358	
3,600.00	3,590.94	3,519.97	3,509.45	12.95	12.76	-92.000	146.69	-1,245.85	1,254.67	1,229.17	25.50	49.212	
3,700.00	3,690.94	3,619.42	3,608.36	13.30	13.14	-91.646	154.21	-1,253.03	1,261.67	1,235.45	26.21	48.130	
3,800.00	3,790.94	3,718.88	3,707.27	13.65	13.53	-91.297	161.73	-1,260.21	1,268.71	1,241.78	26.93	47.106	
3,900.00	3,890.94	3,825.85	3,813.67	14.00	13.94	-90.930	169.71	-1,267.84	1,275.73	1,248.04	27.69	46.077	
4,000.00	3,990.94	3,955.04	3,942.45	14.35	14.43	-90.594	177.10	-1,274.89	1,281.12	1,252.59	28.53	44.905	
4,100.00	4,090.94	4,084.78	4,072.05	14.70	14.90	-90.403	181.34	-1,278.95	1,284.22	1,254.87	29.35	43.752	
4,200.00	4,190.94	4,209.68	4,196.94	15.05	15.34	-90.353	182.44	-1,280.00	1,285.02	1,254.89	30.14	42.641	
4,300.00	4,290.94	4,309.68	4,296.94	15.40	15.68	-90.353	182.44	-1,280.00	1,285.02	1,254.19	30.83	41.675	
4,400.00	4,390.94	4,409.68	4,396.94	15.75	16.02	-90.353	182.44	-1,280.00	1,285.02	1,253.49	31.53	40.751	
4,500.00	4,490.94	4,509.68	4,496.94	16.11	16.37	-90.353	182.44	-1,280.00	1,285.02	1,252.79	32.23	39.866	
4,600.00	4,590.94	4,609.68	4,596.94	16.46	16.71	-90.353	182.44	-1,280.00	1,285.02	1,252.09	32.93	39.018	
4,700.00	4,690.94	4,709.68	4,696.94	16.81	17.06	-90.353	182.44	-1,280.00	1,285.02	1,251.39	33.64	38.204	
4,800.00	4,790.94	4,809.68	4,796.94	17.16	17.41	-90.353	182.44	-1,280.00	1,285.02	1,250.69	34.34	37.423	

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



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 101H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference										Distance				Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
4,900.00	4,890.94	4,909.68	4,896.94	17.52	17.75	-90.353	182.44	-1,280.00	1,285.02	1,249.98	35.04	36.673		
5,000.00	4,990.94	5,009.68	4,996.94	17.87	18.10	-90.353	182.44	-1,280.00	1,285.02	1,249.28	35.74	35.951		
5,100.00	5,090.94	5,109.68	5,096.94	18.22	18.45	-90.353	182.44	-1,280.00	1,285.02	1,248.58	36.45	35.257		
5,200.00	5,190.94	5,209.68	5,196.94	18.58	18.80	-90.353	182.44	-1,280.00	1,285.02	1,247.87	37.15	34.589		
5,300.00	5,290.94	5,309.68	5,296.94	18.93	19.14	-90.353	182.44	-1,280.00	1,285.02	1,247.17	37.86	33.945		
5,400.00	5,390.94	5,409.68	5,396.94	19.28	19.49	-90.353	182.44	-1,280.00	1,285.02	1,246.46	38.56	33.324		
5,500.00	5,490.94	5,509.68	5,496.94	19.64	19.84	-90.353	182.44	-1,280.00	1,285.02	1,245.76	39.27	32.725		
5,600.00	5,590.94	5,609.68	5,596.94	19.99	20.19	-90.353	182.44	-1,280.00	1,285.02	1,245.05	39.97	32.147		
5,700.00	5,690.94	5,709.68	5,696.94	20.34	20.54	-90.353	182.44	-1,280.00	1,285.02	1,244.34	40.68	31.589		
5,800.00	5,790.94	5,809.68	5,796.94	20.70	20.89	-90.353	182.44	-1,280.00	1,285.02	1,243.64	41.39	31.049		
5,900.00	5,890.94	5,909.68	5,896.94	21.05	21.24	-90.353	182.44	-1,280.00	1,285.02	1,242.93	42.09	30.528		
6,000.00	5,990.94	6,009.68	5,996.94	21.41	21.59	-90.353	182.44	-1,280.00	1,285.02	1,242.22	42.80	30.023		
6,100.00	6,090.94	6,109.68	6,096.94	21.76	21.94	-90.353	182.44	-1,280.00	1,285.02	1,241.52	43.51	29.535		
6,200.00	6,190.94	6,209.68	6,196.94	22.12	22.30	-90.353	182.44	-1,280.00	1,285.02	1,240.81	44.22	29.062		
6,300.00	6,290.94	6,309.68	6,296.94	22.47	22.65	-90.353	182.44	-1,280.00	1,285.02	1,240.10	44.93	28.604		
6,400.00	6,390.94	6,409.68	6,396.94	22.83	23.00	-90.353	182.44	-1,280.00	1,285.02	1,239.39	45.63	28.160		
6,500.00	6,490.94	6,509.68	6,496.94	23.18	23.35	-90.353	182.44	-1,280.00	1,285.02	1,238.68	46.34	27.729		
6,600.00	6,590.94	6,609.68	6,596.94	23.54	23.70	-90.353	182.44	-1,280.00	1,285.02	1,237.97	47.05	27.311		
6,700.00	6,690.94	6,709.68	6,696.94	23.89	24.05	-90.353	182.44	-1,280.00	1,285.02	1,237.26	47.76	26.905		
6,800.00	6,790.94	6,809.68	6,796.94	24.25	24.41	-90.353	182.44	-1,280.00	1,285.02	1,236.55	48.47	26.511		
6,900.00	6,890.94	6,909.68	6,896.94	24.61	24.76	-90.353	182.44	-1,280.00	1,285.02	1,235.84	49.18	26.129		
7,000.00	6,990.94	7,009.68	6,996.94	24.96	25.11	-90.353	182.44	-1,280.00	1,285.02	1,235.13	49.89	25.757		
7,100.00	7,090.94	7,109.68	7,096.94	25.32	25.46	-90.353	182.44	-1,280.00	1,285.02	1,234.42	50.60	25.395		
7,200.00	7,190.94	7,209.68	7,196.94	25.67	25.82	-90.353	182.44	-1,280.00	1,285.02	1,233.71	51.31	25.044		
7,300.00	7,290.94	7,309.68	7,296.94	26.03	26.17	-90.353	182.44	-1,280.00	1,285.02	1,233.00	52.02	24.702		
7,400.00	7,390.94	7,409.68	7,396.94	26.38	26.52	-90.353	182.44	-1,280.00	1,285.02	1,232.29	52.73	24.369		
7,500.00	7,490.94	7,509.68	7,496.94	26.74	26.88	-90.353	182.44	-1,280.00	1,285.02	1,231.58	53.44	24.045		
7,600.00	7,590.94	7,609.68	7,596.94	27.10	27.23	-90.353	182.44	-1,280.00	1,285.02	1,230.87	54.15	23.729		
7,700.00	7,690.94	7,709.68	7,696.94	27.45	27.59	-90.353	182.44	-1,280.00	1,285.02	1,230.16	54.87	23.421		
7,800.00	7,790.94	7,809.68	7,796.94	27.81	27.94	-90.353	182.44	-1,280.00	1,285.02	1,229.45	55.58	23.122		
7,900.00	7,890.94	7,909.68	7,896.94	28.17	28.29	-90.353	182.44	-1,280.00	1,285.02	1,228.74	56.29	22.829		
8,000.00	7,990.94	8,009.68	7,996.94	28.52	28.65	-90.353	182.44	-1,280.00	1,285.02	1,228.02	57.00	22.544		
8,100.00	8,090.94	8,109.68	8,096.94	28.88	29.00	-90.353	182.44	-1,280.00	1,285.02	1,227.31	57.71	22.266		
8,200.00	8,190.94	8,209.68	8,196.94	29.23	29.36	-90.353	182.44	-1,280.00	1,285.02	1,226.60	58.42	21.995		
8,300.00	8,290.94	8,309.68	8,296.94	29.59	29.71	-90.353	182.44	-1,280.00	1,285.02	1,225.89	59.14	21.730		
8,400.00	8,390.94	8,409.68	8,396.94	29.95	30.07	-90.353	182.44	-1,280.00	1,285.02	1,225.18	59.85	21.472		
8,500.00	8,490.94	8,509.68	8,496.94	30.30	30.42	-90.353	182.44	-1,280.00	1,285.02	1,224.46	60.56	21.219		
8,600.00	8,590.94	8,609.68	8,596.94	30.66	30.77	-90.353	182.44	-1,280.00	1,285.02	1,223.75	61.27	20.972		
8,700.00	8,690.94	8,709.68	8,696.94	31.02	31.13	-90.353	182.44	-1,280.00	1,285.02	1,223.04	61.98	20.731		
8,800.00	8,790.94	8,809.68	8,796.94	31.37	31.48	-90.353	182.44	-1,280.00	1,285.02	1,222.33	62.70	20.496		
8,900.00	8,890.94	8,909.68	8,896.94	31.73	31.84	-90.353	182.44	-1,280.00	1,285.02	1,221.61	63.41	20.265		
9,000.00	8,990.94	9,009.68	8,996.94	32.09	32.19	-90.353	182.44	-1,280.00	1,285.02	1,220.90	64.12	20.040		
9,100.00	9,090.94	9,109.68	9,096.94	32.44	32.55	-90.353	182.44	-1,280.00	1,285.02	1,220.19	64.84	19.820		
9,112.13	9,103.07	9,121.81	9,109.07	32.49	32.59	-90.353	182.44	-1,280.00	1,285.02	1,220.10	64.92	19.793		
9,200.00	9,190.94	9,200.00	9,187.26	32.80	32.87	-90.355	182.40	-1,280.01	1,285.07	1,219.55	65.51	19.615		
9,300.00	9,290.94	9,274.40	9,261.38	33.16	33.10	-90.608	176.73	-1,281.06	1,286.62	1,220.53	66.10	19.466		
9,400.00	9,390.94	9,341.81	9,327.39	33.51	33.30	-91.195	163.48	-1,283.51	1,290.67	1,224.06	66.61	19.376		
9,500.00	9,490.94	9,400.00	9,382.77	33.87	33.47	-91.968	145.98	-1,286.76	1,297.55	1,230.52	67.03	19.358		
9,600.00	9,590.94	9,463.70	9,440.97	34.23	33.63	-93.080	120.61	-1,291.46	1,307.67	1,240.26	67.41	19.400		
9,700.00	9,690.94	9,516.63	9,486.91	34.59	33.75	-94.200	94.80	-1,296.24	1,321.54	1,253.91	67.63	19.540		
9,800.00	9,790.94	9,564.02	9,525.83	34.94	33.86	-95.342	68.25	-1,301.17	1,339.58	1,271.86	67.72	19.780		
9,900.00	9,890.94	9,600.00	9,553.82	35.30	33.93	-96.287	46.02	-1,305.28	1,362.14	1,294.53	67.61	20.147		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 101H - Wellbore #1 - Design #1

Survey Program: O-MWD				Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,000.00	9,990.94	9,650.00	9,590.24	35.66	34.02	-97.700	12.36	-1,311.52	1,389.36	1,321.85	67.51	20.579			
10,100.00	10,090.94	9,676.45	9,608.26	36.01	34.06	-98.490	-6.68	-1,315.05	1,421.32	1,354.23	67.09	21.185			
10,187.06	10,178.00	9,700.00	9,623.54	36.33	34.10	-99.214	-24.29	-1,318.32	1,453.05	1,386.40	66.65	21.800			
10,200.00	10,190.94	9,700.00	9,623.54	36.37	34.10	-99.208	-24.29	-1,318.32	1,458.05	1,391.51	66.54	21.912			
10,250.00	10,240.81	9,720.16	9,636.02	36.52	34.13	-99.708	-39.85	-1,321.20	1,477.21	1,410.90	66.31	22.278			
10,300.00	10,290.21	9,735.14	9,644.94	36.67	34.16	-99.877	-51.70	-1,323.40	1,496.16	1,430.16	65.99	22.671			
10,350.00	10,338.75	9,750.00	9,653.47	36.82	34.19	-99.878	-63.66	-1,325.61	1,514.66	1,449.00	65.66	23.068			
10,400.00	10,386.07	9,766.50	9,662.56	36.95	34.23	-99.772	-77.20	-1,328.12	1,532.54	1,467.20	65.34	23.455			
10,450.00	10,431.81	9,782.75	9,671.12	37.08	34.27	-99.503	-90.77	-1,330.64	1,549.63	1,484.62	65.01	23.837			
10,500.00	10,475.61	9,800.00	9,679.79	37.21	34.32	-99.118	-105.44	-1,333.36	1,565.78	1,501.09	64.69	24.203			
10,550.00	10,517.15	9,816.15	9,687.48	37.32	34.36	-98.549	-119.40	-1,335.94	1,580.85	1,516.48	64.38	24.556			
10,600.00	10,556.11	9,833.21	9,695.18	37.44	34.41	-97.875	-134.38	-1,338.72	1,594.71	1,530.63	64.09	24.884			
10,650.00	10,592.19	9,850.00	9,702.30	37.55	34.46	-97.060	-149.32	-1,341.49	1,607.26	1,543.44	63.81	25.187			
10,700.00	10,625.12	9,867.90	9,709.40	37.67	34.51	-96.165	-165.47	-1,344.48	1,618.39	1,554.80	63.58	25.453			
10,750.00	10,654.64	9,900.00	9,720.84	37.78	34.60	-95.712	-194.96	-1,349.95	1,628.20	1,564.68	63.52	25.634			
10,800.00	10,680.54	9,900.00	9,720.84	37.90	34.60	-93.904	-194.96	-1,349.95	1,636.09	1,572.89	63.21	25.885			
10,850.00	10,702.61	9,920.84	9,727.36	38.02	34.66	-92.824	-214.42	-1,353.55	1,642.53	1,579.40	63.13	26.019			
10,900.00	10,720.69	9,950.00	9,735.27	38.14	34.75	-92.015	-242.02	-1,358.67	1,647.42	1,584.26	63.16	26.083			
10,950.00	10,734.64	9,950.00	9,735.27	38.27	34.75	-89.940	-242.02	-1,358.67	1,650.43	1,587.40	63.04	26.183			
11,000.00	10,744.36	9,974.24	9,740.75	38.40	34.83	-88.826	-265.23	-1,362.97	1,651.77	1,588.63	63.15	26.157			
11,050.00	10,749.76	10,000.00	9,745.47	38.53	34.91	-87.754	-290.13	-1,367.59	1,651.49	1,588.17	63.33	26.080			
11,082.06	10,750.94	10,000.00	9,745.47	38.62	34.91	-86.352	-290.13	-1,367.59	1,650.33	1,586.96	63.38	26.040			
11,100.00	10,751.09	10,000.00	9,745.47	38.67	34.91	-85.564	-290.13	-1,367.59	1,649.69	1,586.28	63.42	26.013			
11,150.36	10,751.53	10,027.73	9,749.27	38.83	35.00	-84.553	-317.13	-1,372.59	1,648.77	1,585.06	63.71	25.880			
11,200.00	10,751.97	10,050.00	9,751.36	39.00	35.07	-83.345	-338.93	-1,376.63	1,649.60	1,585.63	63.97	25.787			
11,300.00	10,752.84	10,087.74	9,752.94	39.39	35.20	-80.633	-376.01	-1,383.50	1,656.25	1,591.70	64.55	25.657			
11,400.00	10,753.72	10,240.08	9,754.27	39.84	35.81	-82.927	-526.45	-1,407.27	1,666.42	1,600.85	65.57	25.413			
11,461.17	10,754.26	10,353.80	9,755.27	40.15	36.35	-85.200	-639.47	-1,419.78	1,671.60	1,605.27	66.33	25.200			
11,500.00	10,754.60	10,426.39	9,755.90	40.35	36.73	-86.651	-711.84	-1,425.41	1,674.22	1,607.37	66.84	25.048			
11,600.00	10,755.47	10,614.30	9,757.55	40.92	37.86	-90.406	-899.61	-1,431.47	1,677.33	1,609.11	68.22	24.587			
11,700.00	10,756.35	10,722.57	9,758.50	41.55	38.60	-90.759	-1,007.87	-1,430.80	1,677.35	1,607.97	69.39	24.174			
11,800.00	10,757.22	10,822.57	9,759.37	42.24	39.35	-90.759	-1,107.87	-1,430.13	1,677.35	1,606.74	70.61	23.755			
11,900.00	10,758.10	10,922.57	9,760.25	42.98	40.14	-90.759	-1,207.86	-1,429.46	1,677.35	1,605.42	71.92	23.321			
12,000.00	10,758.97	11,022.57	9,761.12	43.77	40.99	-90.759	-1,307.85	-1,428.78	1,677.34	1,604.02	73.32	22.877			
12,100.00	10,759.85	11,122.57	9,762.00	44.60	41.89	-90.759	-1,407.85	-1,428.11	1,677.34	1,602.54	74.80	22.425			
12,200.00	10,760.73	11,222.57	9,762.87	45.48	42.83	-90.759	-1,507.84	-1,427.44	1,677.34	1,600.99	76.35	21.970			
12,300.00	10,761.60	11,322.57	9,763.75	46.41	43.81	-90.759	-1,607.84	-1,426.77	1,677.34	1,599.37	77.97	21.513			
12,400.00	10,762.48	11,422.57	9,764.62	47.37	44.83	-90.759	-1,707.83	-1,426.10	1,677.33	1,597.68	79.66	21.057			
12,500.00	10,763.35	11,522.57	9,765.50	48.37	45.89	-90.759	-1,807.82	-1,425.43	1,677.33	1,595.92	81.41	20.604			
12,600.00	10,764.23	11,622.57	9,766.37	49.41	46.98	-90.759	-1,907.82	-1,424.76	1,677.33	1,594.11	83.22	20.156			
12,700.00	10,765.10	11,722.57	9,767.25	50.48	48.11	-90.759	-2,007.81	-1,424.09	1,677.33	1,592.25	85.08	19.715			
12,800.00	10,765.98	11,822.57	9,768.13	51.58	49.26	-90.759	-2,107.81	-1,423.42	1,677.32	1,590.33	86.99	19.281			
12,900.00	10,766.86	11,922.57	9,769.00	52.70	50.45	-90.759	-2,207.80	-1,422.75	1,677.32	1,588.37	88.95	18.856			
13,000.00	10,767.73	12,022.57	9,769.88	53.86	51.65	-90.759	-2,307.79	-1,422.07	1,677.32	1,586.36	90.96	18.441			
13,100.00	10,768.61	12,122.57	9,770.75	55.04	52.89	-90.759	-2,407.79	-1,421.40	1,677.32	1,584.31	93.01	18.035			
13,200.00	10,769.48	12,222.57	9,771.63	56.25	54.14	-90.759	-2,507.78	-1,420.73	1,677.31	1,582.22	95.09	17.639			
13,300.00	10,770.36	12,322.57	9,772.50	57.47	55.42	-90.759	-2,607.78	-1,420.06	1,677.31	1,580.10	97.21	17.254			
13,400.00	10,771.23	12,422.57	9,773.38	58.72	56.71	-90.759	-2,707.77	-1,419.39	1,677.31	1,577.94	99.37	16.879			
13,500.00	10,772.11	12,522.57	9,774.25	59.99	58.03	-90.759	-2,807.76	-1,418.72	1,677.31	1,575.75	101.56	16.516			
13,600.00	10,772.99	12,622.57	9,775.13	61.28	59.36	-90.759	-2,907.76	-1,418.05	1,677.30	1,573.53	103.78	16.163			
13,700.00	10,773.86	12,722.57	9,776.00	62.58	60.71	-90.759	-3,007.75	-1,417.38	1,677.30	1,571.28	106.02	15.820			
13,800.00	10,774.74	12,822.57	9,776.88	63.90	62.07	-90.759	-3,107.75	-1,416.71	1,677.30	1,569.00	108.30	15.488			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 101H - Wellbore #1 - Design #1

Survey Program: 0-MWD													Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:			Offset Well Error: 0.00 usft		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,900.00	10,775.61	12,922.57	9,777.75	65.23	63.44	-90.759	-3,207.74	-1,416.04	1,677.30	1,566.70	110.59	15.166		
14,000.00	10,776.49	13,022.57	9,778.63	66.58	64.83	-90.759	-3,307.73	-1,415.36	1,677.29	1,564.38	112.91	14.855		
14,100.00	10,777.37	13,122.57	9,779.50	67.95	66.23	-90.759	-3,407.73	-1,414.69	1,677.29	1,562.03	115.26	14.553		
14,200.00	10,778.24	13,222.57	9,780.38	69.32	67.64	-90.759	-3,507.72	-1,414.02	1,677.29	1,559.67	117.62	14.260		
14,300.00	10,779.12	13,322.57	9,781.25	70.71	69.07	-90.759	-3,607.72	-1,413.35	1,677.29	1,557.28	120.00	13.977		
14,400.00	10,779.99	13,422.57	9,782.13	72.11	70.50	-90.759	-3,707.71	-1,412.68	1,677.28	1,554.88	122.40	13.703		
14,500.00	10,780.87	13,522.57	9,783.00	73.52	71.94	-90.759	-3,807.70	-1,412.01	1,677.28	1,552.46	124.82	13.438		
14,600.00	10,781.74	13,622.57	9,783.88	74.94	73.39	-90.759	-3,907.70	-1,411.34	1,677.28	1,550.03	127.25	13.181		
14,700.00	10,782.62	13,722.57	9,784.75	76.36	74.85	-90.759	-4,007.69	-1,410.67	1,677.28	1,547.57	129.70	12.932		
14,800.00	10,783.50	13,822.57	9,785.63	77.80	76.32	-90.759	-4,107.68	-1,410.00	1,677.27	1,545.11	132.16	12.691		
14,900.00	10,784.37	13,922.57	9,786.50	79.25	77.80	-90.759	-4,207.68	-1,409.33	1,677.27	1,542.63	134.64	12.457		
15,000.00	10,785.25	14,022.57	9,787.38	80.70	79.28	-90.759	-4,307.67	-1,408.65	1,677.27	1,540.14	137.13	12.231		
15,100.00	10,786.12	14,122.57	9,788.25	82.16	80.77	-90.759	-4,407.67	-1,407.98	1,677.27	1,537.63	139.63	12.012		
15,200.00	10,787.00	14,222.57	9,789.13	83.63	82.26	-90.759	-4,507.66	-1,407.31	1,677.26	1,535.12	142.15	11.800		
15,300.00	10,787.87	14,322.57	9,790.00	85.11	83.76	-90.759	-4,607.65	-1,406.64	1,677.26	1,532.59	144.67	11.594		
15,400.00	10,788.75	14,422.57	9,790.88	86.59	85.27	-90.759	-4,707.65	-1,405.97	1,677.26	1,530.05	147.20	11.394		
15,500.00	10,789.63	14,522.57	9,791.75	88.08	86.78	-90.759	-4,807.64	-1,405.30	1,677.26	1,527.51	149.75	11.200		
15,600.00	10,790.50	14,622.57	9,792.63	89.57	88.30	-90.759	-4,907.64	-1,404.63	1,677.25	1,524.95	152.30	11.013		
15,700.00	10,791.38	14,722.57	9,793.50	91.07	89.82	-90.759	-5,007.63	-1,403.96	1,677.25	1,522.39	154.86	10.830		
15,800.00	10,792.25	14,822.57	9,794.38	92.58	91.35	-90.759	-5,107.62	-1,403.29	1,677.25	1,519.81	157.44	10.654		
15,900.00	10,793.13	14,922.57	9,795.25	94.09	92.88	-90.759	-5,207.62	-1,402.62	1,677.25	1,517.23	160.01	10.482		
16,000.00	10,794.00	15,022.57	9,796.13	95.60	94.41	-90.759	-5,307.61	-1,401.94	1,677.24	1,514.64	162.60	10.315		
16,100.00	10,794.88	15,122.57	9,797.00	97.12	95.95	-90.759	-5,407.61	-1,401.27	1,677.24	1,512.04	165.20	10.153		
16,200.00	10,795.76	15,222.57	9,797.88	98.64	97.50	-90.759	-5,507.60	-1,400.60	1,677.24	1,509.44	167.80	9.996		
16,300.00	10,796.63	15,322.57	9,798.75	100.17	99.04	-90.759	-5,607.59	-1,399.93	1,677.23	1,506.83	170.40	9.843		
16,400.00	10,797.51	15,422.57	9,799.63	101.70	100.59	-90.759	-5,707.59	-1,399.26	1,677.23	1,504.21	173.02	9.694		
16,500.00	10,798.38	15,522.57	9,800.50	103.24	102.15	-90.759	-5,807.58	-1,398.59	1,677.23	1,501.59	175.64	9.549		
16,600.00	10,799.26	15,622.57	9,801.38	104.78	103.70	-90.759	-5,907.58	-1,397.92	1,677.23	1,498.96	178.26	9.409		
16,700.00	10,800.14	15,722.57	9,802.25	106.32	105.26	-90.759	-6,007.57	-1,397.25	1,677.22	1,496.33	180.90	9.272		
16,800.00	10,801.01	15,822.57	9,803.13	107.86	106.82	-90.759	-6,107.56	-1,396.58	1,677.22	1,493.69	183.53	9.139		
16,900.00	10,801.89	15,922.57	9,804.00	109.41	108.39	-90.759	-6,207.56	-1,395.91	1,677.22	1,491.05	186.17	9.009		
17,000.00	10,802.76	16,022.57	9,804.88	110.97	109.96	-90.759	-6,307.55	-1,395.23	1,677.22	1,488.40	188.82	8.883		
17,100.00	10,803.64	16,122.57	9,805.75	112.52	111.53	-90.759	-6,407.55	-1,394.56	1,677.21	1,485.74	191.47	8.760		
17,200.00	10,804.51	16,222.57	9,806.63	114.08	113.10	-90.759	-6,507.54	-1,393.89	1,677.21	1,483.09	194.13	8.640		
17,300.00	10,805.39	16,322.57	9,807.50	115.64	114.67	-90.759	-6,607.53	-1,393.22	1,677.21	1,480.42	196.79	8.523		
17,400.00	10,806.27	16,422.57	9,808.38	117.20	116.25	-90.759	-6,707.53	-1,392.55	1,677.21	1,477.76	199.45	8.409		
17,500.00	10,807.14	16,522.57	9,809.25	118.77	117.83	-90.759	-6,807.52	-1,391.88	1,677.20	1,475.09	202.12	8.298		
17,600.00	10,808.02	16,622.57	9,810.13	120.33	119.41	-90.759	-6,907.51	-1,391.21	1,677.20	1,472.41	204.79	8.190		
17,700.00	10,808.89	16,722.57	9,811.00	121.90	120.99	-90.759	-7,007.51	-1,390.54	1,677.20	1,469.73	207.47	8.084		
17,800.00	10,809.77	16,822.57	9,811.88	123.48	122.58	-90.759	-7,107.50	-1,389.87	1,677.20	1,467.05	210.15	7.981		
17,900.00	10,810.64	16,922.57	9,812.75	125.05	124.16	-90.759	-7,207.50	-1,389.20	1,677.19	1,464.37	212.83	7.881		
18,000.00	10,811.52	17,022.57	9,813.63	126.63	125.75	-90.759	-7,307.49	-1,388.53	1,677.19	1,461.68	215.51	7.782		
18,100.00	10,812.40	17,122.57	9,814.50	128.20	127.34	-90.759	-7,407.48	-1,387.85	1,677.19	1,458.99	218.20	7.686		
18,200.00	10,813.27	17,222.57	9,815.38	129.78	128.93	-90.759	-7,507.48	-1,387.18	1,677.19	1,456.29	220.89	7.593		
18,300.00	10,814.15	17,322.57	9,816.25	131.37	130.53	-90.759	-7,607.47	-1,386.51	1,677.18	1,453.60	223.59	7.501		
18,400.00	10,815.02	17,422.57	9,817.13	132.95	132.12	-90.759	-7,707.47	-1,385.84	1,677.18	1,450.90	226.29	7.412		
18,500.00	10,815.90	17,522.57	9,818.00	134.53	133.72	-90.759	-7,807.46	-1,385.17	1,677.18	1,448.19	228.99	7.324		
18,600.00	10,816.77	17,622.57	9,818.88	136.12	135.32	-90.759	-7,907.45	-1,384.50	1,677.18	1,445.49	231.69	7.239		
18,700.00	10,817.65	17,722.57	9,819.75	137.71	136.91	-90.759	-8,007.45	-1,383.83	1,677.17	1,442.78	234.39	7.155		
18,800.00	10,818.53	17,822.57	9,820.63	139.30	138.51	-90.759	-8,107.44	-1,383.16	1,677.17	1,440.07	237.10	7.074		
18,900.00	10,819.40	17,922.57	9,821.51	140.89	140.12	-90.759	-8,207.44	-1,382.49	1,677.17	1,437.36	239.81	6.994		
19,000.00	10,820.28	18,022.57	9,822.38	142.49	141.72	-90.759	-8,307.43	-1,381.82	1,677.17	1,434.64	242.53	6.915		

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 101H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
19,100.00	10,821.15	18,122.57	9,823.26	144.08	143.32	-90.759	-8,407.42	-1,381.14	1,677.16	1,431.92	245.24	6.839			
19,200.00	10,822.03	18,222.57	9,824.13	145.68	144.93	-90.759	-8,507.42	-1,380.47	1,677.16	1,429.20	247.96	6.764			
19,300.00	10,822.90	18,322.57	9,825.01	147.27	146.53	-90.759	-8,607.41	-1,379.80	1,677.16	1,426.48	250.68	6.691			
19,400.00	10,823.78	18,422.57	9,825.88	148.87	148.14	-90.759	-8,707.41	-1,379.13	1,677.16	1,423.76	253.40	6.619			
19,500.00	10,824.66	18,522.57	9,826.76	150.47	149.75	-90.759	-8,807.40	-1,378.46	1,677.15	1,421.03	256.12	6.548			
19,600.00	10,825.53	18,622.57	9,827.63	152.07	151.36	-90.759	-8,907.39	-1,377.79	1,677.15	1,418.31	258.84	6.479			
19,700.00	10,826.41	18,722.57	9,828.51	153.67	152.97	-90.759	-9,007.39	-1,377.12	1,677.15	1,415.58	261.57	6.412			
19,800.00	10,827.28	18,822.57	9,829.38	155.27	154.58	-90.759	-9,107.38	-1,376.45	1,677.15	1,412.85	264.30	6.346			
19,900.00	10,828.16	18,922.57	9,830.26	156.88	156.19	-90.759	-9,207.37	-1,375.78	1,677.14	1,410.12	267.03	6.281			
20,000.00	10,829.04	19,022.57	9,831.13	158.48	157.80	-90.759	-9,307.37	-1,375.11	1,677.14	1,407.38	269.76	6.217			
20,100.00	10,829.91	19,122.57	9,832.01	160.09	159.42	-90.759	-9,407.36	-1,374.43	1,677.14	1,404.65	272.49	6.155			
20,200.00	10,830.79	19,222.57	9,832.88	161.70	161.03	-90.759	-9,507.36	-1,373.76	1,677.14	1,401.91	275.23	6.094			
20,300.00	10,831.66	19,322.57	9,833.76	163.30	162.64	-90.759	-9,607.35	-1,373.09	1,677.13	1,399.17	277.96	6.034			
20,400.00	10,832.54	19,422.57	9,834.63	164.91	164.26	-90.759	-9,707.34	-1,372.42	1,677.13	1,396.43	280.70	5.975			
20,500.00	10,833.41	19,522.57	9,835.51	166.52	165.88	-90.759	-9,807.34	-1,371.75	1,677.13	1,393.69	283.44	5.917			
20,600.00	10,834.29	19,622.57	9,836.38	168.13	167.49	-90.759	-9,907.33	-1,371.08	1,677.13	1,390.95	286.18	5.860			
20,700.00	10,835.17	19,722.57	9,837.26	169.74	169.11	-90.759	-10,007.33	-1,370.41	1,677.12	1,388.20	288.92	5.805			
20,800.00	10,836.04	19,822.57	9,838.13	171.36	170.73	-90.759	-10,107.32	-1,369.74	1,677.12	1,385.46	291.66	5.750			
20,900.00	10,836.92	19,922.57	9,839.01	172.97	172.35	-90.759	-10,207.31	-1,369.07	1,677.12	1,382.71	294.41	5.697			
20,961.87	10,837.46	19,984.44	9,839.55	173.85	173.35	-90.759	-10,269.18	-1,368.65	1,677.12	1,381.14	295.97	5.666			
20,972.39	10,837.55	19,984.75	9,839.55	174.00	173.36	-90.324	-10,269.49	-1,368.65	1,677.15	1,381.01	296.14	5.663 SF			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 111H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	6.00	6.00	0.00	0.01	-90.289	-6.00	-1,190.00	1,190.02					
100.00	100.00	106.00	106.00	0.13	0.15	-90.289	-6.00	-1,190.00	1,190.02	1,189.74	0.28	4,283.468		
200.00	200.00	206.00	206.00	0.49	0.51	-90.289	-6.00	-1,190.00	1,190.02	1,189.02	0.99	1,196.285		
300.00	300.00	306.00	306.00	0.85	0.87	-90.289	-6.00	-1,190.00	1,190.02	1,188.30	1.71	695.223		
400.00	400.00	406.00	406.00	1.20	1.23	-90.289	-6.00	-1,190.00	1,190.02	1,187.59	2.43	489.991		
500.00	500.00	506.00	506.00	1.56	1.58	-90.289	-6.00	-1,190.00	1,190.02	1,186.87	3.15	378.312		
514.54	514.54	520.54	520.54	1.61	1.64	-90.289	-6.00	-1,190.00	1,190.02	1,186.77	3.25	366.178 CC		
600.00	600.00	600.00	600.00	1.92	1.92	-90.289	-6.00	-1,190.00	1,190.03	1,186.19	3.84	309.819 ES		
700.00	700.00	688.69	688.69	2.28	2.23	-90.278	-5.77	-1,190.65	1,190.79	1,186.27	4.51	263.893		
800.00	800.00	772.33	772.30	2.64	2.53	-90.246	-5.12	-1,192.44	1,192.92	1,187.76	5.16	231.054		
900.00	899.99	855.90	855.81	3.00	2.82	-90.236	-4.06	-1,195.37	1,196.46	1,190.65	5.81	205.827		
1,000.00	999.96	939.37	939.17	3.36	3.12	-90.290	-2.59	-1,199.45	1,201.42	1,194.95	6.46	185.905		
1,100.00	1,099.86	1,022.69	1,022.31	3.71	3.42	-90.407	-0.71	-1,204.66	1,207.79	1,200.68	7.11	169.825		
1,200.00	1,199.68	1,100.00	1,099.37	4.07	3.70	-90.594	1.40	-1,210.51	1,215.60	1,207.86	7.74	157.073		
1,300.00	1,299.37	1,188.77	1,187.73	4.44	4.03	-90.824	4.25	-1,218.43	1,224.79	1,216.38	8.41	145.577		
1,399.70	1,398.60	1,285.53	1,283.96	4.80	4.39	-91.103	7.68	-1,227.93	1,234.89	1,225.77	9.12	135.350		
1,400.00	1,398.90	1,285.83	1,284.26	4.80	4.39	-91.104	7.69	-1,227.96	1,234.92	1,225.80	9.13	135.320		
1,500.00	1,498.36	1,385.08	1,382.97	5.17	4.77	-91.415	11.21	-1,237.72	1,245.13	1,235.28	9.85	126.374		
1,600.00	1,597.81	1,484.33	1,481.68	5.55	5.14	-91.721	14.73	-1,247.48	1,255.37	1,244.79	10.58	118.611		
1,700.00	1,697.26	1,583.58	1,580.38	5.92	5.52	-92.022	18.25	-1,257.24	1,265.65	1,254.33	11.32	111.823		
1,800.00	1,796.71	1,682.83	1,679.09	6.30	5.90	-92.319	21.77	-1,267.00	1,275.96	1,263.91	12.06	105.840		
1,900.00	1,896.17	1,782.08	1,777.80	6.68	6.28	-92.610	25.29	-1,276.76	1,286.31	1,273.51	12.80	100.532		
2,000.00	1,995.62	1,881.34	1,876.51	7.06	6.67	-92.897	28.81	-1,286.52	1,296.69	1,283.15	13.54	95.792		
2,100.00	2,095.07	1,980.59	1,975.21	7.44	7.05	-93.179	32.33	-1,296.28	1,307.10	1,292.82	14.28	91.536		
2,200.00	2,194.53	2,079.84	2,073.92	7.83	7.44	-93.457	35.85	-1,306.04	1,317.54	1,302.51	15.02	87.695		
2,300.00	2,293.98	2,179.09	2,172.63	8.21	7.82	-93.730	39.37	-1,315.80	1,328.01	1,312.24	15.77	84.211		
2,400.00	2,393.43	2,278.34	2,271.34	8.59	8.21	-93.999	42.89	-1,325.55	1,338.51	1,321.99	16.52	81.039		
2,500.00	2,492.88	2,377.59	2,370.05	8.98	8.60	-94.264	46.41	-1,335.31	1,349.04	1,331.77	17.26	78.139		
2,600.00	2,592.34	2,476.84	2,468.75	9.36	8.98	-94.525	49.93	-1,345.07	1,359.60	1,341.58	18.01	75.477		
2,700.00	2,691.79	2,576.10	2,567.46	9.75	9.37	-94.781	53.45	-1,354.83	1,370.18	1,351.42	18.76	73.026		
2,722.26	2,713.93	2,598.19	2,589.44	9.84	9.46	-94.838	54.24	-1,357.00	1,372.54	1,353.61	18.93	72.507		
2,800.00	2,791.32	2,675.40	2,666.22	10.13	9.76	-95.002	56.98	-1,364.60	1,380.71	1,361.20	19.51	70.769		
2,900.00	2,891.06	2,774.83	2,765.11	10.51	10.15	-95.113	60.50	-1,374.37	1,390.99	1,370.74	20.25	68.699		
3,000.00	2,990.96	2,874.33	2,864.06	10.87	10.54	-95.117	64.03	-1,384.16	1,400.98	1,380.01	20.97	66.793		
3,100.00	3,090.94	2,973.82	2,963.01	11.22	10.93	-95.014	67.56	-1,393.94	1,410.68	1,388.99	21.69	65.034		
3,122.06	3,113.00	2,995.76	2,984.83	11.30	11.01	-94.978	68.34	-1,396.10	1,412.79	1,390.94	21.85	64.664		
3,200.00	3,190.94	3,073.27	3,061.92	11.57	11.32	-94.840	71.09	-1,403.72	1,420.19	1,397.79	22.40	63.398		
3,300.00	3,290.94	3,172.73	3,160.82	11.91	11.71	-94.665	74.61	-1,413.50	1,429.71	1,406.59	23.11	61.862		
3,400.00	3,390.94	3,272.18	3,259.73	12.26	12.10	-94.493	78.14	-1,423.27	1,439.23	1,415.41	23.82	60.415		
3,500.00	3,490.94	3,371.63	3,358.64	12.61	12.49	-94.323	81.67	-1,433.05	1,448.77	1,424.24	24.53	59.052		
3,600.00	3,590.94	3,471.08	3,457.55	12.95	12.88	-94.155	85.20	-1,442.83	1,458.32	1,433.08	25.25	57.765		
3,700.00	3,690.94	3,570.53	3,556.45	13.30	13.27	-93.989	88.72	-1,452.61	1,467.89	1,441.93	25.96	56.548		
3,800.00	3,790.94	3,669.99	3,655.36	13.65	13.66	-93.826	92.25	-1,462.39	1,477.47	1,450.79	26.67	55.395		
3,900.00	3,890.94	3,769.44	3,754.27	14.00	14.05	-93.664	95.78	-1,472.17	1,487.05	1,459.67	27.39	54.301		
4,000.00	3,990.94	3,868.89	3,853.17	14.35	14.44	-93.505	99.30	-1,481.95	1,496.65	1,468.55	28.10	53.263		
4,100.00	4,090.94	3,968.34	3,952.08	14.70	14.83	-93.347	102.83	-1,491.73	1,506.27	1,477.45	28.81	52.276		
4,200.00	4,190.94	4,067.80	4,050.99	15.05	15.22	-93.192	106.36	-1,501.50	1,515.89	1,486.36	29.53	51.337		
4,300.00	4,290.94	4,167.25	4,149.90	15.40	15.61	-93.038	109.88	-1,511.28	1,525.52	1,495.28	30.24	50.442		
4,400.00	4,390.94	4,266.70	4,248.80	15.75	16.00	-92.887	113.41	-1,521.06	1,535.17	1,504.21	30.96	49.588		
4,500.00	4,490.94	4,366.15	4,347.71	16.11	16.39	-92.737	116.94	-1,530.84	1,544.82	1,513.15	31.67	48.772		
4,600.00	4,590.94	4,465.60	4,446.62	16.46	16.79	-92.590	120.47	-1,540.62	1,554.48	1,522.09	32.39	47.993		
4,700.00	4,690.94	4,565.06	4,545.53	16.81	17.18	-92.444	123.99	-1,550.40	1,564.16	1,531.05	33.11	47.247		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 111H - Wellbore #1 - Design #1

Survey Program: O-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,800.00	4,790.94	4,664.51	4,644.43	17.16	17.57	-92.299		127.52	-1,560.18	1,573.84	1,540.02	33.82	46.533	
4,900.00	4,890.94	4,763.96	4,743.34	17.52	17.96	-92.157		131.05	-1,569.96	1,583.54	1,549.00	34.54	45.848	
5,000.00	4,990.94	4,863.41	4,842.25	17.87	18.35	-92.016		134.57	-1,579.73	1,593.24	1,557.99	35.26	45.191	
5,100.00	5,090.94	4,962.86	4,941.16	18.22	18.74	-91.877		138.10	-1,589.51	1,602.96	1,566.99	35.97	44.581	
5,200.00	5,190.94	5,062.32	5,040.06	18.58	19.13	-91.740		141.63	-1,599.29	1,612.68	1,575.99	36.69	43.955	
5,300.00	5,290.94	5,161.77	5,138.97	18.93	19.52	-91.605		145.16	-1,609.07	1,622.41	1,585.01	37.41	43.372	
5,400.00	5,390.94	5,261.22	5,237.88	19.28	19.92	-91.471		148.68	-1,618.85	1,632.15	1,594.03	38.12	42.812	
5,500.00	5,490.94	5,360.67	5,336.79	19.64	20.31	-91.338		152.21	-1,628.63	1,641.90	1,603.06	38.84	42.272	
5,600.00	5,590.94	5,460.13	5,435.69	19.99	20.70	-91.207		155.74	-1,638.41	1,651.66	1,612.10	39.56	41.752	
5,700.00	5,690.94	5,559.58	5,534.60	20.34	21.09	-91.078		159.26	-1,648.19	1,661.43	1,621.15	40.28	41.250	
5,800.00	5,790.94	5,659.03	5,633.51	20.70	21.48	-90.950		162.79	-1,657.96	1,671.20	1,630.21	40.99	40.766	
5,900.00	5,890.94	5,758.48	5,732.42	21.05	21.87	-90.824		166.32	-1,667.74	1,680.99	1,639.27	41.71	40.299	
6,000.00	5,990.94	5,857.93	5,831.32	21.41	22.27	-90.699		169.85	-1,677.52	1,690.78	1,648.35	42.43	39.848	
6,100.00	6,090.94	5,957.39	5,930.23	21.76	22.66	-90.575		173.37	-1,687.30	1,700.58	1,657.43	43.15	39.412	
6,200.00	6,190.94	6,106.66	6,078.86	22.12	23.24	-90.414		178.05	-1,700.25	1,709.38	1,665.29	44.09	38.768	
6,300.00	6,290.94	6,279.06	6,251.02	22.47	23.86	-90.312		181.03	-1,708.54	1,714.18	1,669.10	45.07	38.030	
6,400.00	6,390.94	6,424.99	6,396.94	22.83	24.35	-90.294		181.56	-1,710.00	1,715.02	1,669.12	45.91	37.359	
6,500.00	6,490.94	6,524.99	6,496.94	23.18	24.68	-90.294		181.56	-1,710.00	1,715.02	1,668.42	46.60	36.801	
6,600.00	6,590.94	6,624.99	6,596.94	23.54	25.00	-90.294		181.56	-1,710.00	1,715.02	1,667.72	47.30	36.259	
6,700.00	6,690.94	6,724.99	6,696.94	23.89	25.33	-90.294		181.56	-1,710.00	1,715.02	1,667.03	48.00	35.733	
6,800.00	6,790.94	6,824.99	6,796.94	24.25	25.66	-90.294		181.56	-1,710.00	1,715.02	1,666.33	48.69	35.221	
6,900.00	6,890.94	6,924.99	6,896.94	24.61	25.99	-90.294		181.56	-1,710.00	1,715.02	1,665.63	49.39	34.723	
7,000.00	6,990.94	7,024.99	6,996.94	24.96	26.32	-90.294		181.56	-1,710.00	1,715.02	1,664.93	50.09	34.238	
7,100.00	7,090.94	7,124.99	7,096.94	25.32	26.65	-90.294		181.56	-1,710.00	1,715.02	1,664.23	50.79	33.767	
7,200.00	7,190.94	7,224.99	7,196.94	25.67	26.98	-90.294		181.56	-1,710.00	1,715.02	1,663.53	51.49	33.308	
7,300.00	7,290.94	7,324.99	7,296.94	26.03	27.32	-90.294		181.56	-1,710.00	1,715.02	1,662.83	52.19	32.862	
7,400.00	7,390.94	7,424.99	7,396.94	26.38	27.65	-90.294		181.56	-1,710.00	1,715.02	1,662.13	52.89	32.426	
7,500.00	7,490.94	7,524.99	7,496.94	26.74	27.98	-90.294		181.56	-1,710.00	1,715.02	1,661.43	53.59	32.002	
7,600.00	7,590.94	7,624.99	7,596.94	27.10	28.32	-90.294		181.56	-1,710.00	1,715.02	1,660.73	54.29	31.589	
7,700.00	7,690.94	7,724.99	7,696.94	27.45	28.65	-90.294		181.56	-1,710.00	1,715.02	1,660.03	54.99	31.186	
7,800.00	7,790.94	7,824.99	7,796.94	27.81	28.99	-90.294		181.56	-1,710.00	1,715.02	1,659.33	55.70	30.792	
7,900.00	7,890.94	7,924.99	7,896.94	28.17	29.33	-90.294		181.56	-1,710.00	1,715.02	1,658.62	56.40	30.409	
8,000.00	7,990.94	8,024.99	7,996.94	28.52	29.66	-90.294		181.56	-1,710.00	1,715.02	1,657.92	57.10	30.034	
8,100.00	8,090.94	8,124.99	8,096.94	28.88	30.00	-90.294		181.56	-1,710.00	1,715.02	1,657.22	57.81	29.669	
8,200.00	8,190.94	8,224.99	8,196.94	29.23	30.34	-90.294		181.56	-1,710.00	1,715.02	1,656.51	58.51	29.312	
8,300.00	8,290.94	8,324.99	8,296.94	29.59	30.68	-90.294		181.56	-1,710.00	1,715.02	1,655.81	59.21	28.964	
8,400.00	8,390.94	8,424.99	8,396.94	29.95	31.02	-90.294		181.56	-1,710.00	1,715.02	1,655.11	59.92	28.623	
8,500.00	8,490.94	8,524.99	8,496.94	30.30	31.36	-90.294		181.56	-1,710.00	1,715.02	1,654.40	60.62	28.291	
8,600.00	8,590.94	8,624.99	8,596.94	30.66	31.69	-90.294		181.56	-1,710.00	1,715.02	1,653.70	61.33	27.966	
8,700.00	8,690.94	8,724.99	8,696.94	31.02	32.03	-90.294		181.56	-1,710.00	1,715.02	1,652.99	62.03	27.648	
8,800.00	8,790.94	8,824.99	8,796.94	31.37	32.38	-90.294		181.56	-1,710.00	1,715.02	1,652.29	62.74	27.337	
8,900.00	8,890.94	8,924.99	8,896.94	31.73	32.72	-90.294		181.56	-1,710.00	1,715.02	1,651.58	63.44	27.033	
9,000.00	8,990.94	9,024.99	8,996.94	32.09	33.06	-90.294		181.56	-1,710.00	1,715.02	1,650.87	64.15	26.735	
9,100.00	9,090.94	9,124.99	9,096.94	32.44	33.40	-90.294		181.56	-1,710.00	1,715.02	1,650.17	64.85	26.444	
9,200.00	9,190.94	9,224.99	9,196.94	32.80	33.74	-90.294		181.56	-1,710.00	1,715.02	1,649.46	65.56	26.159	
9,300.00	9,290.94	9,324.99	9,296.94	33.16	34.08	-90.294		181.56	-1,710.00	1,715.02	1,648.76	66.27	25.881	
9,400.00	9,390.94	9,424.99	9,396.94	33.51	34.43	-90.294		181.56	-1,710.00	1,715.02	1,648.05	66.97	25.607	
9,500.00	9,490.94	9,524.99	9,500.00	33.87	34.90	-90.813		166.08	-1,707.63	1,713.72	1,645.97	67.75	25.293	
9,600.00	9,590.94	9,735.75	9,695.76	34.23	35.27	-92.645		111.65	-1,699.30	1,708.98	1,640.54	68.44	24.970	
9,700.00	9,690.94	9,854.81	9,793.44	34.59	35.48	-94.913		44.74	-1,689.06	1,703.05	1,633.95	69.09	24.649	
9,800.00	9,790.94	9,942.78	9,855.50	34.94	35.60	-97.010		-16.77	-1,679.65	1,698.35	1,628.62	69.73	24.355	
9,896.81	9,887.74	10,005.81	9,893.74	35.29	35.65	-98.700		-66.26	-1,672.08	1,696.60	1,626.30	70.30	24.135	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 111H - Wellbore #1 - Design #1

Survey Program: 0-MWD														Offset Site Error: 0.00 usft	
Reference														Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	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		
9,900.00	9,890.94	10,007.60	9,894.75	35.30	35.66	-98.750	-67.72	-1,671.85	1,696.60	1,626.29	70.31	24.130			
10,000.00	9,990.94	10,056.20	9,920.22	35.66	35.69	-100.147	-108.62	-1,665.60	1,698.87	1,628.09	70.79	23.999			
10,100.00	10,090.94	10,093.49	9,937.33	36.01	35.71	-101.264	-141.37	-1,660.59	1,705.78	1,634.66	71.12	23.983			
10,187.06	10,178.00	10,119.36	9,947.92	36.33	35.73	-102.059	-164.69	-1,657.02	1,715.84	1,644.55	71.29	24.067			
10,200.00	10,190.94	10,122.87	9,949.27	36.37	35.73	-102.163	-167.90	-1,656.53	1,717.61	1,646.31	71.31	24.088			
10,250.00	10,240.81	10,137.12	9,954.57	36.52	35.74	-102.504	-180.97	-1,654.52	1,724.34	1,653.02	71.32	24.176			
10,300.00	10,290.21	10,150.00	9,959.07	36.67	35.75	-102.667	-192.90	-1,652.70	1,730.78	1,659.48	71.30	24.275			
10,350.00	10,338.75	10,168.25	9,964.98	36.82	35.77	-102.871	-209.97	-1,650.09	1,736.81	1,665.55	71.26	24.372			
10,400.00	10,386.07	10,184.85	9,969.87	36.95	35.78	-102.894	-225.65	-1,647.69	1,742.34	1,671.15	71.19	24.475			
10,450.00	10,431.81	10,200.00	9,973.94	37.08	35.80	-102.745	-240.08	-1,645.48	1,747.26	1,676.18	71.08	24.582			
10,500.00	10,475.61	10,219.60	9,978.62	37.21	35.82	-102.620	-258.89	-1,642.60	1,751.47	1,680.50	70.97	24.679			
10,550.00	10,517.15	10,237.60	9,982.34	37.32	35.85	-102.326	-276.29	-1,639.94	1,754.90	1,684.06	70.84	24.773			
10,600.00	10,556.11	10,250.00	9,984.59	37.44	35.88	-101.727	-288.35	-1,638.09	1,757.48	1,686.81	70.67	24.867			
10,650.00	10,592.19	10,274.56	9,988.25	37.55	35.93	-101.433	-312.36	-1,634.42	1,759.09	1,688.54	70.56	24.932			
10,700.00	10,625.12	10,300.00	9,990.94	37.67	35.99	-101.070	-337.36	-1,630.59	1,759.76	1,689.33	70.44	24.983			
10,750.00	10,654.64	10,312.54	9,991.86	37.78	36.03	-100.162	-349.72	-1,628.70	1,759.34	1,689.05	70.29	25.030			
10,800.00	10,680.54	10,343.06	9,992.94	37.90	36.11	-99.796	-379.86	-1,624.09	1,757.94	1,687.73	70.21	25.039			
10,850.00	10,702.61	10,354.91	9,993.04	38.02	36.15	-98.686	-391.58	-1,622.32	1,755.25	1,685.14	70.11	25.037			
10,900.00	10,720.69	10,383.87	9,993.29	38.14	36.25	-98.115	-420.25	-1,618.20	1,751.31	1,681.22	70.08	24.989			
10,950.00	10,734.64	10,400.00	9,993.43	38.27	36.30	-97.019	-436.23	-1,616.04	1,746.03	1,675.96	70.07	24.918			
11,000.00	10,744.36	10,444.58	9,993.82	38.40	36.47	-96.912	-480.47	-1,610.51	1,739.12	1,668.93	70.20	24.775			
11,050.00	10,749.76	10,475.89	9,994.10	38.53	36.60	-96.289	-511.58	-1,607.05	1,730.83	1,660.50	70.33	24.610			
11,082.06	10,750.94	10,500.00	9,994.31	38.62	36.70	-96.028	-535.57	-1,604.61	1,724.75	1,654.29	70.45	24.480			
11,100.00	10,751.09	10,500.00	9,994.31	38.67	36.70	-95.379	-535.57	-1,604.61	1,721.27	1,650.78	70.49	24.418			
11,200.00	10,751.97	10,571.54	9,994.94	39.00	37.03	-94.381	-606.85	-1,598.57	1,704.77	1,633.75	71.01	24.006			
11,300.00	10,752.84	10,636.37	9,995.50	39.39	37.36	-93.087	-671.56	-1,594.63	1,693.38	1,621.75	71.63	23.639			
11,400.00	10,753.72	10,700.00	9,996.06	39.84	37.71	-91.716	-735.13	-1,592.19	1,687.13	1,614.76	72.37	23.313			
11,461.17	10,754.26	10,741.82	9,996.43	40.15	37.95	-90.979	-776.94	-1,591.36	1,685.84	1,612.95	72.89	23.127			
11,487.43	10,754.49	10,759.13	9,996.58	40.28	38.06	-90.638	-794.25	-1,591.19	1,685.77	1,612.64	73.13	23.053			
11,500.00	10,754.60	10,771.57	9,996.69	40.35	38.13	-90.633	-806.69	-1,591.11	1,685.77	1,612.51	73.26	23.011			
11,600.00	10,755.47	10,871.57	9,997.56	40.92	38.78	-90.633	-906.68	-1,590.45	1,685.78	1,611.39	74.39	22.661			
11,700.00	10,756.35	10,971.57	9,998.44	41.55	39.49	-90.633	-1,006.68	-1,589.79	1,685.78	1,610.16	75.62	22.293			
11,800.00	10,757.22	11,071.57	9,999.32	42.24	40.24	-90.633	-1,106.67	-1,589.13	1,685.79	1,608.84	76.95	21.907			
11,900.00	10,758.10	11,171.57	10,000.19	42.98	41.05	-90.633	-1,206.67	-1,588.47	1,685.80	1,607.42	78.38	21.509			
12,000.00	10,758.97	11,271.57	10,001.07	43.77	41.91	-90.633	-1,306.66	-1,587.81	1,685.80	1,605.91	79.89	21.101			
12,100.00	10,759.85	11,371.57	10,001.94	44.60	42.81	-90.633	-1,406.65	-1,587.15	1,685.81	1,604.32	81.49	20.687			
12,200.00	10,760.73	11,471.57	10,002.82	45.48	43.76	-90.633	-1,506.65	-1,586.49	1,685.82	1,602.65	83.17	20.269			
12,300.00	10,761.60	11,571.57	10,003.69	46.41	44.75	-90.633	-1,606.64	-1,585.83	1,685.82	1,600.90	84.92	19.851			
12,400.00	10,762.48	11,671.57	10,004.57	47.37	45.78	-90.633	-1,706.64	-1,585.17	1,685.83	1,599.08	86.75	19.433			
12,500.00	10,763.35	11,771.57	10,005.44	48.37	46.84	-90.633	-1,806.63	-1,584.51	1,685.84	1,597.20	88.64	19.019			
12,600.00	10,764.23	11,871.57	10,006.32	49.41	47.93	-90.633	-1,906.62	-1,583.85	1,685.84	1,595.25	90.59	18.609			
12,700.00	10,765.10	11,971.57	10,007.20	50.48	49.06	-90.633	-2,006.62	-1,583.19	1,685.85	1,593.25	92.60	18.205			
12,800.00	10,765.98	12,071.57	10,008.07	51.58	50.21	-90.633	-2,106.61	-1,582.53	1,685.86	1,591.19	94.67	17.808			
12,900.00	10,766.86	12,171.57	10,008.95	52.70	51.39	-90.633	-2,206.61	-1,581.87	1,685.86	1,589.08	96.79	17.418			
13,000.00	10,767.73	12,271.57	10,009.82	53.86	52.60	-90.633	-2,306.60	-1,581.21	1,685.87	1,586.92	98.95	17.038			
13,100.00	10,768.61	12,371.57	10,010.70	55.04	53.83	-90.633	-2,406.59	-1,580.55	1,685.88	1,584.72	101.16	16.666			
13,200.00	10,769.48	12,471.57	10,011.57	56.25	55.09	-90.633	-2,506.59	-1,579.89	1,685.88	1,582.47	103.41	16.303			
13,300.00	10,770.36	12,571.57	10,012.45	57.47	56.36	-90.633	-2,606.58	-1,579.23	1,685.89	1,580.19	105.70	15.950			
13,400.00	10,771.23	12,671.57	10,013.32	58.72	57.65	-90.633	-2,706.58	-1,578.57	1,685.90	1,577.87	108.02	15.607			
13,500.00	10,772.11	12,771.57	10,014.20	59.99	58.96	-90.633	-2,806.57	-1,577.91	1,685.90	1,575.52	110.39	15.273			
13,600.00	10,772.99	12,871.57	10,015.08	61.28	60.29	-90.633	-2,906.56	-1,577.25	1,685.91	1,573.13	112.78	14.949			
13,700.00	10,773.86	12,971.57	10,015.95	62.58	61.63	-90.633	-3,006.56	-1,576.59	1,685.92	1,570.72	115.20	14.635			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 111H - Wellbore #1 - Design #1

Survey Program: 0-MWD													Offset Site Error: 0.00 usft
Rule Assigned:													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.00	10,774.74	13,071.57	10,016.83	63.90	62.99	-90.633	-3,106.55	-1,575.93	1,685.92	1,568.27	117.65	14.330	
13,900.00	10,775.61	13,171.57	10,017.70	65.23	64.36	-90.633	-3,206.55	-1,575.27	1,685.93	1,565.80	120.13	14.034	
14,000.00	10,776.49	13,271.57	10,018.58	66.58	65.75	-90.633	-3,306.54	-1,574.61	1,685.94	1,563.30	122.63	13.748	
14,100.00	10,777.37	13,371.57	10,019.45	67.95	67.15	-90.633	-3,406.53	-1,573.95	1,685.94	1,560.79	125.16	13.471	
14,200.00	10,778.24	13,471.57	10,020.33	69.32	68.55	-90.633	-3,506.53	-1,573.29	1,685.95	1,558.24	127.70	13.202	
14,300.00	10,779.12	13,571.57	10,021.20	70.71	69.97	-90.633	-3,606.52	-1,572.63	1,685.96	1,555.88	130.27	12.942	
14,400.00	10,779.99	13,671.57	10,022.08	72.11	71.40	-90.633	-3,706.52	-1,571.97	1,685.96	1,553.10	132.86	12.690	
14,500.00	10,780.87	13,771.57	10,022.96	73.52	72.84	-90.633	-3,806.51	-1,571.31	1,685.97	1,550.50	135.47	12.445	
14,600.00	10,781.74	13,871.57	10,023.83	74.94	74.29	-90.633	-3,906.50	-1,570.65	1,685.98	1,547.88	138.09	12.209	
14,700.00	10,782.62	13,971.57	10,024.71	76.36	75.74	-90.633	-4,006.50	-1,569.99	1,685.98	1,545.25	140.73	11.980	
14,800.00	10,783.50	14,071.57	10,025.58	77.80	77.21	-90.633	-4,106.49	-1,569.33	1,685.99	1,542.60	143.39	11.758	
14,900.00	10,784.37	14,171.57	10,026.46	79.25	78.68	-90.633	-4,206.49	-1,568.67	1,686.00	1,539.94	146.06	11.543	
15,000.00	10,785.25	14,271.57	10,027.33	80.70	80.16	-90.633	-4,306.48	-1,568.01	1,686.00	1,537.26	148.74	11.335	
15,100.00	10,786.12	14,371.57	10,028.21	82.16	81.64	-90.633	-4,406.47	-1,567.35	1,686.01	1,534.57	151.44	11.133	
15,200.00	10,787.00	14,471.57	10,029.08	83.63	83.13	-90.633	-4,506.47	-1,566.69	1,686.02	1,531.86	154.15	10.937	
15,300.00	10,787.87	14,571.57	10,029.96	85.11	84.63	-90.633	-4,606.46	-1,566.03	1,686.02	1,529.15	156.87	10.748	
15,400.00	10,788.75	14,671.57	10,030.84	86.59	86.14	-90.633	-4,706.46	-1,565.37	1,686.03	1,526.42	159.61	10.564	
15,500.00	10,789.63	14,771.57	10,031.71	88.08	87.64	-90.633	-4,806.45	-1,564.71	1,686.04	1,523.68	162.35	10.385	
15,600.00	10,790.50	14,871.57	10,032.59	89.57	89.16	-90.633	-4,906.44	-1,564.05	1,686.04	1,520.94	165.10	10.212	
15,700.00	10,791.38	14,971.57	10,033.46	91.07	90.68	-90.633	-5,006.44	-1,563.39	1,686.05	1,518.18	167.87	10.044	
15,800.00	10,792.25	15,071.57	10,034.34	92.58	92.20	-90.633	-5,106.43	-1,562.73	1,686.06	1,515.41	170.64	9.881	
15,900.00	10,793.13	15,171.57	10,035.21	94.09	93.73	-90.633	-5,206.43	-1,562.07	1,686.06	1,512.64	173.42	9.722	
16,000.00	10,794.00	15,271.57	10,036.09	95.60	95.26	-90.633	-5,306.42	-1,561.41	1,686.07	1,509.86	176.21	9.568	
16,100.00	10,794.88	15,371.57	10,036.96	97.12	96.80	-90.633	-5,406.41	-1,560.75	1,686.08	1,507.07	179.01	9.419	
16,200.00	10,795.76	15,471.57	10,037.84	98.64	98.34	-90.633	-5,506.41	-1,560.09	1,686.08	1,504.27	181.81	9.274	
16,300.00	10,796.63	15,571.57	10,038.72	100.17	99.88	-90.633	-5,606.40	-1,559.43	1,686.09	1,501.46	184.63	9.132	
16,400.00	10,797.51	15,671.57	10,039.59	101.70	101.43	-90.633	-5,706.40	-1,558.77	1,686.09	1,498.65	187.45	8.995	
16,500.00	10,798.38	15,771.57	10,040.47	103.24	102.98	-90.633	-5,806.39	-1,558.11	1,686.10	1,495.83	190.27	8.862	
16,600.00	10,799.26	15,871.57	10,041.34	104.78	104.53	-90.633	-5,906.38	-1,557.45	1,686.11	1,493.00	193.10	8.732	
16,700.00	10,800.14	15,971.57	10,042.22	106.32	106.09	-90.633	-6,006.38	-1,556.79	1,686.11	1,490.17	195.94	8.605	
16,800.00	10,801.01	16,071.57	10,043.09	107.86	107.65	-90.633	-6,106.37	-1,556.13	1,686.12	1,487.34	198.79	8.482	
16,900.00	10,801.89	16,171.57	10,043.97	109.41	109.21	-90.633	-6,206.37	-1,555.47	1,686.13	1,484.49	201.64	8.362	
17,000.00	10,802.76	16,271.57	10,044.84	110.97	110.77	-90.633	-6,306.36	-1,554.81	1,686.13	1,481.64	204.49	8.246	
17,100.00	10,803.64	16,371.57	10,045.72	112.52	112.34	-90.633	-6,406.35	-1,554.15	1,686.14	1,478.79	207.35	8.132	
17,200.00	10,804.51	16,471.57	10,046.60	114.08	113.91	-90.633	-6,506.35	-1,553.49	1,686.15	1,475.93	210.21	8.021	
17,300.00	10,805.39	16,571.57	10,047.47	115.64	115.48	-90.633	-6,606.34	-1,552.83	1,686.15	1,473.07	213.08	7.913	
17,400.00	10,806.27	16,671.57	10,048.35	117.20	117.06	-90.633	-6,706.34	-1,552.17	1,686.16	1,470.20	215.96	7.808	
17,500.00	10,807.14	16,771.57	10,049.22	118.77	118.63	-90.633	-6,806.33	-1,551.51	1,686.17	1,467.33	218.83	7.705	
17,600.00	10,808.02	16,871.57	10,050.10	120.33	120.21	-90.633	-6,906.32	-1,550.85	1,686.17	1,464.46	221.72	7.605	
17,700.00	10,808.89	16,971.57	10,050.97	121.90	121.79	-90.633	-7,006.32	-1,550.19	1,686.18	1,461.58	224.60	7.507	
17,800.00	10,809.77	17,071.57	10,051.85	123.48	123.38	-90.633	-7,106.31	-1,549.53	1,686.19	1,458.69	227.49	7.412	
17,900.00	10,810.64	17,171.57	10,052.72	125.05	124.96	-90.633	-7,206.31	-1,548.87	1,686.19	1,455.81	230.39	7.319	
18,000.00	10,811.52	17,271.57	10,053.60	126.63	126.55	-90.633	-7,306.30	-1,548.21	1,686.20	1,452.92	233.28	7.228	
18,100.00	10,812.40	17,371.57	10,054.48	128.20	128.13	-90.633	-7,406.29	-1,547.55	1,686.21	1,450.02	236.18	7.139	
18,200.00	10,813.27	17,471.57	10,055.35	129.78	129.72	-90.633	-7,506.29	-1,546.89	1,686.21	1,447.13	239.09	7.053	
18,300.00	10,814.15	17,571.57	10,056.23	131.37	131.31	-90.633	-7,606.28	-1,546.23	1,686.22	1,444.23	241.99	6.968	
18,400.00	10,815.02	17,671.57	10,057.10	132.95	132.91	-90.633	-7,706.28	-1,545.57	1,686.23	1,441.32	244.90	6.885	
18,500.00	10,815.90	17,771.57	10,057.98	134.53	134.50	-90.633	-7,806.27	-1,544.91	1,686.23	1,438.42	247.82	6.804	
18,600.00	10,816.77	17,871.57	10,058.85	136.12	136.10	-90.633	-7,906.26	-1,544.25	1,686.24	1,435.51	250.73	6.724	
18,700.00	10,817.65	17,971.57	10,059.73	137.71	137.69	-90.633	-8,006.26	-1,543.59	1,686.25	1,432.60	253.65	6.648	
18,800.00	10,818.53	18,071.57	10,060.60	139.30	139.29	-90.633	-8,106.25	-1,542.93	1,686.25	1,429.68	256.57	6.572	
18,900.00	10,819.40	18,171.57	10,061.48	140.89	140.89	-90.633	-8,206.25	-1,542.27	1,686.26	1,426.76	259.50	6.498	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 111H - Wellbore #1 - Design #1

Survey Program: 0-MWD													Offset Site Error: 0.00 usft
Reference													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,000.00	10,820.28	18,271.57	10,062.36	142.49	142.49	-90.633	-8,306.24	-1,541.61	1,686.27	1,423.84	262.42	6.426	
19,100.00	10,821.15	18,371.57	10,063.23	144.08	144.09	-90.633	-8,406.23	-1,540.95	1,686.27	1,420.92	265.35	6.355	
19,200.00	10,822.03	18,471.57	10,064.11	145.68	145.70	-90.633	-8,506.23	-1,540.29	1,686.28	1,418.00	268.28	6.285	
19,300.00	10,822.90	18,571.57	10,064.98	147.27	147.30	-90.633	-8,606.22	-1,539.63	1,686.29	1,415.07	271.22	6.218	
19,400.00	10,823.78	18,671.57	10,065.86	148.87	148.91	-90.633	-8,706.22	-1,538.97	1,686.29	1,412.14	274.15	6.151	
19,500.00	10,824.66	18,771.57	10,066.73	150.47	150.51	-90.633	-8,806.21	-1,538.31	1,686.30	1,409.21	277.09	6.086	
19,600.00	10,825.53	18,871.57	10,067.61	152.07	152.12	-90.633	-8,906.20	-1,537.65	1,686.31	1,406.28	280.03	6.022	
19,700.00	10,826.41	18,971.57	10,068.49	153.67	153.73	-90.633	-9,006.20	-1,536.99	1,686.31	1,403.34	282.97	5.959	
19,800.00	10,827.28	19,071.57	10,069.36	155.27	155.34	-90.633	-9,106.19	-1,536.33	1,686.32	1,400.41	285.91	5.898	
19,900.00	10,828.16	19,171.57	10,070.24	156.88	156.95	-90.633	-9,206.19	-1,535.67	1,686.33	1,397.47	288.86	5.838	
20,000.00	10,829.04	19,271.57	10,071.11	158.48	158.56	-90.633	-9,306.18	-1,535.01	1,686.33	1,394.53	291.81	5.779	
20,100.00	10,829.91	19,371.57	10,071.99	160.09	160.17	-90.633	-9,406.17	-1,534.35	1,686.34	1,391.59	294.75	5.721	
20,200.00	10,830.79	19,471.57	10,072.86	161.70	161.78	-90.633	-9,506.17	-1,533.69	1,686.35	1,388.64	297.71	5.664	
20,300.00	10,831.66	19,571.57	10,073.74	163.30	163.40	-90.633	-9,606.16	-1,533.03	1,686.35	1,385.70	300.66	5.609	
20,400.00	10,832.54	19,671.57	10,074.61	164.91	165.01	-90.633	-9,706.16	-1,532.37	1,686.36	1,382.75	303.61	5.554	
20,500.00	10,833.41	19,771.57	10,075.49	166.52	166.63	-90.633	-9,806.15	-1,531.71	1,686.37	1,379.80	306.57	5.501	
20,600.00	10,834.29	19,871.57	10,076.37	168.13	168.24	-90.633	-9,906.14	-1,531.05	1,686.37	1,376.85	309.52	5.448	
20,700.00	10,835.17	19,971.57	10,077.24	169.74	169.86	-90.633	-10,006.14	-1,530.39	1,686.38	1,373.90	312.48	5.397	
20,800.00	10,836.04	20,071.57	10,078.12	171.36	171.48	-90.633	-10,106.13	-1,529.73	1,686.39	1,370.95	315.44	5.346	
20,900.00	10,836.92	20,171.57	10,078.99	172.97	173.10	-90.633	-10,206.13	-1,529.07	1,686.39	1,367.99	318.40	5.296	
20,904.64	10,836.96	20,176.21	10,079.03	173.04	173.17	-90.633	-10,210.77	-1,529.04	1,686.39	1,367.86	318.53	5.294	
20,972.39	10,837.55	20,236.45	10,079.56	174.00	174.15	-90.347	-10,271.00	-1,528.65	1,686.41	1,366.10	320.31	5.265 SF	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 121H - Wellbore #1 - Design #2															Offset Site Error: 0.00 usft
Survey Program: 0-MWD															Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Reference	Offset	Semi Major Axis (usft)	Minor Axis (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	6.00	6.00	0.00	0.01	-91.874			-36.00	-1,100.00	1,100.59				
100.00	100.00	106.00	106.00	0.13	0.15	-91.874			-36.00	-1,100.00	1,100.59	1,100.31	0.28	3,961.578	
200.00	200.00	206.00	206.00	0.49	0.51	-91.874			-36.00	-1,100.00	1,100.59	1,099.59	0.99	1,106.388	
300.00	300.00	306.00	306.00	0.85	0.87	-91.874			-36.00	-1,100.00	1,100.59	1,098.88	1.71	642.979	
400.00	400.00	406.00	406.00	1.20	1.23	-91.874			-36.00	-1,100.00	1,100.59	1,098.16	2.43	453.170	
500.00	500.00	506.00	506.00	1.56	1.58	-91.874			-36.00	-1,100.00	1,100.59	1,097.44	3.15	349.883	
600.00	600.00	606.00	606.00	1.92	1.94	-91.874			-36.00	-1,100.00	1,100.59	1,096.73	3.86	284.940	
700.00	700.00	706.00	706.00	2.28	2.30	-91.874			-36.00	-1,100.00	1,100.59	1,096.01	4.58	240.331	
800.00	800.00	806.00	806.00	2.64	2.66	-91.874			-36.00	-1,100.00	1,100.59	1,095.29	5.30	207.799 CC	
900.00	899.99	905.99	905.99	3.00	3.02	-91.920			-36.00	-1,100.00	1,100.64	1,094.63	6.01	183.041	
1,000.00	999.96	1,005.96	1,005.96	3.36	3.38	-92.056			-36.00	-1,100.00	1,100.80	1,094.07	6.73	163.581	
1,100.00	1,099.86	1,105.86	1,105.86	3.71	3.73	-92.282			-36.00	-1,100.00	1,101.08	1,093.63	7.45	147.875	
1,200.00	1,199.68	1,205.68	1,205.68	4.07	4.09	-92.599			-36.00	-1,100.00	1,101.50	1,093.34	8.16	134.924	
1,300.00	1,299.37	1,300.00	1,300.00	4.44	4.43	-93.006			-36.00	-1,100.00	1,102.10	1,093.24	8.86	124.324 ES	
1,399.70	1,398.60	1,391.29	1,391.29	4.80	4.75	-93.476			-35.56	-1,100.58	1,103.51	1,093.96	9.55	115.503	
1,400.00	1,398.90	1,391.56	1,391.55	4.80	4.75	-93.478			-35.56	-1,100.58	1,103.52	1,093.96	9.56	115.478	
1,500.00	1,498.36	1,478.48	1,478.45	5.17	5.06	-93.948			-34.32	-1,102.21	1,106.24	1,096.01	10.23	108.121	
1,600.00	1,597.81	1,565.48	1,565.38	5.55	5.37	-94.370			-32.27	-1,104.89	1,110.15	1,099.25	10.91	101.765	
1,700.00	1,697.26	1,652.52	1,652.30	5.92	5.68	-94.744			-29.43	-1,108.62	1,115.25	1,103.66	11.59	96.241	
1,800.00	1,796.71	1,739.56	1,739.13	6.30	5.99	-95.069			-25.79	-1,113.41	1,121.51	1,109.24	12.27	91.414	
1,900.00	1,896.17	1,830.47	1,829.72	6.68	6.32	-95.337			-21.18	-1,119.45	1,128.86	1,115.89	12.97	87.066	
2,000.00	1,895.62	1,930.08	1,928.95	7.06	6.68	-95.564			-15.92	-1,126.35	1,136.49	1,122.79	13.70	82.947	
2,100.00	2,095.07	2,029.68	2,028.18	7.44	7.04	-95.788			-10.66	-1,133.25	1,144.14	1,129.70	14.44	79.235	
2,200.00	2,194.53	2,129.29	2,127.41	7.83	7.41	-96.009			-5.41	-1,140.15	1,151.81	1,136.63	15.18	75.875	
2,300.00	2,293.98	2,228.90	2,226.63	8.21	7.78	-96.227			-0.15	-1,147.05	1,159.50	1,143.57	15.92	72.820	
2,400.00	2,393.43	2,328.51	2,325.86	8.59	8.14	-96.443			5.11	-1,153.96	1,167.20	1,150.53	16.67	70.031	
2,500.00	2,492.88	2,428.11	2,425.09	8.98	8.51	-96.655			10.37	-1,160.86	1,174.92	1,157.50	17.41	67.475	
2,600.00	2,592.34	2,527.72	2,524.32	9.36	8.88	-96.865			15.62	-1,167.76	1,182.65	1,164.49	18.16	65.126	
2,700.00	2,691.79	2,627.33	2,623.55	9.75	9.25	-97.072			20.88	-1,174.66	1,190.40	1,171.49	18.91	62.960	
2,722.26	2,713.93	2,649.50	2,645.64	9.84	9.34	-97.117			22.05	-1,176.19	1,192.13	1,173.05	19.07	62.500	
2,800.00	2,791.32	2,726.97	2,722.81	10.13	9.63	-97.239			26.14	-1,181.56	1,198.05	1,178.40	19.65	60.959	
2,900.00	2,891.06	2,826.70	2,822.16	10.51	10.00	-97.283			31.41	-1,188.47	1,205.33	1,184.94	20.39	59.113	
3,000.00	2,990.96	2,926.44	2,921.53	10.87	10.37	-97.205			36.67	-1,195.38	1,212.23	1,191.11	21.12	57.405	
3,100.00	3,090.94	3,026.14	3,020.85	11.22	10.75	-97.006			41.93	-1,202.28	1,218.74	1,196.91	21.83	55.819	
3,122.06	3,113.00	3,048.12	3,042.74	11.30	10.83	-96.947			43.09	-1,203.81	1,220.13	1,198.14	21.99	55.484	
3,200.00	3,190.94	3,125.76	3,120.09	11.57	11.12	-96.725			47.19	-1,209.19	1,225.01	1,202.47	22.54	54.339	
3,300.00	3,290.94	3,225.38	3,219.33	11.91	11.50	-96.444			52.45	-1,216.09	1,231.30	1,208.04	23.25	52.949	
3,400.00	3,390.94	3,325.00	3,318.57	12.26	11.87	-96.166			57.71	-1,222.99	1,237.62	1,213.65	23.97	51.641	
3,500.00	3,490.94	3,424.62	3,417.81	12.61	12.25	-95.890			62.97	-1,229.89	1,243.96	1,219.28	24.68	50.408	
3,600.00	3,590.94	3,524.24	3,517.06	12.95	12.63	-95.618			68.22	-1,236.79	1,250.34	1,224.95	25.39	49.244	
3,700.00	3,690.94	3,623.86	3,616.30	13.30	13.00	-95.348			73.48	-1,243.69	1,256.74	1,230.64	26.10	48.143	
3,800.00	3,790.94	3,723.48	3,715.54	13.65	13.38	-95.081			78.74	-1,250.59	1,263.17	1,236.35	26.82	47.101	
3,900.00	3,890.94	3,823.10	3,814.78	14.00	13.76	-94.816			84.00	-1,257.49	1,269.63	1,242.10	27.53	46.114	
4,000.00	3,990.94	3,922.72	3,914.02	14.35	14.13	-94.554			89.26	-1,264.40	1,276.11	1,247.87	28.25	45.176	
4,100.00	4,090.94	4,022.34	4,013.26	14.70	14.51	-94.295			94.51	-1,271.30	1,282.62	1,253.66	28.96	44.285	
4,200.00	4,190.94	4,121.96	4,112.51	15.05	14.89	-94.039			99.77	-1,278.20	1,289.16	1,259.48	29.68	43.438	
4,300.00	4,290.94	4,221.58	4,211.75	15.40	15.27	-93.785			105.03	-1,285.10	1,295.72	1,265.33	30.39	42.630	
4,400.00	4,390.94	4,321.20	4,310.99	15.75	15.64	-93.533			110.29	-1,292.00	1,302.31	1,271.20	31.11	41.860	
4,500.00	4,490.94	4,420.82	4,410.23	16.11	16.02	-93.284			115.55	-1,298.90	1,308.92	1,277.09	31.83	41.126	
4,600.00	4,590.94	4,520.44	4,509.47	16.46	16.40	-93.038			120.81	-1,305.80	1,315.56	1,283.01	32.54	40.424	
4,700.00	4,690.94	4,620.06	4,608.71	16.81	16.78	-92.794			126.06	-1,312.70	1,322.22	1,288.96	33.26	39.752	
4,800.00	4,790.94	4,719.68	4,707.95	17.16	17.16	-92.552			131.32	-1,319.61	1,328.90	1,294.92	33.98	39.110	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 121H - Wellbore #1 - Design #2

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.00	4,890.94	4,819.30	4,807.20	17.52	17.54	-92.313		136.58	-1,326.51	1,335.61	1,300.91	34.70	38.494	
5,000.00	4,990.94	4,918.92	4,906.44	17.87	17.92	-92.077		141.84	-1,333.41	1,342.34	1,306.93	35.41	37.904	
5,100.00	5,090.94	5,018.54	5,005.68	18.22	18.29	-91.842		147.10	-1,340.31	1,349.09	1,312.96	36.13	37.338	
5,200.00	5,190.94	5,118.16	5,104.92	18.58	18.67	-91.610		152.35	-1,347.21	1,355.87	1,319.02	36.85	36.794	
5,300.00	5,290.94	5,217.78	5,204.16	18.93	19.05	-91.381		157.61	-1,354.11	1,362.67	1,325.10	37.57	36.272	
5,400.00	5,390.94	5,317.40	5,303.40	19.28	19.43	-91.153		162.87	-1,361.01	1,369.49	1,331.20	38.29	35.770	
5,500.00	5,490.94	5,417.02	5,402.64	19.64	19.81	-90.928		168.13	-1,367.91	1,376.33	1,337.32	39.00	35.286	
5,600.00	5,590.94	5,524.49	5,509.72	19.99	20.22	-90.690		173.74	-1,375.28	1,383.13	1,343.37	39.76	34.788	
5,700.00	5,690.94	5,664.39	5,649.34	20.34	20.74	-90.471		178.97	-1,382.14	1,388.00	1,347.36	40.64	34.150	
5,800.00	5,790.94	5,804.74	5,789.63	20.70	21.24	-90.382		181.10	-1,384.93	1,389.98	1,348.49	41.49	33.499	
5,900.00	5,890.94	5,912.04	5,896.94	21.05	21.60	-90.380		181.15	-1,385.00	1,390.03	1,347.81	42.22	32.926	
6,000.00	5,990.94	6,012.04	5,996.94	21.41	21.95	-90.380		181.15	-1,385.00	1,390.03	1,347.11	42.92	32.387	
6,100.00	6,090.94	6,112.04	6,096.94	21.76	22.29	-90.380		181.15	-1,385.00	1,390.03	1,346.41	43.62	31.865	
6,200.00	6,190.94	6,212.04	6,196.94	22.12	22.63	-90.380		181.15	-1,385.00	1,390.03	1,345.70	44.33	31.359	
6,300.00	6,290.94	6,312.04	6,296.94	22.47	22.98	-90.380		181.15	-1,385.00	1,390.03	1,345.00	45.03	30.869	
6,400.00	6,390.94	6,412.04	6,396.94	22.83	23.32	-90.380		181.15	-1,385.00	1,390.03	1,344.30	45.73	30.394	
6,500.00	6,490.94	6,512.04	6,496.94	23.18	23.67	-90.380		181.15	-1,385.00	1,390.03	1,343.59	46.44	29.933	
6,600.00	6,590.94	6,612.04	6,596.94	23.54	24.01	-90.380		181.15	-1,385.00	1,390.03	1,342.89	47.14	29.486	
6,700.00	6,690.94	6,712.04	6,696.94	23.89	24.36	-90.380		181.15	-1,385.00	1,390.03	1,342.18	47.85	29.051	
6,800.00	6,790.94	6,812.04	6,796.94	24.25	24.70	-90.380		181.15	-1,385.00	1,390.03	1,341.48	48.55	28.629	
6,900.00	6,890.94	6,912.04	6,896.94	24.61	25.05	-90.380		181.15	-1,385.00	1,390.03	1,340.77	49.26	28.219	
7,000.00	6,990.94	7,012.04	6,996.94	24.96	25.40	-90.380		181.15	-1,385.00	1,390.03	1,340.06	49.97	27.820	
7,100.00	7,090.94	7,112.04	7,096.94	25.32	25.74	-90.380		181.15	-1,385.00	1,390.03	1,339.36	50.67	27.432	
7,200.00	7,190.94	7,212.04	7,196.94	25.67	26.09	-90.380		181.15	-1,385.00	1,390.03	1,338.65	51.38	27.054	
7,300.00	7,290.94	7,312.04	7,296.94	26.03	26.44	-90.380		181.15	-1,385.00	1,390.03	1,337.94	52.09	26.687	
7,400.00	7,390.94	7,412.04	7,396.94	26.38	26.79	-90.380		181.15	-1,385.00	1,390.03	1,337.24	52.79	26.330	
7,500.00	7,490.94	7,512.04	7,496.94	26.74	27.13	-90.380		181.15	-1,385.00	1,390.03	1,336.53	53.50	25.981	
7,600.00	7,590.94	7,612.04	7,596.94	27.10	27.48	-90.380		181.15	-1,385.00	1,390.03	1,335.82	54.21	25.642	
7,700.00	7,690.94	7,712.04	7,696.94	27.45	27.83	-90.380		181.15	-1,385.00	1,390.03	1,335.11	54.92	25.312	
7,800.00	7,790.94	7,812.04	7,796.94	27.81	28.18	-90.380		181.15	-1,385.00	1,390.03	1,334.41	55.63	24.989	
7,900.00	7,890.94	7,912.04	7,896.94	28.17	28.53	-90.380		181.15	-1,385.00	1,390.03	1,333.70	56.33	24.675	
8,000.00	7,990.94	8,012.04	7,996.94	28.52	28.88	-90.380		181.15	-1,385.00	1,390.03	1,332.99	57.04	24.368	
8,100.00	8,090.94	8,112.04	8,096.94	28.88	29.23	-90.380		181.15	-1,385.00	1,390.03	1,332.28	57.75	24.069	
8,200.00	8,190.94	8,212.04	8,196.94	29.23	29.58	-90.380		181.15	-1,385.00	1,390.03	1,331.57	58.46	23.777	
8,300.00	8,290.94	8,312.04	8,296.94	29.59	29.93	-90.380		181.15	-1,385.00	1,390.03	1,330.86	59.17	23.492	
8,400.00	8,390.94	8,412.04	8,396.94	29.95	30.28	-90.380		181.15	-1,385.00	1,390.03	1,330.15	59.88	23.214	
8,500.00	8,490.94	8,512.04	8,496.94	30.30	30.63	-90.380		181.15	-1,385.00	1,390.03	1,329.44	60.59	22.942	
8,600.00	8,590.94	8,612.04	8,596.94	30.66	30.98	-90.380		181.15	-1,385.00	1,390.03	1,328.73	61.30	22.676	
8,700.00	8,690.94	8,712.04	8,696.94	31.02	31.33	-90.380		181.15	-1,385.00	1,390.03	1,328.02	62.01	22.417	
8,800.00	8,790.94	8,812.04	8,796.94	31.37	31.68	-90.380		181.15	-1,385.00	1,390.03	1,327.31	62.72	22.163	
8,900.00	8,890.94	8,912.04	8,896.94	31.73	32.03	-90.380		181.15	-1,385.00	1,390.03	1,326.60	63.43	21.915	
9,000.00	8,990.94	9,012.04	8,996.94	32.09	32.39	-90.380		181.15	-1,385.00	1,390.03	1,325.89	64.14	21.672	
9,100.00	9,090.94	9,112.04	9,096.94	32.44	32.74	-90.380		181.15	-1,385.00	1,390.03	1,325.18	64.85	21.434	
9,200.00	9,190.94	9,212.04	9,196.94	32.80	33.09	-90.380		181.15	-1,385.00	1,390.03	1,324.47	65.56	21.202	
9,300.00	9,290.94	9,312.04	9,296.94	33.16	33.44	-90.380		181.15	-1,385.00	1,390.03	1,323.76	66.27	20.975	
9,400.00	9,390.94	9,412.04	9,396.94	33.51	33.79	-90.380		181.15	-1,385.00	1,390.03	1,323.05	66.98	20.752	
9,500.00	9,490.94	9,512.04	9,496.94	33.87	34.14	-90.380		181.15	-1,385.00	1,390.03	1,322.34	67.69	20.534	
9,600.00	9,590.94	9,612.04	9,596.94	34.23	34.50	-90.380		181.15	-1,385.00	1,390.03	1,321.63	68.41	20.321	
9,700.00	9,690.94	9,712.04	9,696.94	34.59	34.85	-90.380		181.15	-1,385.00	1,390.03	1,320.91	69.12	20.111	
9,800.00	9,790.94	9,812.04	9,796.94	34.94	35.20	-90.380		181.15	-1,385.00	1,390.03	1,320.20	69.83	19.906	
9,900.00	9,890.94	9,912.04	9,896.94	35.30	35.55	-90.380		181.15	-1,385.00	1,390.03	1,319.49	70.54	19.706	
10,000.00	9,990.94	10,012.04	9,996.94	35.66	35.91	-90.380		181.15	-1,385.00	1,390.03	1,318.78	71.25	19.509	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 121H - Wellbore #1 - Design #2

Survey Program:		0-MWD		Rule Assigned:										Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Separation		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,090.94	10,112.04	10,096.94	36.01	36.26		-90.380	181.15	-1,385.00	1,390.03	1,318.07	71.96	19.316		
10,112.36	10,103.30	10,124.40	10,109.30	36.06	36.30		-90.380	181.15	-1,385.00	1,390.03	1,317.98	72.05	19.292		
10,187.06	10,178.00	10,196.93	10,181.83	36.33	36.56		-90.381	181.14	-1,385.00	1,390.04	1,317.46	72.58	19.153		
10,200.00	10,190.94	10,200.00	10,184.90	36.37	36.57		-90.376	181.11	-1,385.01	1,390.07	1,317.44	72.63	19.138		
10,250.00	10,240.81	10,237.08	10,221.94	36.52	36.69		-90.307	179.51	-1,385.38	1,390.19	1,317.29	72.91	19.068		
10,300.00	10,290.21	10,269.00	10,253.68	36.67	36.79		-90.128	176.26	-1,386.14	1,390.41	1,317.26	73.15	19.008		
10,350.00	10,338.75	10,300.00	10,284.28	36.82	36.88		-89.838	171.47	-1,387.26	1,390.70	1,317.33	73.37	18.955		
10,400.00	10,386.07	10,333.00	10,316.51	36.95	36.98		-89.462	164.60	-1,388.87	1,391.08	1,317.50	73.58	18.906		
10,450.00	10,431.81	10,365.12	10,347.45	37.08	37.07		-88.983	156.19	-1,390.83	1,391.56	1,317.78	73.77	18.862		
10,500.00	10,475.61	10,400.00	10,380.43	37.21	37.17		-88.453	145.17	-1,393.41	1,392.15	1,318.18	73.97	18.820		
10,550.00	10,517.15	10,429.75	10,407.97	37.32	37.25		-87.765	134.23	-1,395.96	1,392.86	1,318.72	74.13	18.788		
10,600.00	10,556.11	10,462.31	10,437.41	37.44	37.33		-87.040	120.69	-1,399.12	1,393.71	1,319.40	74.31	18.756		
10,650.00	10,592.19	10,500.00	10,470.43	37.55	37.43		-86.355	103.01	-1,403.26	1,394.74	1,320.23	74.51	18.719		
10,700.00	10,625.12	10,528.08	10,494.22	37.67	37.49		-85.413	88.48	-1,406.65	1,395.92	1,321.26	74.66	18.696		
10,750.00	10,654.64	10,561.37	10,521.43	37.78	37.56		-84.534	69.81	-1,411.01	1,397.32	1,322.47	74.85	18.668		
10,800.00	10,680.54	10,600.00	10,551.55	37.90	37.64		-83.762	46.27	-1,416.51	1,398.97	1,323.89	75.07	18.635		
10,850.00	10,702.61	10,629.00	10,573.04	38.02	37.69		-82.713	27.33	-1,420.94	1,400.84	1,325.58	75.26	18.613		
10,900.00	10,720.69	10,663.44	10,597.26	38.14	37.76		-81.800	3.48	-1,426.51	1,402.99	1,327.51	75.48	18.586		
10,950.00	10,734.64	10,700.00	10,621.31	38.27	37.82		-80.959	-23.32	-1,432.77	1,405.45	1,329.72	75.73	18.559		
11,000.00	10,744.36	10,733.95	10,642.03	38.40	37.88		-80.053	-49.51	-1,438.89	1,408.22	1,332.26	75.97	18.537		
11,050.00	10,749.76	10,770.19	10,662.34	38.53	37.95		-79.253	-78.72	-1,445.71	1,411.34	1,335.11	76.23	18.515		
11,082.06	10,750.94	10,793.83	10,674.56	38.62	37.99		-78.776	-88.43	-1,450.32	1,413.53	1,337.13	76.39	18.503		
11,100.00	10,751.09	10,807.33	10,681.16	38.67	38.02		-78.528	-109.90	-1,453.00	1,414.89	1,338.40	76.49	18.498		
11,200.00	10,751.97	10,888.61	10,714.85	39.00	38.22		-77.496	-181.86	-1,469.81	1,425.71	1,348.65	77.06	18.502		
11,300.00	10,752.84	10,978.67	10,739.57	39.39	38.47		-77.005	-266.09	-1,489.49	1,441.27	1,363.57	77.70	18.549		
11,400.00	10,753.72	11,073.88	10,750.64	39.84	38.77		-76.862	-358.07	-1,510.98	1,460.77	1,382.35	78.43	18.626		
11,461.17	10,754.26	11,181.13	10,751.75	40.15	39.14		-78.713	-462.83	-1,533.90	1,473.72	1,394.64	79.07	18.637		
11,500.00	10,754.60	11,259.88	10,752.44	40.35	39.45		-80.288	-540.25	-1,548.25	1,481.05	1,401.49	79.56	18.615		
11,600.00	10,755.47	11,465.98	10,754.25	40.92	40.43		-84.410	-744.44	-1,575.69	1,495.04	1,414.04	81.00	18.458		
11,700.00	10,756.35	11,675.19	10,756.08	41.55	41.62		-88.594	-953.23	-1,588.46	1,501.81	1,419.17	82.65	18.172		
11,800.00	10,757.22	11,821.96	10,757.36	42.24	42.58		-90.378	-1,099.99	-1,588.89	1,502.48	1,418.29	84.19	17.846		
11,900.00	10,758.10	11,921.96	10,758.23	42.98	43.29		-90.378	-1,199.98	-1,588.23	1,502.49	1,416.85	85.65	17.542		
12,000.00	10,758.97	12,021.96	10,759.11	43.77	44.05		-90.378	-1,299.97	-1,587.57	1,502.50	1,415.30	87.21	17.229		
12,100.00	10,759.85	12,121.96	10,759.98	44.60	44.86		-90.378	-1,399.97	-1,586.92	1,502.52	1,413.65	88.87	16.908		
12,200.00	10,760.73	12,221.96	10,760.85	45.48	45.71		-90.378	-1,499.96	-1,586.26	1,502.53	1,411.91	90.61	16.582		
12,300.00	10,761.60	12,321.96	10,761.72	46.41	46.61		-90.378	-1,599.96	-1,585.60	1,502.54	1,410.09	92.44	16.253		
12,400.00	10,762.48	12,421.96	10,762.59	47.37	47.55		-90.378	-1,699.95	-1,584.95	1,502.55	1,408.19	94.36	15.924		
12,500.00	10,763.35	12,521.96	10,763.46	48.37	48.52		-90.378	-1,799.94	-1,584.29	1,502.56	1,406.21	96.35	15.595		
12,600.00	10,764.23	12,621.96	10,764.34	49.41	49.53		-90.378	-1,899.94	-1,583.63	1,502.57	1,404.16	98.40	15.269		
12,700.00	10,765.10	12,721.96	10,765.21	50.48	50.58		-90.378	-1,999.93	-1,582.98	1,502.58	1,402.05	100.53	14.946		
12,800.00	10,765.98	12,821.96	10,766.08	51.58	51.66		-90.378	-2,099.93	-1,582.32	1,502.59	1,399.87	102.72	14.628		
12,900.00	10,766.86	12,921.96	10,766.95	52.70	52.76		-90.378	-2,199.92	-1,581.66	1,502.60	1,397.63	104.97	14.315		
13,000.00	10,767.73	13,021.96	10,767.82	53.86	53.90		-90.378	-2,299.91	-1,581.00	1,502.61	1,395.34	107.27	14.008		
13,100.00	10,768.61	13,121.96	10,768.69	55.04	55.06		-90.378	-2,399.91	-1,580.35	1,502.62	1,393.00	109.62	13.707		
13,200.00	10,769.48	13,221.96	10,769.56	56.25	56.25		-90.378	-2,499.90	-1,579.69	1,502.63	1,390.61	112.02	13.413		
13,300.00	10,770.36	13,321.96	10,770.44	57.47	57.46		-90.378	-2,599.90	-1,579.03	1,502.64	1,388.17	114.47	13.127		
13,400.00	10,771.23	13,421.96	10,771.31	58.72	58.69		-90.378	-2,699.89	-1,578.38	1,502.65	1,385.69	116.96	12.848		
13,500.00	10,772.11	13,521.96	10,772.18	59.99	59.94		-90.378	-2,799.88	-1,577.72	1,502.66	1,383.17	119.49	12.576		
13,600.00	10,772.99	13,621.96	10,773.05	61.28	61.21		-90.378	-2,899.88	-1,577.06	1,502.67	1,380.62	122.06	12.311		
13,700.00	10,773.86	13,721.96	10,773.92	62.58	62.50		-90.378	-2,999.87	-1,576.41	1,502.68	1,378.03	124.66	12.055		
13,800.00	10,774.74	13,821.96	10,774.79	63.90	63.80		-90.378	-3,099.87	-1,575.75	1,502.69	1,375.40	127.29	11.805		
13,900.00	10,775.61	13,921.96	10,775.66	65.23	65.12		-90.378	-3,199.86	-1,575.09	1,502.70	1,372.75	129.96	11.563		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 121H - Wellbore #1 - Design #2

Survey Program: 0-MWD				Rule Assigned:					Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
14,000.00	10,776.49	14,021.96	10,776.54	66.58	66.46	-90.378	-3,299.85	-1,574.44	1,502.71	1,370.06	132.65	11.328
14,100.00	10,777.37	14,121.96	10,777.41	67.95	67.81	-90.378	-3,399.85	-1,573.78	1,502.72	1,367.35	135.37	11.101
14,200.00	10,778.24	14,221.96	10,778.28	69.32	69.17	-90.378	-3,499.84	-1,573.12	1,502.74	1,364.62	138.12	10.880
14,300.00	10,779.12	14,321.96	10,779.15	70.71	70.55	-90.378	-3,599.84	-1,572.47	1,502.75	1,361.86	140.89	10.666
14,400.00	10,779.99	14,421.96	10,780.02	72.11	71.94	-90.378	-3,699.83	-1,571.81	1,502.76	1,359.07	143.68	10.459
14,500.00	10,780.87	14,521.96	10,780.89	73.52	73.34	-90.378	-3,799.82	-1,571.15	1,502.77	1,356.27	146.50	10.258
14,600.00	10,781.74	14,621.96	10,781.77	74.94	74.74	-90.378	-3,899.82	-1,570.50	1,502.78	1,353.45	149.33	10.063
14,700.00	10,782.62	14,721.96	10,782.64	76.36	76.16	-90.378	-3,999.81	-1,569.84	1,502.79	1,350.60	152.19	9.875
14,800.00	10,783.50	14,821.96	10,783.51	77.80	77.59	-90.378	-4,099.81	-1,569.18	1,502.80	1,347.74	155.06	9.692
14,900.00	10,784.37	14,921.96	10,784.38	79.25	79.03	-90.378	-4,199.80	-1,568.53	1,502.81	1,344.86	157.95	9.515
15,000.00	10,785.25	15,021.96	10,785.25	80.70	80.47	-90.378	-4,299.80	-1,567.87	1,502.82	1,341.97	160.85	9.343
15,100.00	10,786.12	15,121.96	10,786.12	82.16	81.93	-90.378	-4,399.79	-1,567.21	1,502.83	1,339.06	163.77	9.176
15,200.00	10,787.00	15,221.96	10,786.99	83.63	83.39	-90.378	-4,499.78	-1,566.55	1,502.84	1,336.13	166.71	9.015
15,300.00	10,787.87	15,321.96	10,787.87	85.11	84.85	-90.378	-4,599.78	-1,565.90	1,502.85	1,333.19	169.66	8.858
15,400.00	10,788.75	15,421.96	10,788.74	86.59	86.33	-90.378	-4,699.77	-1,565.24	1,502.86	1,330.24	172.62	8.706
15,500.00	10,789.63	15,521.96	10,789.61	88.08	87.81	-90.378	-4,799.77	-1,564.58	1,502.87	1,327.28	175.59	8.559
15,600.00	10,790.50	15,621.96	10,790.48	89.57	89.30	-90.378	-4,899.76	-1,563.93	1,502.88	1,324.30	178.58	8.416
15,700.00	10,791.38	15,721.96	10,791.35	91.07	90.79	-90.378	-4,999.75	-1,563.27	1,502.89	1,321.32	181.58	8.277
15,800.00	10,792.25	15,821.96	10,792.22	92.58	92.29	-90.378	-5,099.75	-1,562.61	1,502.90	1,318.32	184.58	8.142
15,900.00	10,793.13	15,921.96	10,793.09	94.09	93.79	-90.378	-5,199.74	-1,561.96	1,502.91	1,315.31	187.60	8.011
16,000.00	10,794.00	16,021.96	10,793.97	95.60	95.30	-90.378	-5,299.74	-1,561.30	1,502.92	1,312.29	190.63	7.884
16,100.00	10,794.88	16,121.96	10,794.84	97.12	96.81	-90.378	-5,399.73	-1,560.64	1,502.93	1,309.27	193.67	7.760
16,200.00	10,795.76	16,221.96	10,795.71	98.64	98.33	-90.378	-5,499.72	-1,559.99	1,502.95	1,306.23	196.71	7.640
16,300.00	10,796.63	16,321.96	10,796.58	100.17	99.85	-90.378	-5,599.72	-1,559.33	1,502.96	1,303.19	199.77	7.524
16,400.00	10,797.51	16,421.96	10,797.45	101.70	101.38	-90.378	-5,699.71	-1,558.67	1,502.97	1,300.14	202.83	7.410
16,500.00	10,798.38	16,521.96	10,798.32	103.24	102.91	-90.378	-5,799.71	-1,558.02	1,502.98	1,297.08	205.90	7.300
16,600.00	10,799.26	16,621.96	10,799.19	104.78	104.44	-90.378	-5,899.70	-1,557.36	1,502.99	1,294.01	208.97	7.192
16,700.00	10,800.14	16,721.96	10,800.07	106.32	105.98	-90.378	-5,999.69	-1,556.70	1,503.00	1,290.94	212.06	7.088
16,800.00	10,801.01	16,821.96	10,800.94	107.86	107.52	-90.378	-6,099.69	-1,556.05	1,503.01	1,287.86	215.15	6.986
16,900.00	10,801.89	16,921.96	10,801.81	109.41	109.06	-90.378	-6,199.68	-1,555.39	1,503.02	1,284.78	218.24	6.887
17,000.00	10,802.76	17,021.96	10,802.68	110.97	110.61	-90.378	-6,299.68	-1,554.73	1,503.03	1,281.68	221.35	6.790
17,100.00	10,803.64	17,121.96	10,803.55	112.52	112.16	-90.378	-6,399.67	-1,554.08	1,503.04	1,278.59	224.45	6.696
17,200.00	10,804.51	17,221.96	10,804.42	114.08	113.72	-90.378	-6,499.66	-1,553.42	1,503.05	1,275.48	227.57	6.605
17,300.00	10,805.39	17,321.96	10,805.30	115.64	115.27	-90.378	-6,599.66	-1,552.76	1,503.06	1,272.37	230.69	6.516
17,400.00	10,806.27	17,421.96	10,806.17	117.20	116.83	-90.378	-6,699.65	-1,552.10	1,503.07	1,269.26	233.81	6.429
17,500.00	10,807.14	17,521.96	10,807.04	118.77	118.39	-90.378	-6,799.65	-1,551.45	1,503.08	1,266.14	236.94	6.344
17,600.00	10,808.02	17,621.96	10,807.91	120.33	119.96	-90.378	-6,899.64	-1,550.79	1,503.09	1,263.02	240.08	6.261
17,700.00	10,808.89	17,721.96	10,808.78	121.90	121.52	-90.378	-6,999.63	-1,550.13	1,503.10	1,259.89	243.22	6.180
17,800.00	10,809.77	17,821.96	10,809.65	123.48	123.09	-90.378	-7,099.63	-1,549.48	1,503.11	1,256.75	246.36	6.101
17,900.00	10,810.64	17,921.96	10,810.52	125.05	124.66	-90.378	-7,199.62	-1,548.82	1,503.12	1,253.62	249.51	6.024
18,000.00	10,811.52	18,021.96	10,811.40	126.63	126.24	-90.378	-7,299.62	-1,548.16	1,503.13	1,250.48	252.66	5.949
18,100.00	10,812.40	18,121.96	10,812.27	128.20	127.81	-90.378	-7,399.61	-1,547.51	1,503.14	1,247.33	255.81	5.876
18,200.00	10,813.27	18,221.96	10,813.14	129.78	129.39	-90.378	-7,499.60	-1,546.85	1,503.16	1,244.18	258.97	5.804
18,300.00	10,814.15	18,321.96	10,814.01	131.37	130.97	-90.378	-7,599.60	-1,546.19	1,503.17	1,241.03	262.14	5.734
18,400.00	10,815.02	18,421.96	10,814.88	132.95	132.55	-90.378	-7,699.59	-1,545.54	1,503.18	1,237.87	265.30	5.666
18,500.00	10,815.90	18,521.96	10,815.75	134.53	134.13	-90.378	-7,799.59	-1,544.88	1,503.19	1,234.71	268.47	5.599
18,600.00	10,816.77	18,621.96	10,816.62	136.12	135.71	-90.378	-7,899.58	-1,544.22	1,503.20	1,231.55	271.65	5.534
18,700.00	10,817.65	18,721.96	10,817.50	137.71	137.30	-90.378	-7,999.57	-1,543.57	1,503.21	1,228.38	274.82	5.470
18,800.00	10,818.53	18,821.96	10,818.37	139.30	138.89	-90.378	-8,099.57	-1,542.91	1,503.22	1,225.22	278.00	5.407
18,900.00	10,819.40	18,921.96	10,819.24	140.89	140.48	-90.378	-8,199.56	-1,542.25	1,503.23	1,222.04	281.19	5.346
19,000.00	10,820.28	19,021.96	10,820.11	142.49	142.07	-90.378	-8,299.56	-1,541.60	1,503.24	1,218.87	284.37	5.286
19,100.00	10,821.15	19,121.96	10,820.98	144.08	143.66	-90.378	-8,399.55	-1,540.94	1,503.25	1,215.69	287.56	5.228

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 121H - Wellbore #1 - Design #2

Survey Program: 0-MWD

Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,200.00	10,822.03	19,221.96	10,821.85	145.68	145.25	-90.378	-8,499.55	-1,540.28	1,503.26	1,212.51	290.75	5.170	
19,300.00	10,822.90	19,321.96	10,822.73	147.27	146.85	-90.378	-8,599.54	-1,539.63	1,503.27	1,209.33	293.94	5.114	
19,400.00	10,823.78	19,421.96	10,823.60	148.87	148.44	-90.378	-8,699.53	-1,538.97	1,503.28	1,206.14	297.14	5.059	
19,500.00	10,824.66	19,521.96	10,824.47	150.47	150.04	-90.378	-8,799.53	-1,538.31	1,503.29	1,202.95	300.34	5.005	
19,600.00	10,825.53	19,621.96	10,825.34	152.07	151.64	-90.378	-8,899.52	-1,537.65	1,503.30	1,199.76	303.54	4.953	
19,700.00	10,826.41	19,721.96	10,826.21	153.67	153.24	-90.378	-8,999.52	-1,537.00	1,503.31	1,196.57	306.74	4.901	
19,800.00	10,827.28	19,821.96	10,827.08	155.27	154.84	-90.378	-9,099.51	-1,536.34	1,503.32	1,193.38	309.95	4.850	
19,900.00	10,828.16	19,921.96	10,827.95	156.88	156.44	-90.378	-9,199.50	-1,535.68	1,503.33	1,190.18	313.15	4.801	
20,000.00	10,829.04	20,021.96	10,828.83	158.48	158.04	-90.378	-9,299.50	-1,535.03	1,503.34	1,186.98	316.36	4.752	
20,100.00	10,829.91	20,121.96	10,829.70	160.09	159.65	-90.378	-9,399.49	-1,534.37	1,503.35	1,183.78	319.57	4.704	
20,200.00	10,830.79	20,221.96	10,830.57	161.70	161.25	-90.378	-9,499.49	-1,533.71	1,503.37	1,180.58	322.79	4.657	
20,300.00	10,831.66	20,321.96	10,831.44	163.30	162.86	-90.378	-9,599.48	-1,533.06	1,503.38	1,177.37	326.00	4.612	
20,400.00	10,832.54	20,421.96	10,832.31	164.91	164.46	-90.378	-9,699.47	-1,532.40	1,503.39	1,174.17	329.22	4.567	
20,500.00	10,833.41	20,521.96	10,833.18	166.52	166.07	-90.378	-9,799.47	-1,531.74	1,503.40	1,170.96	332.44	4.522	
20,600.00	10,834.29	20,621.96	10,834.05	168.13	167.68	-90.378	-9,899.46	-1,531.09	1,503.41	1,167.75	335.66	4.479	
20,700.00	10,835.17	20,721.96	10,834.93	169.74	169.29	-90.378	-9,999.46	-1,530.43	1,503.42	1,164.54	338.88	4.436	
20,800.00	10,836.04	20,821.96	10,835.80	171.36	170.90	-90.378	-10,099.45	-1,529.77	1,503.43	1,161.32	342.11	4.395	
20,900.00	10,836.92	20,921.96	10,836.67	172.97	172.47	-90.378	-10,199.44	-1,529.12	1,503.44	1,158.15	345.29	4.354	
20,903.05	10,836.94	20,925.01	10,836.70	173.01	172.52	-90.378	-10,202.49	-1,529.10	1,503.44	1,158.06	345.38	4.353	
20,972.39	10,837.55	20,992.92	10,837.29	174.00	173.49	-90.324	-10,270.40	-1,528.65	1,503.45	1,156.10	347.35	4.328 SF	

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 131H - Wellbore #1 - Design #2

Survey Program: 0-MWD										Rule Assigned:				Warning	
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Offset Site Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			Offset Well Error: 0.00 usft	
0.00	0.00	6.00	6.00	0.00	0.01	-91.825		-36.00	-1,130.00	1,130.57					
100.00	100.00	106.00	106.00	0.13	0.15	-91.825		-36.00	-1,130.00	1,130.57	1,130.30	0.28	4,069.507		
200.00	200.00	206.00	206.00	0.49	0.51	-91.825		-36.00	-1,130.00	1,130.57	1,129.58	0.99	1,136.530		
300.00	300.00	306.00	306.00	0.85	0.87	-91.825		-36.00	-1,130.00	1,130.57	1,128.86	1.71	660.497		
400.00	400.00	406.00	406.00	1.20	1.23	-91.825		-36.00	-1,130.00	1,130.57	1,128.14	2.43	465.516		
500.00	500.00	506.00	506.00	1.56	1.58	-91.825		-36.00	-1,130.00	1,130.57	1,127.43	3.15	359.416		
600.00	600.00	606.00	606.00	1.92	1.94	-91.825		-36.00	-1,130.00	1,130.57	1,126.71	3.86	292.703		
700.00	700.00	706.00	706.00	2.28	2.30	-91.825		-36.00	-1,130.00	1,130.57	1,125.99	4.58	246.878		
800.00	800.00	806.00	806.00	2.64	2.66	-91.825		-36.00	-1,130.00	1,130.57	1,125.28	5.30	213.460 CC		
900.00	899.99	905.99	905.99	3.00	3.02	-91.869		-36.00	-1,130.00	1,130.62	1,124.61	6.01	188.028		
1,000.00	999.96	1,005.96	1,005.96	3.36	3.38	-92.001		-36.00	-1,130.00	1,130.78	1,124.05	6.73	168.036		
1,100.00	1,099.86	1,105.86	1,105.86	3.71	3.73	-92.222		-36.00	-1,130.00	1,131.06	1,123.61	7.45	151.901		
1,200.00	1,199.68	1,200.00	1,200.00	4.07	4.07	-92.530		-36.00	-1,130.00	1,131.48	1,123.34	8.14	138.944 ES		
1,300.00	1,299.37	1,290.47	1,290.47	4.44	4.39	-92.906		-35.64	-1,130.61	1,132.74	1,123.92	8.83	128.339		
1,399.70	1,398.60	1,375.77	1,375.74	4.80	4.69	-93.332		-34.62	-1,132.32	1,135.43	1,125.94	9.49	119.650		
1,400.00	1,398.90	1,376.02	1,376.00	4.80	4.69	-93.333		-34.62	-1,132.32	1,135.44	1,125.95	9.49	119.625		
1,500.00	1,498.36	1,461.56	1,461.47	5.17	4.99	-93.765		-32.95	-1,135.13	1,139.50	1,129.34	10.16	112.156		
1,600.00	1,597.81	1,547.11	1,546.90	5.55	5.30	-94.158		-30.63	-1,139.04	1,144.84	1,134.00	10.83	105.707		
1,700.00	1,697.26	1,632.64	1,632.23	5.92	5.60	-94.510		-27.66	-1,144.04	1,151.44	1,139.94	11.50	100.107		
1,800.00	1,796.71	1,721.11	1,720.39	6.30	5.92	-94.816		-23.93	-1,150.33	1,159.26	1,147.07	12.19	95.125		
1,900.00	1,896.17	1,820.62	1,819.53	6.68	6.28	-95.079		-19.50	-1,157.78	1,167.48	1,154.56	12.92	90.365		
2,000.00	1,995.62	1,920.14	1,918.67	7.06	6.65	-95.338		-15.07	-1,165.24	1,175.73	1,162.07	13.66	86.101		
2,100.00	2,095.07	2,019.66	2,017.81	7.44	7.01	-95.594		-10.65	-1,172.70	1,184.00	1,169.60	14.39	82.262		
2,200.00	2,194.53	2,119.18	2,116.95	7.83	7.38	-95.846		-6.22	-1,180.15	1,192.29	1,177.16	15.13	78.788		
2,300.00	2,293.98	2,218.70	2,216.09	8.21	7.75	-96.095		-1.79	-1,187.61	1,200.61	1,184.73	15.87	75.631		
2,400.00	2,393.43	2,318.22	2,315.23	8.59	8.12	-96.340		2.63	-1,195.07	1,208.94	1,192.33	16.62	72.750		
2,500.00	2,492.88	2,417.74	2,414.37	8.98	8.49	-96.582		7.06	-1,202.52	1,217.30	1,199.94	17.36	70.112		
2,600.00	2,592.34	2,517.25	2,513.51	9.36	8.86	-96.821		11.49	-1,209.98	1,225.69	1,207.58	18.11	67.688		
2,700.00	2,691.79	2,616.77	2,612.65	9.75	9.23	-97.056		15.92	-1,217.43	1,234.09	1,215.23	18.85	65.453		
2,722.26	2,713.93	2,638.93	2,634.72	9.84	9.31	-97.108		16.90	-1,219.09	1,235.96	1,216.94	19.02	64.979		
2,800.00	2,791.32	2,716.34	2,711.84	10.13	9.60	-97.252		20.35	-1,224.89	1,242.40	1,222.80	19.60	63.391		
2,900.00	2,891.06	2,816.00	2,811.12	10.51	9.98	-97.330		24.78	-1,232.36	1,250.34	1,230.01	20.33	61.488		
3,000.00	2,990.96	2,915.71	2,910.45	10.87	10.35	-97.288		29.22	-1,239.83	1,257.90	1,236.84	21.06	59.729		
3,100.00	3,090.94	3,015.39	3,009.75	11.22	10.73	-97.130		33.65	-1,247.30	1,265.07	1,243.29	21.78	58.096		
3,122.06	3,113.00	3,037.37	3,031.65	11.30	10.81	-97.080		34.63	-1,248.95	1,266.60	1,244.66	21.93	57.751		
3,200.00	3,190.94	3,115.01	3,108.99	11.57	11.10	-96.893		38.08	-1,254.76	1,271.98	1,249.49	22.48	56.572		
3,300.00	3,290.94	3,214.63	3,208.23	11.91	11.48	-96.655		42.51	-1,262.23	1,278.90	1,255.71	23.19	55.141		
3,400.00	3,390.94	3,314.25	3,307.48	12.26	11.86	-96.420		46.95	-1,269.69	1,285.85	1,261.95	23.90	53.793		
3,500.00	3,490.94	3,413.87	3,406.72	12.61	12.23	-96.187		51.38	-1,277.15	1,292.82	1,268.20	24.61	52.523		
3,600.00	3,590.94	3,513.49	3,505.96	12.95	12.61	-95.957		55.81	-1,284.62	1,299.81	1,274.48	25.33	51.323		
3,700.00	3,690.94	3,613.13	3,605.20	13.30	12.99	-95.729		60.24	-1,292.08	1,306.82	1,280.78	26.04	50.189		
3,800.00	3,790.94	3,712.73	3,704.44	13.65	13.37	-95.504		64.67	-1,299.55	1,313.85	1,287.10	26.75	49.115		
3,900.00	3,890.94	3,812.35	3,803.68	14.00	13.74	-95.281		69.10	-1,307.01	1,320.90	1,293.43	27.46	48.096		
4,000.00	3,990.94	3,911.97	3,902.92	14.35	14.12	-95.060		73.54	-1,314.47	1,327.97	1,299.79	28.18	47.129		
4,100.00	4,090.94	4,011.59	4,002.16	14.70	14.50	-94.842		77.97	-1,321.94	1,335.06	1,306.17	28.89	46.209		
4,200.00	4,190.94	4,111.21	4,101.40	15.05	14.88	-94.626		82.40	-1,329.40	1,342.17	1,312.56	29.61	45.334		
4,300.00	4,290.94	4,210.83	4,200.64	15.40	15.26	-94.412		86.83	-1,336.86	1,349.29	1,318.97	30.32	44.501		
4,400.00	4,390.94	4,310.45	4,299.88	15.75	15.64	-94.201		91.26	-1,344.33	1,356.44	1,325.40	31.04	43.706		
4,500.00	4,490.94	4,410.07	4,399.12	16.11	16.01	-93.992		95.70	-1,351.79	1,363.60	1,331.85	31.75	42.947		
4,600.00	4,590.94	4,509.69	4,498.36	16.46	16.39	-93.784		100.13	-1,359.26	1,370.79	1,338.32	32.47	42.221		
4,700.00	4,690.94	4,609.31	4,597.61	16.81	16.77	-93.580		104.56	-1,366.72	1,377.99	1,344.80	33.18	41.527		
4,800.00	4,790.94	4,708.92	4,696.85	17.16	17.15	-93.377		108.99	-1,374.18	1,385.20	1,351.30	33.90	40.863		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 131H - Wellbore #1 - Design #2

Survey Program: 0-MWD										Rule Assigned:				Warning	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)							
4,900.00	4,890.94	4,808.54	4,796.09	17.52	17.53	-93.178	113.42	-1,381.65	1,392.44	1,357.82	34.62	40.226			
5,000.00	4,990.94	4,908.16	4,895.33	17.87	17.91	-92.978	117.86	-1,389.11	1,399.69	1,364.36	35.33	39.616			
5,100.00	5,090.94	5,007.78	4,994.57	18.22	18.29	-92.781	122.29	-1,396.57	1,406.96	1,370.91	36.05	39.030			
5,200.00	5,190.94	5,107.40	5,093.81	18.58	18.67	-92.586	126.72	-1,404.04	1,414.24	1,377.48	36.77	38.467			
5,300.00	5,290.94	5,207.02	5,193.05	18.93	19.05	-92.394	131.15	-1,411.50	1,421.54	1,384.06	37.48	37.926			
5,400.00	5,390.94	5,306.64	5,292.29	19.28	19.43	-92.203	135.58	-1,418.97	1,428.86	1,390.66	38.20	37.405			
5,500.00	5,490.94	5,406.26	5,391.53	19.64	19.81	-92.015	140.01	-1,426.43	1,436.19	1,397.27	38.92	36.904			
5,600.00	5,590.94	5,505.88	5,490.77	19.99	20.19	-91.828	144.45	-1,433.89	1,443.54	1,403.90	39.63	36.421			
5,700.00	5,690.94	5,605.50	5,590.01	20.34	20.57	-91.643	148.88	-1,441.36	1,450.90	1,410.55	40.35	35.956			
5,800.00	5,790.94	5,705.12	5,689.25	20.70	20.95	-91.460	153.31	-1,448.82	1,458.27	1,417.21	41.07	35.507			
5,900.00	5,890.94	5,804.74	5,788.49	21.05	21.33	-91.279	157.74	-1,456.28	1,465.67	1,423.88	41.79	35.074			
6,000.00	5,990.94	5,904.36	5,887.73	21.41	21.71	-91.100	162.17	-1,463.75	1,473.07	1,430.57	42.51	34.656			
6,100.00	6,090.94	6,003.98	5,986.98	21.76	22.09	-90.922	166.61	-1,471.21	1,480.49	1,437.27	43.22	34.252			
6,200.00	6,190.94	6,103.60	6,086.22	22.12	22.47	-90.747	171.04	-1,478.68	1,487.93	1,443.99	43.94	33.862			
6,300.00	6,290.94	6,227.62	6,209.82	22.47	22.94	-90.544	176.20	-1,487.37	1,494.98	1,450.21	44.77	33.392			
6,400.00	6,390.94	6,377.94	6,359.95	22.83	23.49	-90.399	179.92	-1,493.64	1,499.13	1,453.45	45.68	32.816			
6,500.00	6,490.94	6,514.94	6,496.94	23.18	23.96	-90.368	180.73	-1,495.00	1,500.03	1,453.53	46.50	32.256			
6,600.00	6,590.94	6,614.94	6,596.94	23.54	24.30	-90.368	180.73	-1,495.00	1,500.03	1,452.83	47.21	31.777			
6,700.00	6,690.94	6,714.94	6,696.94	23.89	24.64	-90.368	180.73	-1,495.00	1,500.03	1,452.12	47.91	31.311			
6,800.00	6,790.94	6,814.94	6,796.94	24.25	24.98	-90.368	180.73	-1,495.00	1,500.03	1,451.42	48.61	30.858			
6,900.00	6,890.94	6,914.94	6,896.94	24.61	25.32	-90.368	180.73	-1,495.00	1,500.03	1,450.72	49.31	30.419			
7,000.00	6,990.94	7,014.94	6,996.94	24.96	25.66	-90.368	180.73	-1,495.00	1,500.03	1,450.01	50.02	29.991			
7,100.00	7,090.94	7,114.94	7,096.94	25.32	26.01	-90.368	180.73	-1,495.00	1,500.03	1,449.31	50.72	29.575			
7,200.00	7,190.94	7,214.94	7,196.94	25.67	26.35	-90.368	180.73	-1,495.00	1,500.03	1,448.61	51.42	29.170			
7,300.00	7,290.94	7,314.94	7,296.94	26.03	26.69	-90.368	180.73	-1,495.00	1,500.03	1,447.90	52.13	28.776			
7,400.00	7,390.94	7,414.94	7,396.94	26.38	27.03	-90.368	180.73	-1,495.00	1,500.03	1,447.20	52.83	28.392			
7,500.00	7,490.94	7,514.94	7,496.94	26.74	27.38	-90.368	180.73	-1,495.00	1,500.03	1,446.49	53.54	28.018			
7,600.00	7,590.94	7,614.94	7,596.94	27.10	27.72	-90.368	180.73	-1,495.00	1,500.03	1,445.79	54.24	27.654			
7,700.00	7,690.94	7,714.94	7,696.94	27.45	28.07	-90.368	180.73	-1,495.00	1,500.03	1,445.08	54.95	27.299			
7,800.00	7,790.94	7,814.94	7,796.94	27.81	28.41	-90.368	180.73	-1,495.00	1,500.03	1,444.38	55.66	26.952			
7,900.00	7,890.94	7,914.94	7,896.94	28.17	28.76	-90.368	180.73	-1,495.00	1,500.03	1,443.67	56.36	26.615			
8,000.00	7,990.94	8,014.94	7,996.94	28.52	29.10	-90.368	180.73	-1,495.00	1,500.03	1,442.96	57.07	26.285			
8,100.00	8,090.94	8,114.94	8,096.94	28.88	29.45	-90.368	180.73	-1,495.00	1,500.03	1,442.26	57.77	25.964			
8,200.00	8,190.94	8,214.94	8,196.94	29.23	29.79	-90.368	180.73	-1,495.00	1,500.03	1,441.55	58.48	25.650			
8,300.00	8,290.94	8,314.94	8,296.94	29.59	30.14	-90.368	180.73	-1,495.00	1,500.03	1,440.84	59.19	25.343			
8,400.00	8,390.94	8,414.94	8,396.94	29.95	30.49	-90.368	180.73	-1,495.00	1,500.03	1,440.13	59.90	25.044			
8,500.00	8,490.94	8,514.94	8,496.94	30.30	30.83	-90.368	180.73	-1,495.00	1,500.03	1,439.43	60.60	24.751			
8,600.00	8,590.94	8,614.94	8,596.94	30.66	31.18	-90.368	180.73	-1,495.00	1,500.03	1,438.72	61.31	24.466			
8,700.00	8,690.94	8,714.94	8,696.94	31.02	31.53	-90.368	180.73	-1,495.00	1,500.03	1,438.01	62.02	24.186			
8,800.00	8,790.94	8,814.94	8,796.94	31.37	31.88	-90.368	180.73	-1,495.00	1,500.03	1,437.30	62.73	23.913			
8,900.00	8,890.94	8,914.94	8,896.94	31.73	32.22	-90.368	180.73	-1,495.00	1,500.03	1,436.59	63.44	23.646			
9,000.00	8,990.94	9,014.94	8,996.94	32.09	32.57	-90.368	180.73	-1,495.00	1,500.03	1,435.89	64.15	23.385			
9,100.00	9,090.94	9,114.94	9,096.94	32.44	32.92	-90.368	180.73	-1,495.00	1,500.03	1,435.18	64.85	23.129			
9,200.00	9,190.94	9,214.94	9,196.94	32.80	33.27	-90.368	180.73	-1,495.00	1,500.03	1,434.47	65.56	22.879			
9,300.00	9,290.94	9,314.94	9,296.94	33.16	33.62	-90.368	180.73	-1,495.00	1,500.03	1,433.76	66.27	22.634			
9,400.00	9,390.94	9,414.94	9,396.94	33.51	33.97	-90.368	180.73	-1,495.00	1,500.03	1,433.05	66.98	22.395			
9,500.00	9,490.94	9,514.94	9,496.94	33.87	34.32	-90.368	180.73	-1,495.00	1,500.03	1,432.34	67.69	22.160			
9,600.00	9,590.94	9,614.94	9,596.94	34.23	34.66	-90.368	180.73	-1,495.00	1,500.03	1,431.63	68.40	21.930			
9,700.00	9,690.94	9,714.94	9,696.94	34.59	35.01	-90.368	180.73	-1,495.00	1,500.03	1,430.92	69.11	21.705			
9,800.00	9,790.94	9,814.94	9,796.94	34.94	35.36	-90.368	180.73	-1,495.00	1,500.03	1,430.21	69.82	21.484			
9,900.00	9,890.94	9,914.94	9,896.94	35.30	35.71	-90.368	180.73	-1,495.00	1,500.03	1,429.50	70.53	21.268			
10,000.00	9,990.94	10,014.94	9,996.94	35.66	36.06	-90.368	180.73	-1,495.00	1,500.03	1,428.79	71.24	21.056			

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 131H - Wellbore #1 - Design #2

Survey Program: 0-MWD				Rule Assigned:										Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation Factor				
10,100.00	10,090.94	10,114.94	10,096.94	36.01	36.41	-90.368	180.73	-1,495.00	1,500.03	1,428.08	71.95	20.848			
10,187.06	10,178.00	10,202.00	10,184.00	36.33	36.72	-90.368	180.73	-1,495.00	1,500.03	1,427.46	72.57	20.670			
10,200.00	10,190.94	10,214.94	10,196.94	36.37	36.76	-90.363	180.73	-1,495.00	1,500.01	1,427.35	72.66	20.644			
10,250.00	10,240.81	10,264.81	10,246.81	36.52	36.94	-90.237	180.73	-1,495.00	1,499.58	1,426.59	72.99	20.545			
10,300.00	10,290.21	10,314.21	10,296.21	36.67	37.11	-89.948	180.73	-1,495.00	1,498.61	1,425.30	73.31	20.441			
10,350.00	10,338.75	10,362.75	10,344.75	36.82	37.28	-89.495	180.73	-1,495.00	1,497.17	1,423.55	73.62	20.335			
10,400.00	10,386.07	10,410.07	10,392.07	36.95	37.45	-88.882	180.73	-1,495.00	1,495.38	1,421.46	73.92	20.229			
10,450.00	10,431.81	10,455.81	10,437.81	37.08	37.61	-88.113	180.73	-1,495.00	1,493.38	1,419.17	74.21	20.124			
10,500.00	10,475.61	10,499.61	10,481.61	37.21	37.76	-87.192	180.73	-1,495.00	1,491.34	1,416.86	74.48	20.024			
10,550.00	10,517.15	10,541.15	10,523.15	37.32	37.91	-86.126	180.73	-1,495.00	1,489.47	1,414.73	74.74	19.929			
10,600.00	10,556.11	10,580.11	10,562.11	37.44	38.04	-84.922	180.73	-1,495.00	1,487.98	1,413.00	74.98	19.844			
10,650.00	10,592.19	10,616.19	10,598.19	37.55	38.17	-83.590	180.73	-1,495.00	1,487.11	1,411.89	75.22	19.771			
10,677.73	10,610.85	10,634.85	10,616.85	37.62	38.24	-82.800	180.73	-1,495.00	1,486.96	1,411.62	75.34	19.736			
10,700.00	10,625.12	10,649.12	10,631.12	37.67	38.29	-82.141	180.73	-1,495.00	1,487.06	1,411.62	75.44	19.712			
10,750.00	10,654.64	10,678.64	10,660.64	37.78	38.39	-80.588	180.73	-1,495.00	1,488.07	1,412.42	75.65	19.671			
10,800.00	10,680.54	10,704.54	10,686.54	37.90	38.48	-78.945	180.73	-1,495.00	1,490.34	1,414.49	75.85	19.649			
10,850.00	10,702.61	10,726.61	10,708.61	38.02	38.56	-77.229	180.73	-1,495.00	1,494.02	1,417.98	76.04	19.648			
10,900.00	10,720.69	10,744.69	10,726.69	38.14	38.62	-75.456	180.73	-1,495.00	1,499.26	1,423.05	76.22	19.671			
10,950.00	10,734.64	10,758.64	10,740.64	38.27	38.67	-73.645	180.73	-1,495.00	1,506.15	1,429.77	76.38	19.718			
11,000.00	10,744.36	10,768.36	10,750.36	38.40	38.71	-71.814	180.73	-1,495.00	1,514.72	1,438.19	76.54	19.791			
11,050.00	10,749.76	10,773.76	10,755.76	38.53	38.72	-69.981	180.73	-1,495.00	1,524.97	1,448.30	76.68	19.889			
11,082.06	10,750.94	10,774.94	10,756.94	38.62	38.73	-68.813	180.73	-1,495.00	1,532.40	1,455.64	76.76	19.964			
11,100.00	10,751.09	10,775.09	10,757.09	38.67	38.73	-68.164	180.73	-1,495.00	1,536.89	1,460.09	76.80	20.011			
11,200.00	10,751.97	10,775.97	10,757.97	39.00	38.73	-64.648	180.73	-1,495.00	1,567.39	1,490.32	77.07	20.336			
11,300.00	10,752.84	10,776.84	10,758.84	39.39	38.74	-61.329	180.73	-1,495.00	1,606.75	1,529.38	77.38	20.765			
11,400.00	10,753.72	10,777.72	10,759.72	39.84	38.74	-58.237	180.73	-1,495.00	1,654.29	1,576.60	77.69	21.293			
11,461.17	10,754.26	10,778.26	10,760.26	40.15	38.74	-56.467	180.73	-1,495.00	1,687.08	1,609.19	77.89	21.661			
11,500.00	10,754.60	10,778.60	10,760.60	40.35	38.74	-55.386	180.73	-1,495.00	1,709.05	1,631.04	78.01	21.908			
11,600.00	10,755.47	10,779.47	10,761.47	40.92	38.74	-52.731	180.73	-1,495.00	1,768.30	1,689.98	78.33	22.576			
11,700.00	10,756.35	12,750.31	11,806.26	41.55	45.11	-90.029	-990.84	-1,589.67	1,829.60	1,754.22	75.38	24.273			
11,800.00	10,757.22	12,850.31	11,807.13	42.24	45.73	-90.029	-1,090.83	-1,589.01	1,829.60	1,753.13	76.47	23.925			
11,900.00	10,758.10	12,950.31	11,808.01	42.98	46.39	-90.029	-1,190.82	-1,588.35	1,829.61	1,751.95	77.66	23.559			
12,000.00	10,758.97	13,050.31	11,808.88	43.77	47.11	-90.029	-1,290.82	-1,587.70	1,829.62	1,750.68	78.93	23.179			
12,100.00	10,759.85	13,150.31	11,809.75	44.60	47.87	-90.029	-1,390.81	-1,587.04	1,829.62	1,749.33	80.29	22.788			
12,200.00	10,760.73	13,250.31	11,810.63	45.48	48.68	-90.029	-1,490.81	-1,586.38	1,829.63	1,747.91	81.72	22.388			
12,300.00	10,761.60	13,350.31	11,811.50	46.41	49.52	-90.029	-1,590.80	-1,585.72	1,829.64	1,746.41	83.23	21.983			
12,400.00	10,762.48	13,450.31	11,812.37	47.37	50.41	-90.029	-1,690.79	-1,585.07	1,829.64	1,744.84	84.80	21.575			
12,500.00	10,763.35	13,550.31	11,813.25	48.37	51.34	-90.029	-1,790.79	-1,584.41	1,829.65	1,743.20	86.45	21.165			
12,600.00	10,764.23	13,650.31	11,814.12	49.41	52.30	-90.029	-1,890.78	-1,583.75	1,829.66	1,741.51	88.15	20.756			
12,700.00	10,765.10	13,750.31	11,814.99	50.48	53.29	-90.029	-1,990.78	-1,583.09	1,829.66	1,739.75	89.91	20.349			
12,800.00	10,765.98	13,850.31	11,815.87	51.58	54.32	-90.029	-2,090.77	-1,582.44	1,829.67	1,737.94	91.73	19.946			
12,900.00	10,766.86	13,950.31	11,816.74	52.70	55.38	-90.029	-2,190.76	-1,581.78	1,829.68	1,736.07	93.60	19.547			
13,000.00	10,767.73	14,050.31	11,817.61	53.86	56.46	-90.029	-2,290.76	-1,581.12	1,829.68	1,734.16	95.52	19.155			
13,100.00	10,768.61	14,150.31	11,818.48	55.04	57.57	-90.029	-2,390.75	-1,580.46	1,829.69	1,732.20	97.49	18.769			
13,200.00	10,769.48	14,250.31	11,819.36	56.25	58.71	-90.029	-2,490.75	-1,579.81	1,829.70	1,730.20	99.50	18.390			
13,300.00	10,770.36	14,350.31	11,820.23	57.47	59.88	-90.029	-2,590.74	-1,579.15	1,829.70	1,728.16	101.55	18.019			
13,400.00	10,771.23	14,450.31	11,821.10	58.72	61.06	-90.029	-2,690.73	-1,578.49	1,829.71	1,726.07	103.63	17.656			
13,500.00	10,772.11	14,550.31	11,821.98	59.99	62.27	-90.029	-2,790.73	-1,577.83	1,829.71	1,723.96	105.76	17.301			
13,600.00	10,772.99	14,650.31	11,822.85	61.28	63.49	-90.029	-2,890.72	-1,577.18	1,829.72	1,721.80	107.92	16.955			
13,700.00	10,773.86	14,750.31	11,823.72	62.58	64.74	-90.029	-2,990.72	-1,576.52	1,829.73	1,719.62	110.11	16.618			
13,800.00	10,774.74	14,850.31	11,824.60	63.90	66.00	-90.029	-3,090.71	-1,575.86	1,829.73	1,717.41	112.33	16.289			
13,900.00	10,775.61	14,950.31	11,825.47	65.23	67.28	-90.029	-3,190.71	-1,575.20	1,829.74	1,715.16	114.58	15.970			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 131H - Wellbore #1 - Design #2

Survey Program: 0-MWD											Offset Site Error: 0.00 usft	
Reference											Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	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
14,000.00	10,776.49	15,050.31	11,826.34	66.58	68.58	-90.029	-3,290.70	-1,574.55	1,829.75	1,712.90	116.85	15.659
14,100.00	10,777.37	15,150.31	11,827.22	67.95	69.89	-90.029	-3,390.69	-1,573.89	1,829.75	1,710.60	119.15	15.356
14,200.00	10,778.24	15,250.31	11,828.09	69.32	71.22	-90.029	-3,490.69	-1,573.23	1,829.76	1,708.28	121.48	15.063
14,300.00	10,779.12	15,350.31	11,828.96	70.71	72.55	-90.029	-3,590.68	-1,572.57	1,829.77	1,705.94	123.82	14.777
14,400.00	10,779.99	15,450.31	11,829.84	72.11	73.91	-90.029	-3,690.68	-1,571.92	1,829.77	1,703.58	126.19	14.500
14,500.00	10,780.87	15,550.31	11,830.71	73.52	75.27	-90.029	-3,790.67	-1,571.26	1,829.78	1,701.20	128.58	14.230
14,600.00	10,781.74	15,650.31	11,831.58	74.94	76.65	-90.029	-3,890.66	-1,570.60	1,829.79	1,698.80	130.99	13.969
14,700.00	10,782.62	15,750.31	11,832.45	76.36	78.03	-90.029	-3,990.66	-1,569.94	1,829.79	1,696.38	133.41	13.715
14,800.00	10,783.50	15,850.31	11,833.33	77.80	79.43	-90.029	-4,090.65	-1,569.29	1,829.80	1,693.94	135.86	13.469
14,900.00	10,784.37	15,950.31	11,834.20	79.25	80.83	-90.029	-4,190.65	-1,568.63	1,829.81	1,691.49	138.32	13.229
15,000.00	10,785.25	16,050.31	11,835.07	80.70	82.25	-90.029	-4,290.64	-1,567.97	1,829.81	1,689.02	140.79	12.997
15,100.00	10,786.12	16,150.31	11,835.95	82.16	83.67	-90.029	-4,390.63	-1,567.31	1,829.82	1,686.54	143.28	12.771
15,200.00	10,787.00	16,250.31	11,836.82	83.63	85.11	-90.029	-4,490.63	-1,566.66	1,829.83	1,684.05	145.78	12.552
15,300.00	10,787.87	16,350.31	11,837.69	85.11	86.55	-90.029	-4,590.62	-1,566.00	1,829.83	1,681.54	148.29	12.339
15,400.00	10,788.75	16,450.31	11,838.57	86.59	87.99	-90.029	-4,690.62	-1,565.34	1,829.84	1,679.02	150.82	12.132
15,500.00	10,789.63	16,550.31	11,839.44	88.08	89.45	-90.029	-4,790.61	-1,564.68	1,829.85	1,676.49	153.36	11.932
15,600.00	10,790.50	16,650.31	11,840.31	89.57	90.91	-90.029	-4,890.60	-1,564.03	1,829.85	1,673.94	155.91	11.737
15,700.00	10,791.38	16,750.31	11,841.19	91.07	92.38	-90.029	-4,990.60	-1,563.37	1,829.86	1,671.39	158.47	11.547
15,800.00	10,792.25	16,850.31	11,842.06	92.58	93.85	-90.029	-5,090.59	-1,562.71	1,829.87	1,668.82	161.04	11.363
15,900.00	10,793.13	16,950.31	11,842.93	94.09	95.33	-90.029	-5,190.59	-1,562.05	1,829.87	1,666.25	163.62	11.183
16,000.00	10,794.00	17,050.31	11,843.81	95.60	96.82	-90.029	-5,290.58	-1,561.40	1,829.88	1,663.67	166.21	11.009
16,100.00	10,794.88	17,150.31	11,844.68	97.12	98.31	-90.029	-5,390.57	-1,560.74	1,829.88	1,661.07	168.81	10.840
16,200.00	10,795.76	17,250.31	11,845.55	98.64	99.81	-90.029	-5,490.57	-1,560.08	1,829.89	1,658.47	171.42	10.675
16,300.00	10,796.63	17,350.31	11,846.43	100.17	101.31	-90.029	-5,590.56	-1,559.42	1,829.90	1,655.86	174.03	10.515
16,400.00	10,797.51	17,450.31	11,847.30	101.70	102.81	-90.029	-5,690.56	-1,558.77	1,829.90	1,653.25	176.66	10.359
16,500.00	10,798.38	17,550.31	11,848.17	103.24	104.32	-90.029	-5,790.55	-1,558.11	1,829.91	1,650.62	179.29	10.207
16,600.00	10,799.26	17,650.31	11,849.04	104.78	105.84	-90.029	-5,890.54	-1,557.45	1,829.92	1,647.99	181.92	10.059
16,700.00	10,800.14	17,750.31	11,849.92	106.32	107.36	-90.029	-5,990.54	-1,556.79	1,829.92	1,645.36	184.57	9.915
16,800.00	10,801.01	17,850.31	11,850.79	107.86	108.88	-90.029	-6,090.53	-1,556.14	1,829.93	1,642.71	187.22	9.774
16,900.00	10,801.89	17,950.31	11,851.66	109.41	110.41	-90.029	-6,190.53	-1,555.48	1,829.94	1,640.06	189.87	9.638
17,000.00	10,802.76	18,050.31	11,852.54	110.97	111.94	-90.029	-6,290.52	-1,554.82	1,829.94	1,637.41	192.54	9.504
17,100.00	10,803.64	18,150.31	11,853.41	112.52	113.47	-90.029	-6,390.51	-1,554.16	1,829.95	1,634.75	195.20	9.375
17,200.00	10,804.51	18,250.31	11,854.28	114.08	115.01	-90.029	-6,490.51	-1,553.51	1,829.96	1,632.08	197.88	9.248
17,300.00	10,805.39	18,350.31	11,855.16	115.64	116.55	-90.029	-6,590.50	-1,552.85	1,829.96	1,629.41	200.55	9.125
17,400.00	10,806.27	18,450.31	11,856.03	117.20	118.09	-90.029	-6,690.50	-1,552.19	1,829.97	1,626.73	203.24	9.004
17,500.00	10,807.14	18,550.31	11,856.90	118.77	119.64	-90.029	-6,790.49	-1,551.53	1,829.98	1,624.05	205.93	8.887
17,600.00	10,808.02	18,650.31	11,857.78	120.33	121.19	-90.029	-6,890.48	-1,550.87	1,829.98	1,621.38	208.62	8.772
17,700.00	10,808.89	18,750.31	11,858.65	121.90	122.74	-90.029	-6,990.48	-1,550.22	1,829.99	1,618.67	211.32	8.660
17,800.00	10,809.77	18,850.31	11,859.52	123.48	124.29	-90.029	-7,090.47	-1,549.56	1,830.00	1,615.98	214.02	8.551
17,900.00	10,810.64	18,950.31	11,860.40	125.05	125.85	-90.029	-7,190.47	-1,548.90	1,830.00	1,613.28	216.72	8.444
18,000.00	10,811.52	19,050.31	11,861.27	126.63	127.41	-90.029	-7,290.46	-1,548.24	1,830.01	1,610.57	219.43	8.340
18,100.00	10,812.40	19,150.31	11,862.14	128.20	128.97	-90.029	-7,390.45	-1,547.59	1,830.02	1,607.87	222.15	8.238
18,200.00	10,813.27	19,250.31	11,863.02	129.78	130.53	-90.029	-7,490.45	-1,546.93	1,830.02	1,605.16	224.86	8.138
18,300.00	10,814.15	19,350.31	11,863.89	131.37	132.10	-90.029	-7,590.44	-1,546.27	1,830.03	1,602.44	227.59	8.041
18,400.00	10,815.02	19,450.31	11,864.76	132.95	133.67	-90.029	-7,690.44	-1,545.61	1,830.04	1,599.72	230.31	7.946
18,500.00	10,815.90	19,550.31	11,865.63	134.53	135.24	-90.029	-7,790.43	-1,544.96	1,830.04	1,597.00	233.04	7.853
18,600.00	10,816.77	19,650.31	11,866.51	136.12	136.81	-90.029	-7,890.42	-1,544.30	1,830.05	1,594.28	235.77	7.762
18,700.00	10,817.65	19,750.31	11,867.38	137.71	138.39	-90.029	-7,990.42	-1,543.64	1,830.05	1,591.55	238.50	7.673
18,800.00	10,818.53	19,850.31	11,868.25	139.30	139.96	-90.029	-8,090.41	-1,542.98	1,830.06	1,588.82	241.24	7.586
18,900.00	10,819.40	19,950.31	11,869.13	140.89	141.54	-90.029	-8,190.41	-1,542.33	1,830.07	1,586.09	243.98	7.501
19,000.00	10,820.28	20,050.31	11,870.00	142.49	143.12	-90.029	-8,290.40	-1,541.67	1,830.07	1,583.35	246.72	7.418
19,100.00	10,821.15	20,150.31	11,870.87	144.08	144.70	-90.029	-8,390.39	-1,541.01	1,830.08	1,580.61	249.47	7.336

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 131H - Wellbore #1 - Design #2

Survey Program: 0-MWD									Rule Assigned:		Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,200.00	10,822.03	20,250.31	11,871.75	145.68	146.28	-90.029	-8,490.39	-1,540.35	1,830.09	1,577.87	252.21	7.256	
19,300.00	10,822.90	20,350.31	11,872.62	147.27	147.87	-90.029	-8,590.38	-1,539.70	1,830.09	1,575.13	254.96	7.178	
19,400.00	10,823.78	20,450.31	11,873.49	148.87	149.45	-90.029	-8,690.38	-1,539.04	1,830.10	1,572.38	257.72	7.101	
19,500.00	10,824.66	20,550.31	11,874.37	150.47	151.04	-90.029	-8,790.37	-1,538.38	1,830.11	1,569.63	260.47	7.026	
19,600.00	10,825.53	20,650.31	11,875.24	152.07	152.63	-90.029	-8,890.36	-1,537.72	1,830.11	1,566.88	263.23	6.953	
19,700.00	10,826.41	20,750.31	11,876.11	153.67	154.22	-90.029	-8,990.36	-1,537.07	1,830.12	1,564.13	265.99	6.880	
19,800.00	10,827.28	20,850.31	11,876.99	155.27	155.81	-90.029	-9,090.35	-1,536.41	1,830.13	1,561.37	268.75	6.810	
19,900.00	10,828.16	20,950.31	11,877.86	156.88	157.40	-90.029	-9,190.35	-1,535.75	1,830.13	1,558.62	271.52	6.740	
20,000.00	10,829.04	21,050.31	11,878.73	158.48	159.00	-90.029	-9,290.34	-1,535.09	1,830.14	1,555.86	274.28	6.672	
20,100.00	10,829.91	21,150.31	11,879.60	160.09	160.59	-90.029	-9,390.33	-1,534.44	1,830.15	1,553.10	277.05	6.606	
20,200.00	10,830.79	21,250.31	11,880.48	161.70	162.19	-90.029	-9,490.33	-1,533.78	1,830.15	1,550.33	279.82	6.540	
20,300.00	10,831.66	21,350.31	11,881.35	163.30	163.79	-90.029	-9,590.32	-1,533.12	1,830.16	1,547.57	282.59	6.476	
20,400.00	10,832.54	21,450.31	11,882.22	164.91	165.38	-90.029	-9,690.32	-1,532.46	1,830.17	1,544.80	285.36	6.413	
20,500.00	10,833.41	21,550.31	11,883.10	166.52	166.98	-90.029	-9,790.31	-1,531.81	1,830.17	1,542.03	288.14	6.352	
20,600.00	10,834.29	21,650.31	11,883.97	168.13	168.59	-90.029	-9,890.30	-1,531.15	1,830.18	1,539.26	290.92	6.291	
20,700.00	10,835.17	21,750.31	11,884.84	169.74	170.19	-90.029	-9,990.30	-1,530.49	1,830.19	1,536.49	293.70	6.232	
20,800.00	10,836.04	21,850.31	11,885.72	171.36	171.79	-90.029	-10,090.29	-1,529.83	1,830.19	1,533.72	296.48	6.173	
20,900.00	10,836.92	21,950.31	11,886.59	172.97	173.39	-90.029	-10,190.29	-1,529.18	1,830.20	1,530.94	299.26	6.116	
20,972.39	10,837.55	22,022.70	11,887.22	174.00	174.55	-90.029	-10,262.67	-1,528.70	1,830.20	1,529.08	301.12	6.078 SF	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 201H - Wellbore #1 - Design #1

Survey Program: Reference		0-MWD		Semi Major Axis		Azimuth from North (")	Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	6.00	6.00	0.00	0.01	-90.304	-6.00	-1,130.00	1,130.02				
100.00	100.00	106.00	106.00	0.13	0.15	-90.304	-6.00	-1,130.00	1,130.02	1,129.74	0.28	4,067.501	
200.00	200.00	206.00	206.00	0.49	0.51	-90.304	-6.00	-1,130.00	1,130.02	1,129.02	0.99	1,135.970	
300.00	300.00	306.00	306.00	0.85	0.87	-90.304	-6.00	-1,130.00	1,130.02	1,128.30	1.71	660.171	
400.00	400.00	406.00	406.00	1.20	1.23	-90.304	-6.00	-1,130.00	1,130.02	1,127.59	2.43	465.287	
500.00	500.00	506.00	506.00	1.56	1.58	-90.304	-6.00	-1,130.00	1,130.02	1,126.87	3.15	359.238	
514.54	514.54	520.54	520.54	1.61	1.64	-90.304	-6.00	-1,130.00	1,130.02	1,126.77	3.25	347.716 CC	
600.00	600.00	605.73	605.73	1.92	1.94	-90.304	-6.00	-1,130.00	1,130.02	1,126.16	3.86	292.635	
700.00	700.00	700.00	699.99	2.28	2.28	-90.261	-5.15	-1,130.21	1,130.24	1,125.68	4.56	247.998	
800.00	800.00	796.59	796.55	2.64	2.63	-90.138	-2.73	-1,130.83	1,130.87	1,125.61	5.26	214.938	
900.00	899.99	891.91	891.79	3.00	2.97	-89.983	1.21	-1,131.83	1,131.94	1,125.98	5.96	189.883	
1,000.00	999.96	987.18	986.89	3.36	3.31	-89.839	6.68	-1,133.22	1,133.47	1,126.81	6.66	170.133	
1,100.00	1,099.86	1,082.40	1,081.83	3.71	3.66	-89.706	13.67	-1,134.99	1,135.47	1,128.10	7.37	154.144	
1,200.00	1,199.68	1,177.55	1,176.58	4.07	4.01	-89.585	22.19	-1,137.15	1,137.92	1,129.84	8.08	140.914	
1,300.00	1,299.37	1,272.65	1,271.10	4.44	4.36	-89.476	32.23	-1,139.70	1,140.83	1,132.04	8.79	129.763	
1,399.70	1,398.60	1,367.39	1,365.10	4.80	4.72	-89.379	43.74	-1,142.62	1,144.19	1,134.67	9.52	120.246	
1,400.00	1,398.90	1,367.68	1,365.39	4.80	4.72	-89.379	43.78	-1,142.63	1,144.20	1,134.68	9.52	120.220	
1,500.00	1,498.36	1,465.89	1,462.65	5.17	5.10	-89.245	56.94	-1,145.97	1,147.92	1,137.66	10.27	111.815	
1,600.00	1,597.81	1,565.78	1,561.57	5.55	5.50	-89.096	70.41	-1,149.38	1,151.68	1,140.65	11.03	104.423	
1,700.00	1,697.26	1,665.66	1,660.48	5.92	5.89	-88.949	83.89	-1,152.80	1,155.44	1,143.64	11.80	97.943	
1,800.00	1,796.71	1,765.55	1,759.39	6.30	6.29	-88.802	97.36	-1,156.22	1,159.21	1,146.64	12.57	92.223	
1,900.00	1,896.17	1,865.43	1,858.30	6.68	6.69	-88.657	110.84	-1,159.64	1,162.98	1,149.64	13.35	87.142	
2,000.00	1,995.62	1,965.31	1,957.21	7.06	7.09	-88.512	124.32	-1,163.06	1,166.77	1,152.64	14.13	82.603	
2,100.00	2,095.07	2,065.20	2,056.13	7.44	7.49	-88.368	137.79	-1,166.48	1,170.56	1,155.65	14.91	78.525	
2,200.00	2,194.53	2,167.46	2,157.41	7.83	7.91	-88.215	151.49	-1,169.95	1,174.33	1,158.63	15.70	74.799	
2,300.00	2,293.98	2,276.79	2,265.97	8.21	8.34	-88.121	163.97	-1,173.12	1,177.53	1,161.02	16.52	71.301	
2,400.00	2,393.43	2,386.13	2,374.87	8.59	8.76	-88.173	173.44	-1,175.52	1,179.94	1,162.62	17.32	68.135	
2,500.00	2,492.88	2,495.31	2,483.85	8.98	9.16	-88.370	179.87	-1,177.15	1,181.57	1,163.46	18.11	65.259	
2,600.00	2,592.34	2,604.16	2,592.63	9.36	9.55	-88.712	183.27	-1,178.01	1,182.44	1,163.56	18.88	62.635	
2,700.00	2,691.79	2,709.32	2,697.79	9.75	9.91	-89.190	183.87	-1,178.17	1,182.68	1,163.05	19.63	60.263	
2,722.26	2,713.93	2,731.46	2,719.93	9.84	9.98	-89.302	183.87	-1,178.17	1,182.71	1,162.92	19.79	59.772	
2,800.00	2,791.32	2,808.85	2,797.32	10.13	10.24	-89.658	183.87	-1,178.17	1,182.83	1,162.48	20.35	58.126	
2,900.00	2,891.06	2,908.59	2,897.06	10.51	10.59	-90.002	183.87	-1,178.17	1,183.00	1,161.93	21.06	56.160	
3,000.00	2,990.96	3,008.49	2,996.96	10.87	10.93	-90.220	183.87	-1,178.17	1,183.12	1,161.35	21.77	54.345	
3,100.00	3,090.94	3,108.47	3,096.94	11.22	11.27	-90.311	183.87	-1,178.17	1,183.18	1,160.72	22.47	52.664	
3,122.06	3,113.00	3,130.53	3,119.00	11.30	11.35	-90.315	183.87	-1,178.17	1,183.18	1,160.57	22.62	52.309	
3,200.00	3,190.94	3,208.47	3,196.94	11.57	11.61	-90.315	183.87	-1,178.17	1,183.18	1,160.03	23.16	51.095	
3,300.00	3,290.94	3,308.47	3,296.94	11.91	11.96	-90.315	183.87	-1,178.17	1,183.18	1,159.34	23.85	49.613	
3,400.00	3,390.94	3,408.47	3,396.94	12.26	12.31	-90.315	183.87	-1,178.17	1,183.18	1,158.64	24.54	48.213	
3,500.00	3,490.94	3,508.47	3,496.94	12.61	12.65	-90.315	183.87	-1,178.17	1,183.18	1,157.95	25.24	46.886	
3,600.00	3,590.94	3,608.47	3,596.94	12.95	13.00	-90.315	183.87	-1,178.17	1,183.18	1,157.25	25.93	45.629	
3,700.00	3,690.94	3,708.47	3,696.94	13.30	13.35	-90.315	183.87	-1,178.17	1,183.18	1,156.56	26.63	44.435	
3,800.00	3,790.94	3,808.47	3,796.94	13.65	13.70	-90.315	183.87	-1,178.17	1,183.18	1,155.86	27.32	43.301	
3,900.00	3,890.94	3,908.47	3,896.94	14.00	14.04	-90.315	183.87	-1,178.17	1,183.18	1,155.16	28.02	42.221	
4,000.00	3,990.94	4,008.47	3,996.94	14.35	14.39	-90.315	183.87	-1,178.17	1,183.18	1,154.46	28.72	41.193	
4,100.00	4,090.94	4,108.47	4,096.94	14.70	14.74	-90.315	183.87	-1,178.17	1,183.18	1,153.76	29.42	40.213	
4,200.00	4,190.94	4,208.47	4,196.94	15.05	15.09	-90.315	183.87	-1,178.17	1,183.18	1,153.06	30.12	39.277	
4,300.00	4,290.94	4,308.47	4,296.94	15.40	15.44	-90.315	183.87	-1,178.17	1,183.18	1,152.36	30.83	38.383	
4,400.00	4,390.94	4,408.47	4,396.94	15.75	15.80	-90.315	183.87	-1,178.17	1,183.18	1,151.66	31.53	37.527	
4,500.00	4,490.94	4,508.47	4,496.94	16.11	16.15	-90.315	183.87	-1,178.17	1,183.18	1,150.95	32.23	36.709	
4,600.00	4,590.94	4,608.47	4,596.94	16.46	16.50	-90.315	183.87	-1,178.17	1,183.18	1,150.25	32.94	35.924	
4,700.00	4,690.94	4,708.47	4,696.94	16.81	16.85	-90.315	183.87	-1,178.17	1,183.18	1,149.54	33.64	35.172	

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 201H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Warning	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Offset Site Error: 0.00 usft	Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
4,800.00	4,790.94	4,808.47	4,796.94	17.16	17.20	-90.315	183.87	-1,178.17	1,183.18	1,148.84	34.34	34.450			
4,900.00	4,890.94	4,908.47	4,896.94	17.52	17.55	-90.315	183.87	-1,178.17	1,183.18	1,148.13	35.05	33.757			
5,000.00	4,990.94	5,008.47	4,996.94	17.87	17.91	-90.315	183.87	-1,178.17	1,183.18	1,147.43	35.76	33.091			
5,100.00	5,090.94	5,108.47	5,096.94	18.22	18.26	-90.315	183.87	-1,178.17	1,183.18	1,146.72	36.46	32.450			
5,200.00	5,190.94	5,208.47	5,196.94	18.58	18.61	-90.315	183.87	-1,178.17	1,183.18	1,146.02	37.17	31.833			
5,300.00	5,290.94	5,308.47	5,296.94	18.93	18.97	-90.315	183.87	-1,178.17	1,183.18	1,145.31	37.88	31.239			
5,400.00	5,390.94	5,408.47	5,396.94	19.28	19.32	-90.315	183.87	-1,178.17	1,183.18	1,144.60	38.58	30.666			
5,500.00	5,490.94	5,508.47	5,496.94	19.64	19.67	-90.315	183.87	-1,178.17	1,183.18	1,143.89	39.29	30.113			
5,600.00	5,590.94	5,608.47	5,596.94	19.99	20.03	-90.315	183.87	-1,178.17	1,183.18	1,143.19	40.00	29.580			
5,700.00	5,690.94	5,708.47	5,696.94	20.34	20.38	-90.315	183.87	-1,178.17	1,183.18	1,142.48	40.71	29.066			
5,800.00	5,790.94	5,808.47	5,796.94	20.70	20.74	-90.315	183.87	-1,178.17	1,183.18	1,141.77	41.42	28.568			
5,900.00	5,890.94	5,908.47	5,896.94	21.05	21.09	-90.315	183.87	-1,178.17	1,183.18	1,141.06	42.12	28.088			
6,000.00	5,990.94	6,008.47	5,996.94	21.41	21.44	-90.315	183.87	-1,178.17	1,183.18	1,140.35	42.83	27.622			
6,100.00	6,090.94	6,108.47	6,096.94	21.76	21.80	-90.315	183.87	-1,178.17	1,183.18	1,139.64	43.54	27.172			
6,200.00	6,190.94	6,208.47	6,196.94	22.12	22.15	-90.315	183.87	-1,178.17	1,183.18	1,138.93	44.25	26.737			
6,300.00	6,290.94	6,308.47	6,296.94	22.47	22.51	-90.315	183.87	-1,178.17	1,183.18	1,138.22	44.96	26.314			
6,400.00	6,390.94	6,408.47	6,396.94	22.83	22.86	-90.315	183.87	-1,178.17	1,183.18	1,137.51	45.67	25.905			
6,500.00	6,490.94	6,508.47	6,496.94	23.18	23.22	-90.315	183.87	-1,178.17	1,183.18	1,136.80	46.38	25.509			
6,600.00	6,590.94	6,608.47	6,596.94	23.54	23.57	-90.315	183.87	-1,178.17	1,183.18	1,136.09	47.09	25.124			
6,700.00	6,690.94	6,708.47	6,696.94	23.89	23.93	-90.315	183.87	-1,178.17	1,183.18	1,135.38	47.81	24.750			
6,800.00	6,790.94	6,808.47	6,796.94	24.25	24.28	-90.315	183.87	-1,178.17	1,183.18	1,134.67	48.52	24.388			
6,900.00	6,890.94	6,908.47	6,896.94	24.61	24.64	-90.315	183.87	-1,178.17	1,183.18	1,133.96	49.23	24.035			
7,000.00	6,990.94	7,008.47	6,996.94	24.96	24.99	-90.315	183.87	-1,178.17	1,183.18	1,133.25	49.94	23.693			
7,100.00	7,090.94	7,108.47	7,096.94	25.32	25.35	-90.315	183.87	-1,178.17	1,183.18	1,132.53	50.65	23.360			
7,200.00	7,190.94	7,208.47	7,196.94	25.67	25.71	-90.315	183.87	-1,178.17	1,183.18	1,131.82	51.36	23.036			
7,300.00	7,290.94	7,308.47	7,296.94	26.03	26.06	-90.315	183.87	-1,178.17	1,183.18	1,131.11	52.07	22.722			
7,400.00	7,390.94	7,408.47	7,396.94	26.38	26.42	-90.315	183.87	-1,178.17	1,183.18	1,130.40	52.79	22.415			
7,500.00	7,490.94	7,508.47	7,496.94	26.74	26.77	-90.315	183.87	-1,178.17	1,183.18	1,129.69	53.50	22.117			
7,600.00	7,590.94	7,608.47	7,596.94	27.10	27.13	-90.315	183.87	-1,178.17	1,183.18	1,128.98	54.21	21.826			
7,700.00	7,690.94	7,708.47	7,696.94	27.45	27.49	-90.315	183.87	-1,178.17	1,183.18	1,128.26	54.92	21.543			
7,800.00	7,790.94	7,808.47	7,796.94	27.81	27.84	-90.315	183.87	-1,178.17	1,183.18	1,127.55	55.63	21.267			
7,900.00	7,890.94	7,908.47	7,896.94	28.17	28.20	-90.315	183.87	-1,178.17	1,183.18	1,126.84	56.35	20.998			
8,000.00	7,990.94	8,008.47	7,996.94	28.52	28.55	-90.315	183.87	-1,178.17	1,183.18	1,126.13	57.06	20.736			
8,100.00	8,090.94	8,108.47	8,096.94	28.88	28.91	-90.315	183.87	-1,178.17	1,183.18	1,125.41	57.77	20.480			
8,200.00	8,190.94	8,208.47	8,196.94	29.23	29.27	-90.315	183.87	-1,178.17	1,183.18	1,124.70	58.48	20.231			
8,300.00	8,290.94	8,308.47	8,296.94	29.59	29.62	-90.315	183.87	-1,178.17	1,183.18	1,123.99	59.20	19.987			
8,400.00	8,390.94	8,408.47	8,396.94	29.95	29.98	-90.315	183.87	-1,178.17	1,183.18	1,123.27	59.91	19.749			
8,500.00	8,490.94	8,508.47	8,496.94	30.30	30.34	-90.315	183.87	-1,178.17	1,183.18	1,122.56	60.62	19.517			
8,600.00	8,590.94	8,608.47	8,596.94	30.66	30.69	-90.315	183.87	-1,178.17	1,183.18	1,121.85	61.34	19.290			
8,700.00	8,690.94	8,708.47	8,696.94	31.02	31.05	-90.315	183.87	-1,178.17	1,183.18	1,121.13	62.05	19.068			
8,800.00	8,790.94	8,808.47	8,796.94	31.37	31.41	-90.315	183.87	-1,178.17	1,183.18	1,120.42	62.76	18.851			
8,900.00	8,890.94	8,908.47	8,896.94	31.73	31.76	-90.315	183.87	-1,178.17	1,183.18	1,119.71	63.48	18.640			
9,000.00	8,990.94	9,008.47	8,996.94	32.09	32.12	-90.315	183.87	-1,178.17	1,183.18	1,118.99	64.19	18.432			
9,100.00	9,090.94	9,108.47	9,096.94	32.44	32.48	-90.315	183.87	-1,178.17	1,183.18	1,118.28	64.90	18.230			
9,200.00	9,190.94	9,208.47	9,196.94	32.80	32.83	-90.315	183.87	-1,178.17	1,183.18	1,117.57	65.62	18.031			
9,300.00	9,290.94	9,308.47	9,296.94	33.16	33.19	-90.315	183.87	-1,178.17	1,183.18	1,116.85	66.33	17.837			
9,400.00	9,390.94	9,408.47	9,396.94	33.51	33.55	-90.315	183.87	-1,178.17	1,183.18	1,116.14	67.05	17.648			
9,500.00	9,490.94	9,508.47	9,496.94	33.87	33.90	-90.315	183.87	-1,178.17	1,183.18	1,115.43	67.76	17.462			
9,600.00	9,590.94	9,608.47	9,596.94	34.23	34.26	-90.315	183.87	-1,178.17	1,183.18	1,114.71	68.47	17.280			
9,700.00	9,690.94	9,708.47	9,696.94	34.59	34.62	-90.315	183.87	-1,178.17	1,183.18	1,114.00	69.19	17.101			
9,800.00	9,790.94	9,808.47	9,796.94	34.94	34.97	-90.315	183.87	-1,178.17	1,183.18	1,113.28	69.90	16.927			
9,900.00	9,890.94	9,908.47	9,896.94	35.30	35.33	-90.315	183.87	-1,178.17	1,183.18	1,112.57	70.62	16.755			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design:Rodney Robinson Federal (West) - Rodney Robinson Federal 201H - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD				Rule Assigned:									Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Azimuth	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		Separation (usft)	Factor	
10,000.00	9,990.94	10,008.47	9,996.94	35.66	35.69	-90.315	183.87	-1,178.17	1,183.18	1,111.86	71.33	16.588		
10,100.00	10,090.94	10,108.47	10,096.94	36.01	36.05	-90.315	183.87	-1,178.17	1,183.18	1,111.14	72.04	16.423		
10,187.06	10,178.00	10,195.53	10,184.00	36.33	36.36	-90.315	183.87	-1,178.17	1,183.18	1,110.52	72.67	16.283		
10,200.00	10,190.94	10,208.47	10,196.94	36.37	36.40	-90.308	183.87	-1,178.17	1,183.17	1,110.41	72.76	16.262		
10,250.00	10,240.81	10,258.34	10,246.81	36.52	36.58	-90.149	183.87	-1,178.17	1,182.74	1,109.65	73.09	16.182		
10,300.00	10,290.21	10,307.74	10,296.21	36.67	36.76	-89.781	183.87	-1,178.17	1,181.78	1,108.37	73.42	16.097		
10,350.00	10,338.75	10,356.28	10,344.75	36.82	36.93	-89.207	183.87	-1,178.17	1,180.40	1,106.67	73.73	16.010		
10,400.00	10,386.07	10,403.60	10,392.07	36.95	37.10	-88.429	183.87	-1,178.17	1,178.71	1,104.67	74.03	15.921		
10,450.00	10,431.81	10,449.33	10,437.81	37.08	37.26	-87.452	183.87	-1,178.17	1,176.90	1,102.58	74.32	15.835		
10,500.00	10,475.61	10,493.14	10,481.61	37.21	37.42	-86.282	183.87	-1,178.17	1,175.19	1,100.59	74.60	15.753		
10,550.00	10,517.15	10,534.68	10,523.15	37.32	37.57	-84.927	183.87	-1,178.17	1,173.83	1,098.96	74.87	15.679		
10,600.00	10,556.11	10,573.64	10,562.11	37.44	37.71	-83.399	183.87	-1,178.17	1,173.09	1,097.97	75.12	15.616		
10,618.25	10,569.62	10,587.15	10,575.62	37.48	37.76	-82.800	183.87	-1,178.17	1,173.02	1,097.81	75.21	15.597 ES		
10,650.00	10,592.19	10,609.72	10,598.19	37.55	37.84	-81.709	183.87	-1,178.17	1,173.24	1,097.87	75.36	15.568		
10,700.00	10,625.12	10,642.64	10,631.12	37.67	37.95	-79.875	183.87	-1,178.17	1,174.55	1,098.96	75.59	15.539		
10,750.00	10,654.64	10,672.17	10,660.64	37.78	38.06	-77.914	183.87	-1,178.17	1,177.30	1,101.50	75.81	15.531		
10,800.00	10,680.54	10,698.07	10,686.54	37.90	38.15	-75.848	183.87	-1,178.17	1,181.71	1,105.70	76.01	15.547		
10,850.00	10,702.61	10,720.14	10,708.61	38.02	38.23	-73.701	183.87	-1,178.17	1,187.97	1,111.77	76.20	15.590		
10,900.00	10,720.69	10,738.22	10,726.69	38.14	38.29	-71.497	183.87	-1,178.17	1,196.23	1,119.85	76.38	15.662		
10,950.00	10,734.64	10,752.17	10,740.64	38.27	38.34	-69.261	183.87	-1,178.17	1,206.55	1,130.01	76.54	15.763		
11,000.00	10,744.36	10,761.88	10,750.36	38.40	38.38	-67.020	183.87	-1,178.17	1,218.96	1,142.27	76.69	15.895		
11,050.00	10,749.76	10,767.29	10,755.76	38.53	38.40	-64.798	183.87	-1,178.17	1,233.40	1,156.59	76.82	16.056		
11,082.06	10,750.94	10,768.46	10,756.94	38.62	38.40	-63.394	183.87	-1,178.17	1,243.68	1,166.79	76.89	16.175		
11,100.00	10,751.09	10,768.62	10,757.09	38.67	38.40	-62.619	183.87	-1,178.17	1,249.81	1,172.88	76.93	16.246		
11,200.00	10,751.97	10,769.50	10,757.97	39.00	38.41	-58.484	183.87	-1,178.17	1,289.87	1,212.72	77.16	16.717		
11,300.00	10,752.84	10,770.37	10,758.84	39.39	38.41	-54.693	183.87	-1,178.17	1,339.25	1,261.85	77.40	17.303		
11,400.00	10,753.72	10,771.25	10,759.72	39.84	38.41	-51.270	183.87	-1,178.17	1,396.88	1,319.24	77.64	17.992		
11,461.17	10,754.26	10,771.78	10,760.26	40.15	38.41	-49.359	183.87	-1,178.17	1,435.75	1,357.97	77.78	18.459		
11,500.00	10,754.60	10,772.12	10,760.60	40.35	38.42	-48.211	183.87	-1,178.17	1,461.53	1,383.67	77.87	18.769		
11,600.00	10,755.47	10,773.00	10,761.47	40.92	38.42	-45.435	183.87	-1,178.17	1,530.46	1,452.38	78.08	19.600		
11,700.00	10,756.35	10,773.88	10,762.35	41.55	38.42	-42.904	183.87	-1,178.17	1,602.67	1,524.38	78.29	20.471		
11,800.00	10,757.22	10,774.75	10,763.22	42.24	38.43	-40.595	183.87	-1,178.17	1,677.73	1,599.25	78.48	21.378		
11,900.00	10,758.10	10,775.63	10,764.10	42.98	38.43	-38.487	183.87	-1,178.17	1,755.28	1,676.62	78.66	22.315		
12,000.00	10,758.97	10,776.50	10,764.97	43.77	38.43	-36.560	183.87	-1,178.17	1,835.00	1,756.18	78.82	23.280		
12,100.00	10,759.85	13,642.50	12,322.91	44.60	49.38	-89.661	-1,383.64	-1,167.74	1,896.84	1,827.75	69.10	27.453		
12,200.00	10,760.73	13,742.50	12,323.78	45.48	50.18	-89.661	-1,483.64	-1,167.08	1,896.84	1,826.64	70.20	27.020		
12,300.00	10,761.60	13,842.50	12,324.66	46.41	51.01	-89.661	-1,583.63	-1,166.41	1,896.84	1,825.48	71.36	26.580		
12,400.00	10,762.48	13,942.50	12,325.53	47.37	51.89	-89.661	-1,683.63	-1,165.75	1,896.84	1,824.26	72.58	26.135		
12,500.00	10,763.35	14,042.50	12,326.41	48.37	52.80	-89.661	-1,783.62	-1,165.08	1,896.84	1,823.00	73.85	25.687		
12,600.00	10,764.23	14,142.50	12,327.28	49.41	53.75	-89.661	-1,883.61	-1,164.42	1,896.84	1,821.68	75.16	25.237		
12,700.00	10,765.10	14,242.50	12,328.15	50.48	54.73	-89.661	-1,983.61	-1,163.75	1,896.84	1,820.32	76.52	24.789		
12,800.00	10,765.98	14,342.50	12,329.03	51.58	55.74	-89.661	-2,083.60	-1,163.09	1,896.84	1,818.92	77.92	24.342		
12,900.00	10,766.86	14,442.50	12,329.90	52.70	56.79	-89.661	-2,183.60	-1,162.42	1,896.84	1,817.47	79.37	23.899		
13,000.00	10,767.73	14,542.50	12,330.78	53.86	57.86	-89.661	-2,283.59	-1,161.76	1,896.84	1,815.99	80.85	23.461		
13,100.00	10,768.61	14,642.50	12,331.65	55.04	58.96	-89.661	-2,383.58	-1,161.09	1,896.84	1,814.47	82.37	23.028		
13,200.00	10,769.48	14,742.50	12,332.52	56.25	60.08	-89.661	-2,483.58	-1,160.43	1,896.84	1,812.91	83.93	22.601		
13,300.00	10,770.36	14,842.50	12,333.40	57.47	61.23	-89.661	-2,583.57	-1,159.76	1,896.84	1,811.32	85.52	22.181		
13,400.00	10,771.23	14,942.50	12,334.27	58.72	62.40	-89.661	-2,683.57	-1,159.10	1,896.84	1,809.70	87.13	21.769		
13,500.00	10,772.11	15,042.50	12,335.14	59.99	63.59	-89.661	-2,783.56	-1,158.43	1,896.84	1,808.06	88.78	21.365		
13,600.00	10,772.99	15,142.50	12,336.02	61.28	64.81	-89.661	-2,883.55	-1,157.77	1,896.84	1,806.38	90.46	20.969		
13,700.00	10,773.86	15,242.50	12,336.89	62.58	66.04	-89.661	-2,983.55	-1,157.10	1,896.84	1,804.68	92.16	20.582		
13,800.00	10,774.74	15,342.50	12,337.77	63.90	67.29	-89.661	-3,083.54	-1,156.44	1,896.84	1,802.95	93.89	20.203		

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 201H - Wellbore #1 - Design #1

Survey Program				0-MWD						Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)					
13,900.00	10,775.61	15,442.50	12,338.64	65.23	68.56	-89.661	-3,183.54	-1,155.77	1,896.84	1,801.20	95.64	19.834				
14,000.00	10,776.49	15,542.50	12,339.51	66.58	69.84	-89.661	-3,283.53	-1,155.11	1,896.84	1,799.43	97.41	19.473				
14,100.00	10,777.37	15,642.50	12,340.39	67.95	71.14	-89.661	-3,383.52	-1,154.44	1,896.84	1,797.63	99.20	19.121				
14,200.00	10,778.24	15,742.50	12,341.26	69.32	72.45	-89.661	-3,483.52	-1,153.78	1,896.84	1,795.82	101.02	18.777				
14,300.00	10,779.12	15,842.50	12,342.14	70.71	73.78	-89.661	-3,583.51	-1,153.11	1,896.84	1,793.99	102.85	18.443				
14,400.00	10,779.99	15,942.50	12,343.01	72.11	75.12	-89.661	-3,683.51	-1,152.45	1,896.84	1,792.14	104.70	18.117				
14,500.00	10,780.87	16,042.50	12,343.88	73.52	76.47	-89.661	-3,783.50	-1,151.78	1,896.84	1,790.27	106.57	17.800				
14,600.00	10,781.74	16,142.50	12,344.76	74.94	77.83	-89.661	-3,883.49	-1,151.12	1,896.84	1,788.39	108.45	17.490				
14,700.00	10,782.62	16,242.50	12,345.63	76.36	79.21	-89.661	-3,983.49	-1,150.45	1,896.84	1,786.49	110.35	17.190				
14,800.00	10,783.50	16,342.50	12,346.51	77.80	80.59	-89.661	-4,083.48	-1,149.79	1,896.84	1,784.57	112.26	16.897				
14,900.00	10,784.37	16,442.50	12,347.38	79.25	81.99	-89.661	-4,183.48	-1,149.12	1,896.83	1,782.65	114.19	16.612				
15,000.00	10,785.25	16,542.50	12,348.25	80.70	83.39	-89.661	-4,283.47	-1,148.46	1,896.83	1,780.71	116.13	16.334				
15,100.00	10,786.12	16,642.50	12,349.13	82.16	84.81	-89.661	-4,383.46	-1,147.79	1,896.83	1,778.76	118.08	16.064				
15,200.00	10,787.00	16,742.50	12,350.00	83.63	86.23	-89.661	-4,483.46	-1,147.13	1,896.83	1,776.79	120.04	15.801				
15,300.00	10,787.87	16,842.50	12,350.87	85.11	87.66	-89.661	-4,583.45	-1,146.46	1,896.83	1,774.82	122.02	15.545				
15,400.00	10,788.75	16,942.50	12,351.75	86.59	89.10	-89.661	-4,683.45	-1,145.80	1,896.83	1,772.83	124.00	15.297				
15,500.00	10,789.63	17,042.50	12,352.62	88.08	90.54	-89.661	-4,783.44	-1,145.13	1,896.83	1,770.83	126.00	15.054				
15,600.00	10,790.50	17,142.50	12,353.50	89.57	92.00	-89.661	-4,883.43	-1,144.47	1,896.83	1,768.83	128.01	14.818				
15,700.00	10,791.38	17,242.50	12,354.37	91.07	93.46	-89.661	-4,983.43	-1,143.80	1,896.83	1,766.81	130.02	14.589				
15,800.00	10,792.25	17,342.50	12,355.24	92.58	94.92	-89.661	-5,083.42	-1,143.14	1,896.83	1,764.79	132.05	14.365				
15,900.00	10,793.13	17,442.50	12,356.12	94.09	96.39	-89.661	-5,183.42	-1,142.47	1,896.83	1,762.75	134.08	14.147				
16,000.00	10,794.00	17,542.50	12,356.99	95.60	97.87	-89.661	-5,283.41	-1,141.81	1,896.83	1,760.71	136.12	13.935				
16,100.00	10,794.88	17,642.50	12,357.87	97.12	99.35	-89.661	-5,383.40	-1,141.14	1,896.83	1,758.67	138.17	13.729				
16,200.00	10,795.76	17,742.50	12,358.74	98.64	100.84	-89.661	-5,483.40	-1,140.48	1,896.83	1,756.61	140.22	13.527				
16,300.00	10,796.63	17,842.50	12,359.61	100.17	102.34	-89.661	-5,583.39	-1,139.81	1,896.83	1,754.55	142.29	13.331				
16,400.00	10,797.51	17,942.50	12,360.49	101.70	103.83	-89.661	-5,683.39	-1,139.15	1,896.83	1,752.48	144.35	13.140				
16,500.00	10,798.38	18,042.50	12,361.36	103.24	105.34	-89.661	-5,783.38	-1,138.48	1,896.83	1,750.40	146.43	12.954				
16,600.00	10,799.26	18,142.50	12,362.24	104.78	106.85	-89.661	-5,883.37	-1,137.82	1,896.83	1,748.32	148.51	12.772				
16,700.00	10,800.14	18,242.50	12,363.11	106.32	108.36	-89.661	-5,983.37	-1,137.15	1,896.83	1,746.23	150.60	12.595				
16,800.00	10,801.01	18,342.50	12,363.98	107.86	109.87	-89.661	-6,083.36	-1,136.49	1,896.83	1,744.14	152.69	12.422				
16,900.00	10,801.89	18,442.50	12,364.86	109.41	111.39	-89.661	-6,183.35	-1,135.82	1,896.83	1,742.04	154.79	12.254				
17,000.00	10,802.76	18,542.50	12,365.73	110.97	112.92	-89.661	-6,283.35	-1,135.16	1,896.83	1,739.93	156.90	12.090				
17,100.00	10,803.64	18,642.50	12,366.60	112.52	114.44	-89.661	-6,383.34	-1,134.49	1,896.83	1,737.82	159.01	11.929				
17,200.00	10,804.51	18,742.50	12,367.48	114.08	115.97	-89.661	-6,483.34	-1,133.82	1,896.83	1,735.71	161.12	11.773				
17,300.00	10,805.39	18,842.50	12,368.35	115.64	117.51	-89.661	-6,583.33	-1,133.16	1,896.83	1,733.59	163.24	11.620				
17,400.00	10,806.27	18,942.50	12,369.23	117.20	119.04	-89.661	-6,683.32	-1,132.49	1,896.83	1,731.46	165.37	11.470				
17,500.00	10,807.14	19,042.50	12,370.10	118.77	120.59	-89.661	-6,783.32	-1,131.83	1,896.83	1,729.33	167.49	11.325				
17,600.00	10,808.02	19,142.50	12,370.97	120.33	122.13	-89.661	-6,883.31	-1,131.16	1,896.83	1,727.20	169.63	11.182				
17,700.00	10,808.89	19,242.50	12,371.85	121.90	123.67	-89.661	-6,983.31	-1,130.50	1,896.83	1,725.07	171.76	11.043				
17,800.00	10,809.77	19,342.50	12,372.72	123.48	125.22	-89.661	-7,083.30	-1,129.83	1,896.83	1,722.93	173.90	10.907				
17,900.00	10,810.64	19,442.50	12,373.60	125.05	126.77	-89.661	-7,183.29	-1,129.17	1,896.83	1,720.78	176.05	10.775				
18,000.00	10,811.52	19,542.50	12,374.47	126.63	128.33	-89.661	-7,283.29	-1,128.50	1,896.83	1,718.63	178.19	10.645				
18,100.00	10,812.40	19,642.50	12,375.34	128.20	129.89	-89.661	-7,383.28	-1,127.84	1,896.83	1,716.48	180.34	10.518				
18,200.00	10,813.27	19,742.50	12,376.22	129.78	131.44	-89.661	-7,483.28	-1,127.17	1,896.83	1,714.33	182.50	10.394				
18,300.00	10,814.15	19,842.50	12,377.09	131.37	133.01	-89.661	-7,583.27	-1,126.51	1,896.83	1,712.17	184.66	10.272				
18,400.00	10,815.02	19,942.50	12,377.97	132.95	134.57	-89.661	-7,683.26	-1,125.84	1,896.83	1,710.01	186.82	10.153				
18,500.00	10,815.90	20,042.50	12,378.84	134.53	136.13	-89.661	-7,783.26	-1,125.18	1,896.83	1,707.85	188.98	10.037				
18,600.00	10,816.77	20,142.50	12,379.71	136.12	137.70	-89.661	-7,883.25	-1,124.51	1,896.83	1,705.68	191.15	9.923				
18,700.00	10,817.65	20,242.50	12,380.59	137.71	139.27	-89.661	-7,983.25	-1,123.85	1,896.83	1,703.51	193.32	9.812				
18,800.00	10,818.53	20,342.50	12,381.46	139.30	140.84	-89.661	-8,083.24	-1,123.18	1,896.83	1,701.34	195.49	9.703				
18,900.00	10,819.40	20,442.50	12,382.33	140.89	142.42	-89.661	-8,183.23	-1,122.52	1,896.83	1,699.16	197.66	9.596				
19,000.00	10,820.28	20,542.50	12,383.21	142.49	143.99	-89.661	-8,283.23	-1,121.85	1,896.83	1,696.99	199.84	9.492				

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 201H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error:
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						0.00 usft
19,100.00	10,821.15	20,642.50	12,384.08	144.08	145.57	-89.661	-8,383.22	-1,121.19	1,896.82	1,694.81	202.02	9.389		
19,200.00	10,822.03	20,742.50	12,384.96	145.68	147.15	-89.662	-8,483.22	-1,120.52	1,896.82	1,692.62	204.20	9.289		
19,300.00	10,822.90	20,842.50	12,385.83	147.27	148.73	-89.662	-8,583.21	-1,119.86	1,896.82	1,690.44	206.38	9.191		
19,400.00	10,823.78	20,942.50	12,386.70	148.87	150.31	-89.662	-8,683.20	-1,119.19	1,896.82	1,688.25	208.57	9.094		
19,500.00	10,824.66	21,042.50	12,387.58	150.47	151.89	-89.662	-8,783.20	-1,118.53	1,896.82	1,686.06	210.76	9.000		
19,600.00	10,825.53	21,142.50	12,388.45	152.07	153.48	-89.662	-8,883.19	-1,117.86	1,896.82	1,683.87	212.95	8.907		
19,700.00	10,826.41	21,242.50	12,389.33	153.67	155.06	-89.662	-8,983.19	-1,117.20	1,896.82	1,681.68	215.14	8.817		
19,800.00	10,827.28	21,342.50	12,390.20	155.27	156.65	-89.662	-9,083.18	-1,116.53	1,896.82	1,679.49	217.34	8.728		
19,900.00	10,828.16	21,442.50	12,391.07	156.88	158.24	-89.662	-9,183.17	-1,115.87	1,896.82	1,677.29	219.53	8.640		
20,000.00	10,829.04	21,542.50	12,391.95	158.48	159.83	-89.662	-9,283.17	-1,115.20	1,896.82	1,675.09	221.73	8.555		
20,100.00	10,829.91	21,642.50	12,392.82	160.09	161.42	-89.662	-9,383.16	-1,114.54	1,896.82	1,672.89	223.93	8.470		
20,200.00	10,830.79	21,742.50	12,393.70	161.70	163.02	-89.662	-9,483.16	-1,113.87	1,896.82	1,670.69	226.14	8.388		
20,300.00	10,831.66	21,842.50	12,394.57	163.30	164.61	-89.662	-9,583.15	-1,113.21	1,896.82	1,668.48	228.34	8.307		
20,400.00	10,832.54	21,942.50	12,395.44	164.91	166.21	-89.662	-9,683.14	-1,112.54	1,896.82	1,666.28	230.54	8.228		
20,500.00	10,833.41	22,042.50	12,396.32	166.52	167.80	-89.662	-9,783.14	-1,111.88	1,896.82	1,664.07	232.75	8.150		
20,600.00	10,834.29	22,142.50	12,397.19	168.13	169.40	-89.662	-9,883.13	-1,111.21	1,896.82	1,661.86	234.96	8.073		
20,700.00	10,835.17	22,242.50	12,398.07	169.74	171.00	-89.662	-9,983.13	-1,110.55	1,896.82	1,659.65	237.17	7.998		
20,800.00	10,836.04	22,342.50	12,398.94	171.36	172.60	-89.662	-10,083.12	-1,109.88	1,896.82	1,657.44	239.38	7.924		
20,900.00	10,836.92	22,442.50	12,399.81	172.97	174.20	-89.662	-10,183.11	-1,109.22	1,896.82	1,655.23	241.59	7.851		
20,972.39	10,837.55	22,514.89	12,400.45	174.00	175.36	-89.662	-10,255.50	-1,108.74	1,896.82	1,653.81	243.01	7.806 SF		



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 215H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	7.00	7.00	0.00	0.01	-90.300	-6.38	-1,220.48	1,220.49					
100.00	100.00	107.00	107.00	0.13	0.15	-90.300	-6.38	-1,220.48	1,220.49	1,220.21	0.28	4,337.206		
200.00	200.00	207.00	207.00	0.49	0.51	-90.300	-6.38	-1,220.48	1,220.49	1,219.49	1.00	1,222.517		
300.00	300.00	307.00	307.00	0.85	0.87	-90.300	-6.38	-1,220.48	1,220.49	1,218.78	1.72	711.538		
400.00	400.00	407.00	407.00	1.20	1.23	-90.300	-6.38	-1,220.48	1,220.49	1,218.06	2.43	501.800		
500.00	500.00	507.00	507.00	1.56	1.59	-90.300	-6.38	-1,220.48	1,220.49	1,217.34	3.15	387.560		
600.00	600.00	607.83	607.83	1.92	1.95	-90.300	-6.39	-1,220.47	1,220.49	1,216.62	3.87	315.550		
700.00	700.00	719.61	719.60	2.28	2.33	-90.350	-7.46	-1,219.85	1,219.94	1,215.33	4.61	264.797		
800.00	800.00	831.30	831.24	2.64	2.70	-90.490	-10.42	-1,218.14	1,218.43	1,213.09	5.34	228.199		
900.00	899.99	942.76	942.56	3.00	3.09	-90.760	-15.26	-1,215.35	1,216.00	1,209.92	6.08	200.042		
1,000.00	999.96	1,043.79	1,043.37	3.36	3.44	-91.156	-20.97	-1,212.05	1,212.94	1,206.15	6.79	178.669		
1,100.00	1,099.86	1,134.17	1,133.62	3.71	3.76	-91.566	-25.22	-1,209.60	1,210.55	1,203.09	7.47	162.141		
1,200.00	1,199.68	1,224.67	1,224.05	4.07	4.08	-92.000	-28.23	-1,207.86	1,209.09	1,200.94	8.15	148.431		
1,300.00	1,299.37	1,315.28	1,314.63	4.44	4.40	-92.457	-30.01	-1,206.83	1,208.54	1,199.72	8.83	136.901		
1,308.48	1,307.81	1,322.96	1,322.31	4.47	4.42	-92.497	-30.11	-1,206.78	1,208.54	1,199.65	8.89	136.008		
1,399.70	1,398.60	1,406.25	1,405.60	4.80	4.72	-92.935	-30.55	-1,206.52	1,208.93	1,199.42	9.51	127.103		
1,400.00	1,398.90	1,406.55	1,405.90	4.80	4.72	-92.936	-30.55	-1,206.52	1,208.93	1,199.42	9.51	127.075		
1,500.00	1,498.36	1,506.01	1,505.36	5.17	5.06	-93.430	-30.55	-1,206.52	1,208.78	1,199.55	10.23	118.253		
1,600.00	1,597.81	1,605.46	1,604.81	5.55	5.41	-93.922	-30.55	-1,206.52	1,210.73	1,199.78	10.95	110.554		
1,700.00	1,697.26	1,704.91	1,704.26	5.92	5.76	-94.414	-30.55	-1,206.52	1,211.76	1,200.08	11.68	103.783		
1,800.00	1,796.71	1,804.36	1,803.71	6.30	6.11	-94.905	-30.55	-1,206.52	1,212.88	1,200.48	12.40	97.789		
1,900.00	1,896.17	1,903.82	1,903.17	6.68	6.46	-95.395	-30.55	-1,206.52	1,214.09	1,200.96	13.13	92.450		
2,000.00	1,995.62	2,003.27	2,002.62	7.06	6.81	-95.884	-30.55	-1,206.52	1,215.39	1,201.53	13.86	87.668		
2,100.00	2,095.07	2,102.72	2,102.07	7.44	7.16	-96.372	-30.55	-1,206.52	1,216.78	1,202.18	14.60	83.362		
2,200.00	2,194.53	2,202.18	2,201.53	7.83	7.51	-96.859	-30.55	-1,206.52	1,218.25	1,202.92	15.33	79.466		
2,300.00	2,293.98	2,301.63	2,300.98	8.21	7.86	-97.344	-30.55	-1,206.52	1,219.82	1,203.75	16.07	75.927		
2,400.00	2,393.43	2,401.08	2,400.43	8.59	8.22	-97.828	-30.55	-1,206.52	1,221.47	1,204.67	16.80	72.698		
2,500.00	2,492.88	2,500.66	2,500.01	8.98	8.57	-98.311	-30.55	-1,206.52	1,223.21	1,205.67	17.54	69.741		
2,600.00	2,592.34	2,624.25	2,623.59	9.36	9.01	-98.767	-29.83	-1,205.39	1,224.04	1,205.68	18.36	66.668		
2,700.00	2,691.79	2,748.03	2,747.30	9.75	9.45	-99.172	-27.65	-1,202.00	1,222.98	1,203.81	19.18	63.779		
2,722.26	2,713.93	2,775.61	2,774.85	9.84	9.54	-99.256	-26.97	-1,200.94	1,222.49	1,203.13	19.36	63.158		
2,800.00	2,791.32	2,871.96	2,871.05	10.13	9.89	-99.493	-24.02	-1,196.37	1,219.86	1,199.88	19.98	61.049		
2,900.00	2,891.06	2,995.94	2,994.67	10.51	10.33	-99.648	-18.95	-1,188.48	1,214.28	1,193.51	20.77	58.461		
3,000.00	2,990.86	3,115.88	3,114.05	10.87	10.76	-99.642	-12.68	-1,178.72	1,206.23	1,184.70	21.53	56.017		
3,100.00	3,090.94	3,215.42	3,213.04	11.22	11.12	-99.535	-7.05	-1,169.97	1,196.98	1,174.74	22.24	53.827		
3,122.06	3,113.00	3,237.37	3,234.87	11.30	11.20	-99.494	-5.80	-1,168.04	1,194.87	1,172.48	22.39	53.363		
3,200.00	3,190.94	3,314.88	3,311.96	11.57	11.48	-99.339	-1.42	-1,161.23	1,187.38	1,164.44	22.94	51.770		
3,300.00	3,290.94	3,414.33	3,410.86	11.91	11.84	-99.137	4.21	-1,152.48	1,177.78	1,154.15	23.63	49.833		
3,400.00	3,390.94	3,513.78	3,509.77	12.26	12.21	-98.932	9.83	-1,143.74	1,168.20	1,143.87	24.34	48.004		
3,500.00	3,490.94	3,613.23	3,608.68	12.61	12.58	-98.723	15.46	-1,134.99	1,158.64	1,133.60	25.04	46.276		
3,600.00	3,590.94	3,712.69	3,707.58	12.95	12.94	-98.511	21.08	-1,126.25	1,149.09	1,123.35	25.74	44.640		
3,700.00	3,690.94	3,812.14	3,806.49	13.30	13.31	-98.295	26.71	-1,117.50	1,139.55	1,113.11	26.45	43.090		
3,800.00	3,790.94	3,911.59	3,905.40	13.65	13.68	-98.076	32.33	-1,108.76	1,130.04	1,102.88	27.15	41.619		
3,900.00	3,890.94	4,011.04	4,004.30	14.00	14.06	-97.853	37.96	-1,100.01	1,120.54	1,092.68	27.86	40.222		
4,000.00	3,990.94	4,110.49	4,103.21	14.35	14.43	-97.626	43.58	-1,091.27	1,111.05	1,082.49	28.57	38.893		
4,100.00	4,090.94	4,209.95	4,202.12	14.70	14.80	-97.396	49.21	-1,082.53	1,101.59	1,072.31	29.28	37.628		
4,200.00	4,190.94	4,309.40	4,301.02	15.05	15.18	-97.161	54.83	-1,073.78	1,092.14	1,062.15	29.99	36.422		
4,300.00	4,290.94	4,408.85	4,399.93	15.40	15.55	-96.922	60.46	-1,065.04	1,082.71	1,052.01	30.70	35.272		
4,400.00	4,390.94	4,508.30	4,498.84	15.75	15.93	-96.679	66.08	-1,056.29	1,073.30	1,041.89	31.41	34.173		
4,500.00	4,490.94	4,607.75	4,597.75	16.11	16.31	-96.432	71.71	-1,047.55	1,063.91	1,031.79	32.12	33.123		
4,600.00	4,590.94	4,707.21	4,696.65	16.46	16.68	-96.181	77.33	-1,038.80	1,054.54	1,021.70	32.83	32.118		
4,700.00	4,690.94	4,806.66	4,795.56	16.81	17.06	-95.925	82.96	-1,030.06	1,045.18	1,011.64	33.55	31.156		

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 215H - Wellbore #1 - Design #1

Survey Program: 0-MWD												Offset Site Error: 0.00 usft	
Rule Assigned: Distance												Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Azimuth from North (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.00	4,790.94	4,906.11	4,894.47	17.16	17.44	-95.664	88.58	-1,021.31	1,035.86	1,001.59	34.26	30.234	
4,900.00	4,890.94	5,005.56	4,993.37	17.52	17.82	-95.399	94.21	-1,012.57	1,026.55	991.57	34.98	29.350	
5,000.00	4,890.94	5,105.01	5,092.28	17.87	18.20	-95.128	99.83	-1,003.82	1,017.26	981.57	35.69	28.501	
5,100.00	5,090.94	5,204.47	5,191.19	18.22	18.58	-94.853	105.46	-995.08	1,008.00	971.59	36.41	27.686	
5,200.00	5,190.94	5,303.92	5,290.09	18.58	18.96	-94.573	111.08	-986.33	998.76	961.64	37.13	26.903	
5,300.00	5,290.94	5,403.37	5,389.00	18.93	19.34	-94.287	116.71	-977.59	989.55	951.70	37.84	26.149	
5,400.00	5,390.94	5,502.82	5,487.91	19.28	19.72	-93.996	122.33	-968.84	980.36	941.79	38.56	25.424	
5,500.00	5,490.94	5,602.27	5,586.82	19.64	20.11	-93.700	127.96	-960.10	971.19	931.91	39.28	24.725	
5,600.00	5,590.94	5,701.73	5,685.72	19.99	20.49	-93.398	133.58	-951.36	962.05	922.05	40.00	24.052	
5,700.00	5,690.94	5,801.18	5,784.63	20.34	20.87	-93.090	139.21	-942.61	952.94	912.22	40.72	23.403	
5,800.00	5,790.94	5,900.63	5,883.54	20.70	21.25	-92.777	144.83	-933.87	943.86	902.42	41.44	22.777	
5,900.00	5,890.94	6,000.08	5,982.44	21.05	21.64	-92.457	150.46	-925.12	934.80	892.64	42.16	22.172	
6,000.00	5,990.94	6,099.53	6,081.35	21.41	22.02	-92.131	156.08	-916.38	925.78	882.90	42.88	21.589	
6,100.00	6,090.94	6,198.99	6,180.26	21.76	22.40	-91.799	161.71	-907.63	916.79	873.18	43.60	21.025	
6,200.00	6,190.94	6,298.44	6,279.16	22.12	22.79	-91.460	167.33	-898.89	907.82	863.49	44.33	20.480	
6,300.00	6,290.94	6,397.89	6,378.07	22.47	23.17	-91.114	172.96	-890.14	898.89	853.84	45.05	19.953	
6,400.00	6,390.94	6,496.66	6,464.41	22.83	23.50	-90.825	177.58	-882.96	890.54	844.78	45.76	19.463	
6,500.00	6,490.94	6,595.95	6,547.46	23.18	23.82	-90.605	181.05	-877.57	884.01	837.56	46.44	19.034	
6,600.00	6,590.94	6,695.48	6,630.86	23.54	24.12	-90.445	183.54	-873.69	879.34	832.22	47.12	18.663	
6,700.00	6,690.94	6,795.17	6,714.50	23.89	24.42	-90.348	185.05	-871.35	876.52	828.75	47.77	18.348	
6,800.00	6,790.94	6,894.95	6,798.27	24.25	24.72	-90.314	185.57	-870.54	875.55	827.14	48.41	18.085	
6,834.04	6,824.97	6,852.65	6,831.97	24.37	24.83	-90.314	185.57	-870.54	875.55	826.90	48.65	17.996	
6,900.00	6,890.94	6,918.61	6,897.94	24.61	25.06	-90.314	185.57	-870.54	875.55	826.44	49.12	17.826	
7,000.00	6,890.94	7,018.61	6,997.94	24.96	25.40	-90.314	185.57	-870.54	875.55	825.74	49.82	17.575	
7,100.00	7,090.94	7,118.61	7,097.94	25.32	25.74	-90.314	185.57	-870.54	875.55	825.03	50.52	17.330	
7,200.00	7,190.94	7,218.61	7,197.94	25.67	26.09	-90.314	185.57	-870.54	875.55	824.33	51.23	17.091	
7,300.00	7,290.94	7,318.61	7,297.94	26.03	26.43	-90.314	185.57	-870.54	875.55	823.62	51.93	16.859	
7,400.00	7,390.94	7,418.61	7,397.94	26.38	26.78	-90.314	185.57	-870.54	875.55	822.92	52.64	16.633	
7,500.00	7,490.94	7,518.61	7,497.94	26.74	27.12	-90.314	185.57	-870.54	875.55	822.21	53.34	16.413	
7,600.00	7,590.94	7,618.61	7,597.94	27.10	27.47	-90.314	185.57	-870.54	875.55	821.51	54.05	16.199	
7,700.00	7,690.94	7,718.61	7,697.94	27.45	27.81	-90.314	185.57	-870.54	875.55	820.80	54.76	15.990	
7,800.00	7,790.94	7,818.61	7,797.94	27.81	28.16	-90.314	185.57	-870.54	875.55	820.09	55.46	15.787	
7,900.00	7,890.94	7,918.61	7,897.94	28.17	28.50	-90.314	185.57	-870.54	875.55	819.39	56.17	15.588	
8,000.00	7,990.94	8,018.61	7,997.94	28.52	28.85	-90.314	185.57	-870.54	875.55	818.68	56.88	15.394	
8,100.00	8,090.94	8,118.61	8,097.94	28.88	29.20	-90.314	185.57	-870.54	875.55	817.97	57.58	15.205	
8,200.00	8,190.94	8,218.61	8,197.94	29.23	29.54	-90.314	185.57	-870.54	875.55	817.26	58.29	15.021	
8,300.00	8,290.94	8,318.61	8,297.94	29.59	29.89	-90.314	185.57	-870.54	875.55	816.56	59.00	14.840	
8,400.00	8,390.94	8,418.61	8,397.94	29.95	30.24	-90.314	185.57	-870.54	875.55	815.85	59.71	14.665	
8,500.00	8,490.94	8,518.61	8,497.94	30.30	30.58	-90.314	185.57	-870.54	875.55	815.14	60.41	14.493	
8,600.00	8,590.94	8,618.61	8,597.94	30.66	30.93	-90.314	185.57	-870.54	875.55	814.43	61.12	14.325	
8,700.00	8,690.94	8,718.61	8,697.94	31.02	31.28	-90.314	185.57	-870.54	875.55	813.72	61.83	14.161	
8,800.00	8,790.94	8,818.61	8,797.94	31.37	31.63	-90.314	185.57	-870.54	875.55	813.02	62.54	14.000	
8,900.00	8,890.94	8,918.61	8,897.94	31.73	31.98	-90.314	185.57	-870.54	875.55	812.31	63.25	13.843	
9,000.00	8,990.94	9,018.61	8,997.94	32.09	32.33	-90.314	185.57	-870.54	875.55	811.60	63.96	13.690	
9,100.00	9,090.94	9,118.61	9,097.94	32.44	32.68	-90.314	185.57	-870.54	875.55	810.89	64.67	13.540	
9,200.00	9,190.94	9,218.61	9,197.94	32.80	33.03	-90.314	185.57	-870.54	875.55	810.18	65.38	13.393	
9,300.00	9,290.94	9,318.61	9,297.94	33.16	33.38	-90.314	185.57	-870.54	875.55	809.47	66.08	13.249	
9,400.00	9,390.94	9,418.61	9,397.94	33.51	33.72	-90.314	185.57	-870.54	875.55	808.76	66.79	13.108	
9,500.00	9,490.94	9,518.61	9,497.94	33.87	34.07	-90.314	185.57	-870.54	875.55	808.05	67.50	12.970	
9,600.00	9,590.94	9,618.61	9,597.94	34.23	34.42	-90.314	185.57	-870.54	875.55	807.34	68.21	12.835	
9,700.00	9,690.94	9,718.61	9,697.94	34.59	34.78	-90.314	185.57	-870.54	875.55	806.63	68.92	12.703	
9,800.00	9,790.94	9,818.61	9,797.94	34.94	35.13	-90.314	185.57	-870.54	875.55	805.92	69.63	12.573	

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 215H - Wellbore #1 - Design #1

Survey Program: 0-MWD										Rule Assigned:				Offset Site Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
9,900.00	9,890.94	9,918.61	9,897.94	35.30	35.48	-90.314	185.57	-870.54	875.55	805.21	70.35	12.447			
10,000.00	9,990.94	10,018.61	9,997.94	35.66	35.83	-90.314	185.57	-870.54	875.55	804.50	71.06	12.322			
10,100.00	10,090.94	10,118.61	10,097.94	36.01	36.18	-90.314	185.57	-870.54	875.55	803.79	71.77	12.200			
10,187.06	10,178.00	10,205.67	10,185.00	36.33	36.48	-90.314	185.57	-870.54	875.55	803.17	72.39	12.096			
10,200.00	10,190.94	10,218.61	10,197.94	36.37	36.53	-90.305	185.57	-870.54	875.54	803.06	72.47	12.081			
10,250.00	10,240.81	10,268.49	10,247.81	36.52	36.70	-90.090	185.57	-870.54	875.11	802.30	72.81	12.019			
10,300.00	10,290.21	10,317.88	10,297.21	36.67	36.88	-89.593	185.57	-870.54	874.17	801.04	73.14	11.953			
10,350.00	10,338.75	10,366.43	10,345.75	36.82	37.05	-88.816	185.57	-870.54	872.84	799.39	73.46	11.883			
10,400.00	10,386.07	10,413.75	10,393.07	36.95	37.21	-87.763	185.57	-870.54	871.30	797.54	73.77	11.812			
10,450.00	10,431.81	10,459.48	10,438.81	37.08	37.37	-86.440	185.57	-870.54	869.79	795.72	74.07	11.743			
10,500.00	10,475.61	10,503.28	10,482.61	37.21	37.53	-84.855	185.57	-870.54	868.59	794.24	74.36	11.682			
10,550.00	10,517.15	10,544.82	10,524.15	37.32	37.67	-83.020	185.57	-870.54	868.04	793.41	74.83	11.631			
10,555.60	10,521.65	10,549.32	10,528.65	37.34	37.69	-82.800	185.57	-870.54	868.04	793.37	74.67	11.626	CC, ES		
10,600.00	10,556.11	10,583.78	10,563.11	37.44	37.81	-80.954	185.57	-870.54	868.49	793.58	74.90	11.595			
10,650.00	10,592.19	10,619.86	10,599.19	37.55	37.94	-78.677	185.57	-870.54	870.29	795.12	75.16	11.579			
10,700.00	10,625.12	10,652.79	10,632.12	37.67	38.05	-76.217	185.57	-870.54	873.80	798.38	75.41	11.587			
10,750.00	10,654.64	10,682.32	10,661.64	37.78	38.16	-73.605	185.57	-870.54	879.33	803.68	75.65	11.624			
10,800.00	10,680.54	10,708.21	10,687.54	37.90	38.25	-70.879	185.57	-870.54	887.17	811.29	75.88	11.692			
10,850.00	10,702.61	10,730.29	10,709.61	38.02	38.33	-68.077	185.57	-870.54	897.51	821.42	76.09	11.795			
10,900.00	10,720.69	10,748.37	10,727.69	38.14	38.39	-65.239	185.57	-870.54	910.47	834.18	76.29	11.935			
10,950.00	10,734.64	10,762.32	10,741.64	38.27	38.44	-62.407	185.57	-870.54	926.08	849.61	76.46	12.111			
11,000.00	10,744.36	10,772.03	10,751.36	38.40	38.47	-59.617	185.57	-870.54	944.28	867.66	76.62	12.324			
11,050.00	10,749.76	10,777.43	10,756.76	38.53	38.49	-56.904	185.57	-870.54	964.93	888.17	76.76	12.572			
11,082.06	10,750.94	10,778.61	10,757.94	38.62	38.50	-55.217	185.57	-870.54	979.34	902.52	76.83	12.747			
11,100.00	10,751.09	10,778.77	10,758.09	38.67	38.50	-54.297	185.57	-870.54	987.83	910.96	76.87	12.851			
11,200.00	10,751.97	10,779.64	10,758.97	39.00	38.50	-49.520	185.57	-870.54	1,041.23	964.16	77.07	13.509			
11,300.00	10,752.84	10,780.52	10,759.84	39.39	38.50	-45.351	185.57	-870.54	1,103.82	1,026.55	77.27	14.285			
11,400.00	10,753.72	10,781.39	10,760.72	39.84	38.51	-41.769	185.57	-870.54	1,174.06	1,096.62	77.45	15.160			
11,461.17	10,754.26	10,781.93	10,761.26	40.15	38.51	-39.847	185.57	-870.54	1,220.20	1,142.66	77.54	15.736			
11,500.00	10,754.60	10,782.27	10,761.60	40.35	38.51	-38.716	185.57	-870.54	1,250.43	1,172.83	77.60	16.114			
11,600.00	10,755.47	10,783.15	10,762.47	40.92	38.51	-36.044	185.57	-870.54	1,330.31	1,252.58	77.74	17.113			
11,700.00	10,756.35	10,784.02	10,763.35	41.55	38.52	-33.679	185.57	-870.54	1,412.76	1,334.90	77.86	18.145			
11,800.00	10,757.22	10,784.90	10,764.22	42.24	38.52	-31.578	185.57	-870.54	1,497.35	1,419.38	77.97	19.205			
11,900.00	10,758.10	10,785.77	10,765.10	42.98	38.52	-29.704	185.57	-870.54	1,583.73	1,505.67	78.07	20.287			
12,000.00	10,758.97	10,786.65	10,765.97	43.77	38.53	-28.025	185.57	-870.54	1,671.63	1,593.48	78.16	21.388			
12,100.00	10,759.85	10,787.52	10,766.85	44.60	38.53	-26.515	185.57	-870.54	1,760.83	1,682.59	78.24	22.506			
12,200.00	10,760.73	13,873.13	12,443.80	45.48	50.59	-89.504	-1,483.38	-853.21	1,844.26	1,779.83	64.43	28.623			
12,300.00	10,761.60	13,973.13	12,444.67	46.41	51.43	-89.503	-1,583.37	-852.17	1,844.10	1,778.68	65.42	28.187			
12,400.00	10,762.48	14,073.13	12,445.55	47.37	52.31	-89.503	-1,683.36	-851.14	1,843.95	1,777.49	66.46	27.746			
12,500.00	10,763.35	14,173.13	12,446.42	48.37	53.22	-89.502	-1,783.35	-850.10	1,843.79	1,776.26	67.54	27.301			
12,600.00	10,764.23	14,273.13	12,447.29	49.41	54.17	-89.502	-1,883.34	-849.06	1,843.63	1,774.98	68.65	26.855			
12,700.00	10,765.10	14,373.13	12,448.17	50.48	55.16	-89.501	-1,983.33	-848.02	1,843.48	1,773.87	69.81	26.408			
12,800.00	10,765.98	14,473.13	12,449.04	51.58	56.17	-89.501	-2,083.32	-846.98	1,843.32	1,772.32	71.00	25.963			
12,900.00	10,766.86	14,573.13	12,449.92	52.70	57.21	-89.500	-2,183.31	-845.94	1,843.17	1,770.94	72.22	25.521			
13,000.00	10,767.73	14,673.13	12,450.79	53.86	58.29	-89.500	-2,283.30	-844.91	1,843.01	1,769.53	73.48	25.082			
13,100.00	10,768.61	14,773.13	12,451.67	55.04	59.38	-89.499	-2,383.29	-843.87	1,842.86	1,768.09	74.77	24.648			
13,200.00	10,769.48	14,873.13	12,452.54	56.25	60.51	-89.499	-2,483.28	-842.83	1,842.70	1,766.61	76.09	24.219			
13,300.00	10,770.36	14,973.13	12,453.41	57.47	61.66	-89.498	-2,583.27	-841.79	1,842.54	1,765.11	77.43	23.796			
13,400.00	10,771.23	15,073.13	12,454.29	58.72	62.83	-89.498	-2,683.26	-840.75	1,842.39	1,763.59	78.80	23.380			
13,500.00	10,772.11	15,173.12	12,455.16	59.99	64.02	-89.497	-2,783.25	-839.71	1,842.23	1,762.04	80.20	22.972			
13,600.00	10,772.99	15,273.12	12,456.04	61.28	65.23	-89.497	-2,883.24	-838.68	1,842.08	1,760.46	81.61	22.571			
13,700.00	10,773.86	15,373.12	12,456.91	62.58	66.46	-89.496	-2,983.23	-837.64	1,841.92	1,758.87	83.06	22.177			

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



MS Directional Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 215H - Wellbore #1 - Design #1														Offset Site Error: 0.00 usft
Survey Program: 0-MWD		Offset		Semi Major Axis		Azimuth		Offset Wellbore Centre		Rule Assigned:			Offset Well Error: 0.00 usft	
Reference	Offset	Reference	Offset	Reference	Offset	from North	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
13,800.00	10,774.74	15,473.12	12,457.78	63.90	67.71	-89.495	-3,083.22	-836.60	1,841.77	1,757.25	84.52	21.792		
13,900.00	10,775.61	15,573.12	12,458.66	65.23	68.98	-89.495	-3,183.21	-835.56	1,841.61	1,755.61	86.00	21.414		
14,000.00	10,776.49	15,673.12	12,459.53	66.58	70.26	-89.494	-3,283.20	-834.52	1,841.46	1,753.96	87.50	21.045		
14,100.00	10,777.37	15,773.12	12,460.41	67.95	71.56	-89.494	-3,383.19	-833.48	1,841.30	1,752.28	89.02	20.685		
14,200.00	10,778.24	15,873.12	12,461.28	69.32	72.87	-89.493	-3,483.18	-832.45	1,841.15	1,750.59	90.55	20.332		
14,300.00	10,779.12	15,973.12	12,462.15	70.71	74.20	-89.493	-3,583.17	-831.41	1,840.99	1,748.89	92.10	19.988		
14,400.00	10,779.99	16,073.12	12,463.03	72.11	75.53	-89.492	-3,683.16	-830.37	1,840.84	1,747.17	93.67	19.652		
14,500.00	10,780.87	16,173.12	12,463.90	73.52	76.89	-89.492	-3,783.15	-829.33	1,840.68	1,745.43	95.25	19.325		
14,600.00	10,781.74	16,273.12	12,464.78	74.94	78.25	-89.491	-3,883.14	-828.29	1,840.53	1,743.68	96.84	19.005		
14,700.00	10,782.62	16,373.12	12,465.65	76.36	79.62	-89.491	-3,983.13	-827.25	1,840.37	1,741.92	98.45	18.693		
14,800.00	10,783.50	16,473.12	12,466.52	77.80	81.01	-89.490	-4,083.12	-826.22	1,840.22	1,740.14	100.07	18.389		
14,900.00	10,784.37	16,573.12	12,467.40	79.25	82.40	-89.490	-4,183.11	-825.18	1,840.06	1,738.36	101.70	18.092		
15,000.00	10,785.25	16,673.11	12,468.27	80.70	83.80	-89.489	-4,283.10	-824.14	1,839.91	1,736.56	103.35	17.803		
15,100.00	10,786.12	16,773.11	12,469.15	82.16	85.22	-89.489	-4,383.09	-823.10	1,839.75	1,734.75	105.00	17.522		
15,200.00	10,787.00	16,873.11	12,470.02	83.63	86.64	-89.488	-4,483.08	-822.06	1,839.60	1,732.94	106.66	17.247		
15,300.00	10,787.87	16,973.11	12,470.89	85.11	88.07	-89.487	-4,583.07	-821.03	1,839.44	1,731.11	108.33	16.979		
15,400.00	10,788.75	17,073.11	12,471.77	86.59	89.51	-89.487	-4,683.06	-819.99	1,839.29	1,729.27	110.01	16.719		
15,500.00	10,789.63	17,173.11	12,472.64	88.08	90.95	-89.486	-4,783.05	-818.95	1,839.13	1,727.43	111.70	16.464		
15,600.00	10,790.50	17,273.11	12,473.52	89.57	92.40	-89.486	-4,883.04	-817.91	1,838.98	1,725.58	113.40	16.216		
15,700.00	10,791.38	17,373.11	12,474.39	91.07	93.86	-89.485	-4,983.03	-816.87	1,838.83	1,723.72	115.11	15.975		
15,800.00	10,792.25	17,473.11	12,475.26	92.58	95.32	-89.485	-5,083.02	-815.83	1,838.67	1,721.85	116.82	15.739		
15,900.00	10,793.13	17,573.11	12,476.14	94.09	96.80	-89.484	-5,183.01	-814.80	1,838.52	1,719.97	118.54	15.509		
16,000.00	10,794.00	17,673.11	12,477.01	95.60	98.27	-89.484	-5,283.00	-813.76	1,838.36	1,718.09	120.27	15.285		
16,100.00	10,794.88	17,773.11	12,477.89	97.12	99.75	-89.483	-5,382.99	-812.72	1,838.21	1,716.21	122.00	15.067		
16,200.00	10,795.76	17,873.11	12,478.76	98.64	101.24	-89.483	-5,482.98	-811.68	1,838.06	1,714.31	123.74	14.854		
16,300.00	10,796.63	17,973.11	12,479.63	100.17	102.74	-89.482	-5,582.97	-810.64	1,837.90	1,712.41	125.49	14.646		
16,400.00	10,797.51	18,073.11	12,480.51	101.70	104.23	-89.481	-5,682.96	-809.60	1,837.75	1,710.51	127.24	14.443		
16,500.00	10,798.38	18,173.10	12,481.38	103.24	105.74	-89.481	-5,782.95	-808.57	1,837.60	1,708.60	129.00	14.245		
16,600.00	10,799.26	18,273.10	12,482.26	104.78	107.24	-89.480	-5,882.94	-807.53	1,837.44	1,706.68	130.76	14.052		
16,700.00	10,800.14	18,373.10	12,483.13	106.32	108.75	-89.480	-5,982.93	-806.49	1,837.29	1,704.76	132.53	13.863		
16,800.00	10,801.01	18,473.10	12,484.01	107.86	110.27	-89.479	-6,082.92	-805.45	1,837.13	1,702.84	134.30	13.679		
16,900.00	10,801.89	18,573.10	12,484.88	109.41	111.79	-89.479	-6,182.91	-804.41	1,836.98	1,700.91	136.07	13.500		
17,000.00	10,802.76	18,673.10	12,485.75	110.97	113.31	-89.478	-6,282.90	-803.37	1,836.83	1,698.97	137.86	13.324		
17,100.00	10,803.64	18,773.10	12,486.63	112.52	114.84	-89.478	-6,382.89	-802.34	1,836.67	1,697.03	139.64	13.153		
17,200.00	10,804.51	18,873.10	12,487.50	114.08	116.37	-89.477	-6,482.88	-801.30	1,836.52	1,695.09	141.43	12.986		
17,300.00	10,805.39	18,973.10	12,488.38	115.64	117.90	-89.477	-6,582.88	-800.26	1,836.37	1,693.15	143.22	12.822		
17,400.00	10,806.27	19,073.10	12,489.25	117.20	119.44	-89.476	-6,682.87	-799.22	1,836.21	1,691.20	145.01	12.662		
17,500.00	10,807.14	19,173.10	12,490.12	118.77	120.98	-89.475	-6,782.86	-798.18	1,836.06	1,689.25	146.81	12.506		
17,600.00	10,808.02	19,273.10	12,491.00	120.33	122.52	-89.475	-6,882.85	-797.15	1,835.91	1,687.29	148.62	12.353		
17,700.00	10,808.89	19,373.10	12,491.87	121.90	124.07	-89.474	-6,982.84	-796.11	1,835.76	1,685.33	150.42	12.204		
17,800.00	10,809.77	19,473.10	12,492.75	123.48	125.62	-89.474	-7,082.83	-795.07	1,835.60	1,683.37	152.23	12.058		
17,900.00	10,810.64	19,573.09	12,493.62	125.05	127.17	-89.473	-7,182.82	-794.03	1,835.45	1,681.41	154.04	11.915		
18,000.00	10,811.52	19,673.09	12,494.49	126.63	128.72	-89.473	-7,282.81	-792.99	1,835.30	1,679.44	155.85	11.776		
18,100.00	10,812.40	19,773.09	12,495.37	128.20	130.28	-89.472	-7,382.80	-791.95	1,835.14	1,677.47	157.67	11.639		
18,200.00	10,813.27	19,873.09	12,496.24	129.78	131.84	-89.472	-7,482.79	-790.92	1,834.99	1,675.50	159.49	11.505		
18,300.00	10,814.15	19,973.09	12,497.12	131.37	133.40	-89.471	-7,582.78	-789.88	1,834.84	1,673.53	161.31	11.375		
18,400.00	10,815.02	20,073.09	12,497.99	132.95	134.96	-89.470	-7,682.77	-788.84	1,834.69	1,671.55	163.13	11.246		
18,500.00	10,815.90	20,173.09	12,498.86	134.53	136.53	-89.470	-7,782.76	-787.80	1,834.53	1,669.57	164.96	11.121		
18,600.00	10,816.77	20,273.09	12,499.74	136.12	138.09	-89.469	-7,882.75	-786.76	1,834.38	1,667.59	166.79	10.998		
18,700.00	10,817.65	20,373.09	12,500.61	137.71	139.66	-89.469	-7,982.74	-785.72	1,834.23	1,665.61	168.62	10.878		
18,800.00	10,818.53	20,473.09	12,501.49	139.30	141.23	-89.468	-8,082.73	-784.69	1,834.08	1,663.63	170.45	10.760		
18,900.00	10,819.40	20,573.09	12,502.36	140.89	142.81	-89.468	-8,182.72	-783.65	1,833.93	1,661.64	172.28	10.645		

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



MS Directional
Anticollision Report



Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

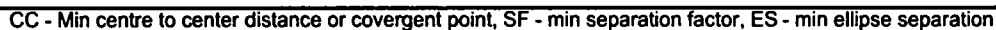
Offset Design: Rodney Robinson Federal (West) - Rodney Robinson Federal 215H - Wellbore #1 - Design #1

Survey Program: 0-MWD		Reference		Offset		Semi Major Axis		Azimuth from North (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,000.00	10,820.28	20,673.09	12,503.23	142.49	144.38	142.49	144.38	-89.467	-8,282.71	-782.61	1,833.77	1,659.65	174.12	10.532		
19,100.00	10,821.15	20,773.09	12,504.11	144.08	145.96	144.08	145.96	-89.466	-8,382.70	-781.57	1,833.62	1,657.66	175.96	10.421		
19,200.00	10,822.03	20,873.09	12,504.98	145.68	147.54	145.68	147.54	-89.466	-8,482.69	-780.53	1,833.47	1,655.67	177.80	10.312		
19,300.00	10,822.90	20,973.09	12,505.86	147.27	149.12	147.27	149.12	-89.465	-8,582.68	-779.49	1,833.32	1,653.68	179.64	10.206		
19,400.00	10,823.78	21,073.08	12,506.73	148.87	150.70	148.87	150.70	-89.465	-8,682.67	-778.46	1,833.17	1,651.69	181.48	10.101		
19,500.00	10,824.66	21,173.08	12,507.60	150.47	152.28	150.47	152.28	-89.464	-8,782.66	-777.42	1,833.01	1,649.69	183.32	9.999		
19,600.00	10,825.53	21,273.08	12,508.48	152.07	153.87	152.07	153.87	-89.464	-8,882.65	-776.38	1,832.86	1,647.69	185.17	9.898		
19,700.00	10,826.41	21,373.08	12,509.35	153.67	155.45	153.67	155.45	-89.463	-8,982.64	-775.34	1,832.71	1,645.70	187.01	9.800		
19,800.00	10,827.28	21,473.08	12,510.23	155.27	157.04	155.27	157.04	-89.463	-9,082.63	-774.30	1,832.56	1,643.70	188.86	9.703		
19,900.00	10,828.16	21,573.08	12,511.10	156.88	158.63	156.88	158.63	-89.462	-9,182.62	-773.26	1,832.41	1,641.70	190.71	9.608		
20,000.00	10,829.04	21,673.08	12,511.97	158.48	160.22	158.48	160.22	-89.461	-9,282.61	-772.23	1,832.26	1,639.70	192.56	9.515		
20,100.00	10,829.91	21,773.08	12,512.85	160.09	161.81	160.09	161.81	-89.461	-9,382.60	-771.19	1,832.10	1,637.69	194.41	9.424		
20,200.00	10,830.79	21,873.08	12,513.72	161.70	163.41	161.70	163.41	-89.460	-9,482.59	-770.15	1,831.95	1,635.69	196.26	9.334		
20,300.00	10,831.66	21,973.08	12,514.60	163.30	165.00	163.30	165.00	-89.460	-9,582.58	-769.11	1,831.80	1,633.69	198.11	9.246		
20,400.00	10,832.54	22,073.08	12,515.47	164.91	166.60	164.91	166.60	-89.459	-9,682.57	-768.07	1,831.65	1,631.68	199.97	9.160		
20,500.00	10,833.41	22,173.08	12,516.35	166.52	168.19	166.52	168.19	-89.459	-9,782.56	-767.04	1,831.50	1,629.68	201.82	9.075		
20,600.00	10,834.29	22,273.08	12,517.22	168.13	169.79	168.13	169.79	-89.458	-9,882.55	-766.00	1,831.35	1,627.67	203.68	8.991		
20,700.00	10,835.17	22,373.08	12,518.09	169.74	171.39	169.74	171.39	-89.457	-9,982.54	-764.96	1,831.20	1,625.66	205.54	8.909		
20,800.00	10,836.04	22,473.07	12,518.97	171.36	172.99	171.36	172.99	-89.457	-10,082.53	-763.92	1,831.05	1,623.65	207.39	8.829		
20,900.00	10,836.92	22,573.07	12,519.84	172.97	174.59	172.97	174.59	-89.456	-10,182.52	-762.88	1,830.89	1,621.64	209.25	8.750		
20,972.39	10,837.55	22,645.46	12,520.47	174.00	175.75	174.00	175.75	-89.456	-10,254.90	-762.13	1,830.79	1,620.41	210.37	8.703 SF		



Local Co-ordinate Reference:	Well Rodney Robinson Federal 122H
TVD Reference:	WELL @ 3760.50usft (Patterson 282)
MD Reference:	WELL @ 3760.50usft (Patterson 282)
North Reference:	Grid
Survey Calculation Method:	Minimum Curvature
Output errors are at	2.00 sigma
Database:	EDM 5000.14 Conroe DB
Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 3760.50usft (Patterson 282) Coordinates are relative to: Rodney Robinson Federal 122H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is 104° 20' 0.000 W Grid Convergence at Surface is: 0.385°





MS Directional Anticollision Report

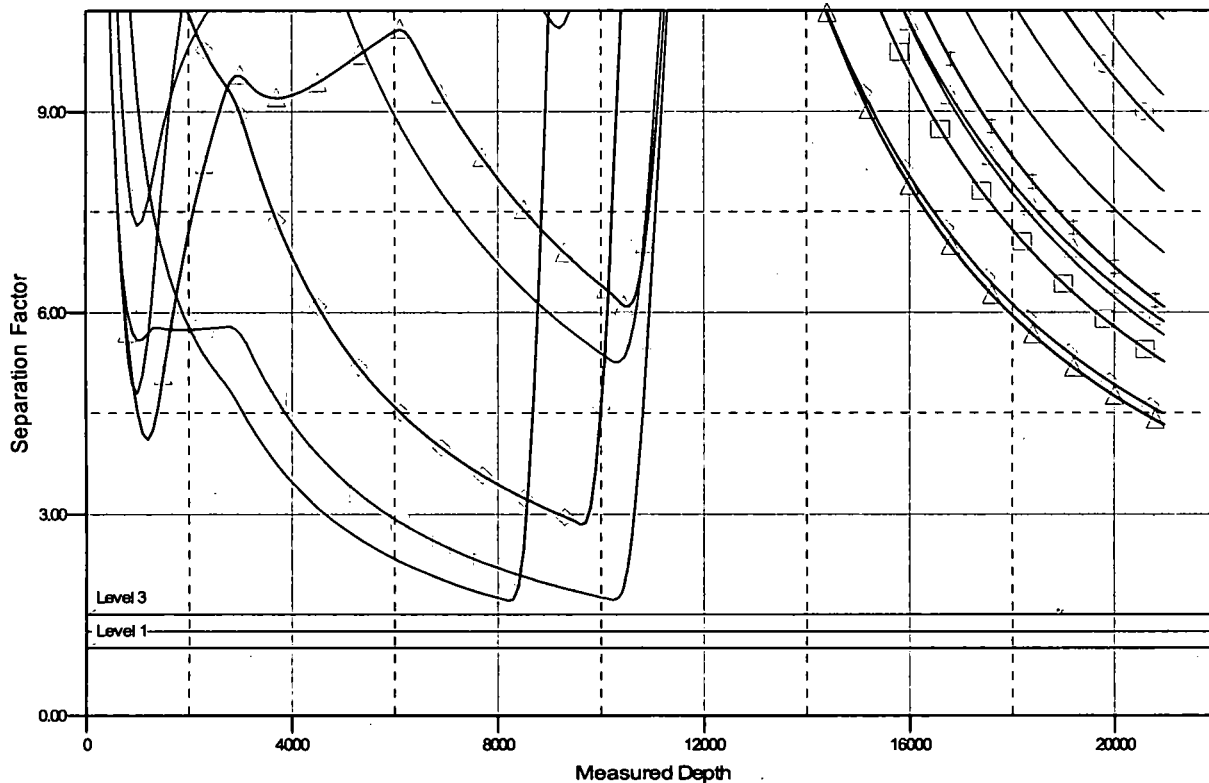


Company: Matador Resources
Project: Lea County, New Mexico (NAD 27)
Reference Site: Rodney Robinson Federal (East)
Site Error: 0.00 usft
Reference Well: Rodney Robinson Federal 122H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1

Local Co-ordinate Reference: Well Rodney Robinson Federal 122H
TVD Reference: WELL @ 3760.50usft (Patterson 282)
MD Reference: WELL @ 3760.50usft (Patterson 282)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Conroe DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 3760.50usft (Patterson 282) Coordinates are relative to: Rodney Robinson Federal 122H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 301
Central Meridian is 104° 20' 0.000 W Grid Convergence at Surface is: 0.385°

Separation Factor Plot



LEGEND

Rodney Robinson Federal 121H, Wellbore #1, Design #2V0	Rodney Robinson Federal 121H, Wellbore #1, Design #1V0	Rodney Robinson Federal 122H, Wellbore #1, Design #1V0
Rodney Robinson Federal 121H, Wellbore #1, Design #1V0	Rodney Robinson Federal 121H, Wellbore #1, Design #2V0	Rodney Robinson Federal 122H, Wellbore #1, Design #1V0
Rodney Robinson Federal 121H, Wellbore #1, Design #1V0	Rodney Robinson Federal 122H, Wellbore #1, Design #1V0	Rodney Robinson Federal 122H, Wellbore #1, Design #1V0

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



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

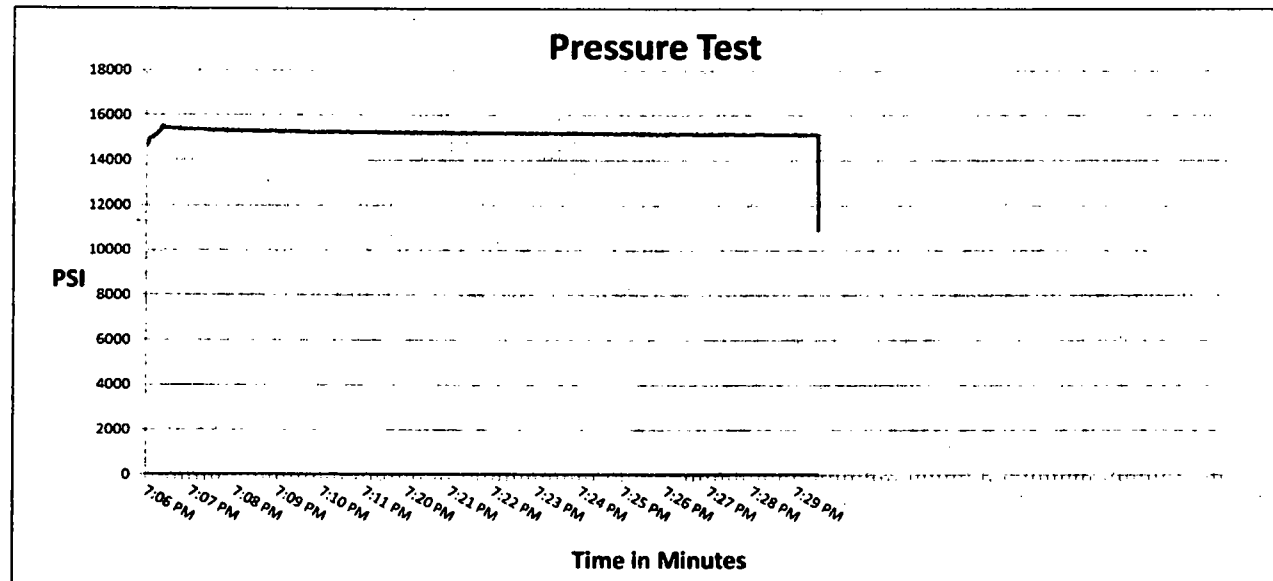
Pick Ticket #: 284918

Hose Specifications

Hose Type	Length
Ck	10'
I.D.	O.D.
3"	4.79"
Working Pressure	Burst Pressure
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4-1/16 10K	Swage
Die Size	Final O.D.
5.37"	5.37"
Hose Serial #	Hose Assembly Serial #
10490	284918-2



Test Pressure
15000 PSI

Time Held at Test Pressure
15 2/4 Minutes

Actual Burst Pressure

Peak Pressure
15732 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-2	Hose O.D. (Inches)	5.30"
Hose Assembly Length	10'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	91996	Stem (Heat #)	91996
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	15 1/2		
Date Tested	Tested By	Approved By	
12/8/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

Date Assembled: **12/8/2014**

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-2**

Hose Lot # and Date Code **10490-01/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

Date

12/9/2014



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications

Hose Type Ck

Length 20'

I.D.

O.D.

3"

4.77"

Working Pressure

10000 PSI

Burst Pressure

Standard Safety Multiplier Applies

Verification

Type of Fitting

4-1/16 10K

Die Size

5.37"

Hose Serial #

10490

Coupling Method

Swage

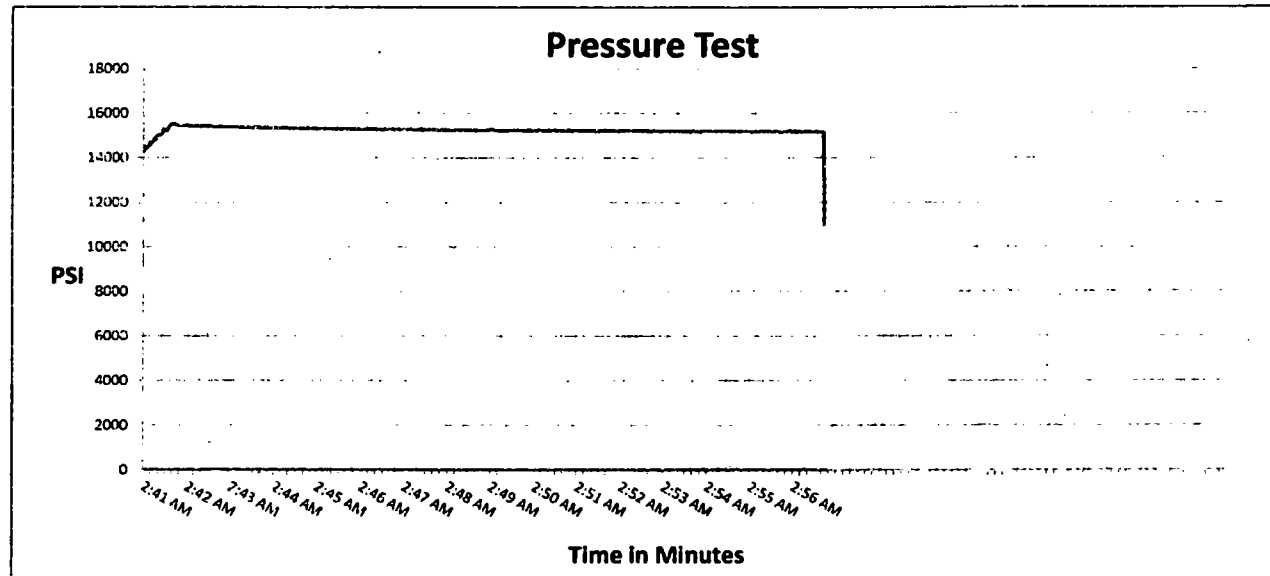
Final O.D.

5.40"

Hose Assembly Serial #

284918-1

R297



Test Pressure
15000 PSI

Time Held at Test Pressure
15 2/4 Minutes

Actual Burst Pressure

Peak Pressure
15893 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-1	Hose O.D. (Inches)	5.30"
Hose Assembly Length	20'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)	V3579	Connection (Heat #)	V3579
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	15 1/2		
Date Tested	Tested By		Approved By
12/9/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

Date Assembled: **12/8/2014**

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-1**

Hose Lot # and Date Code **10490-01/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

Date

12/9/2014



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

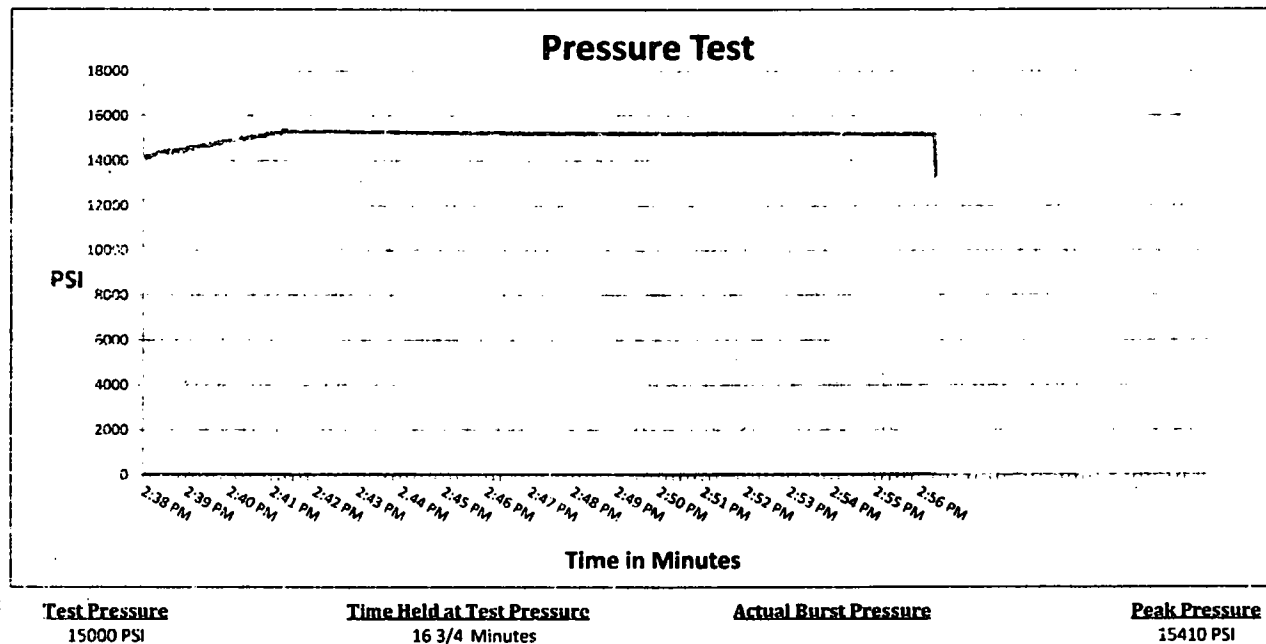
Pick Ticket #: 284918

Hose Specifications

Hose Type	Length
Mud	70'
I.D.	O.D.
3"	4.79"
Working Pressure	Burst Pressure
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	Final O.D.
5.37"	5.37"
Hose Serial #	Hose Assembly Serial #
10490	284918-3



Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES
Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37
Hydrostatic Test Requirements			
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.	
Test Pressure Hold Time (minutes)	16 3/4		
Date Tested	Tested By		Approved By
12/9/2014			



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**

Customer P.O.# **260471**

Sales Order # **236404**

Date Assembled: **12/8/2014**

Specifications

Hose Assembly Type: **Choke & Kill**

Assembly Serial # **287918-3**

Hose Lot # and Date Code **10490-01/13**

Hose Working Pressure (psi) **10000**

Test Pressure (psi) **15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:

Midwest Hose & Specialty, Inc.

3312 S I-35 Service Rd

Oklahoma City, OK 73129

Comments:

Approved By

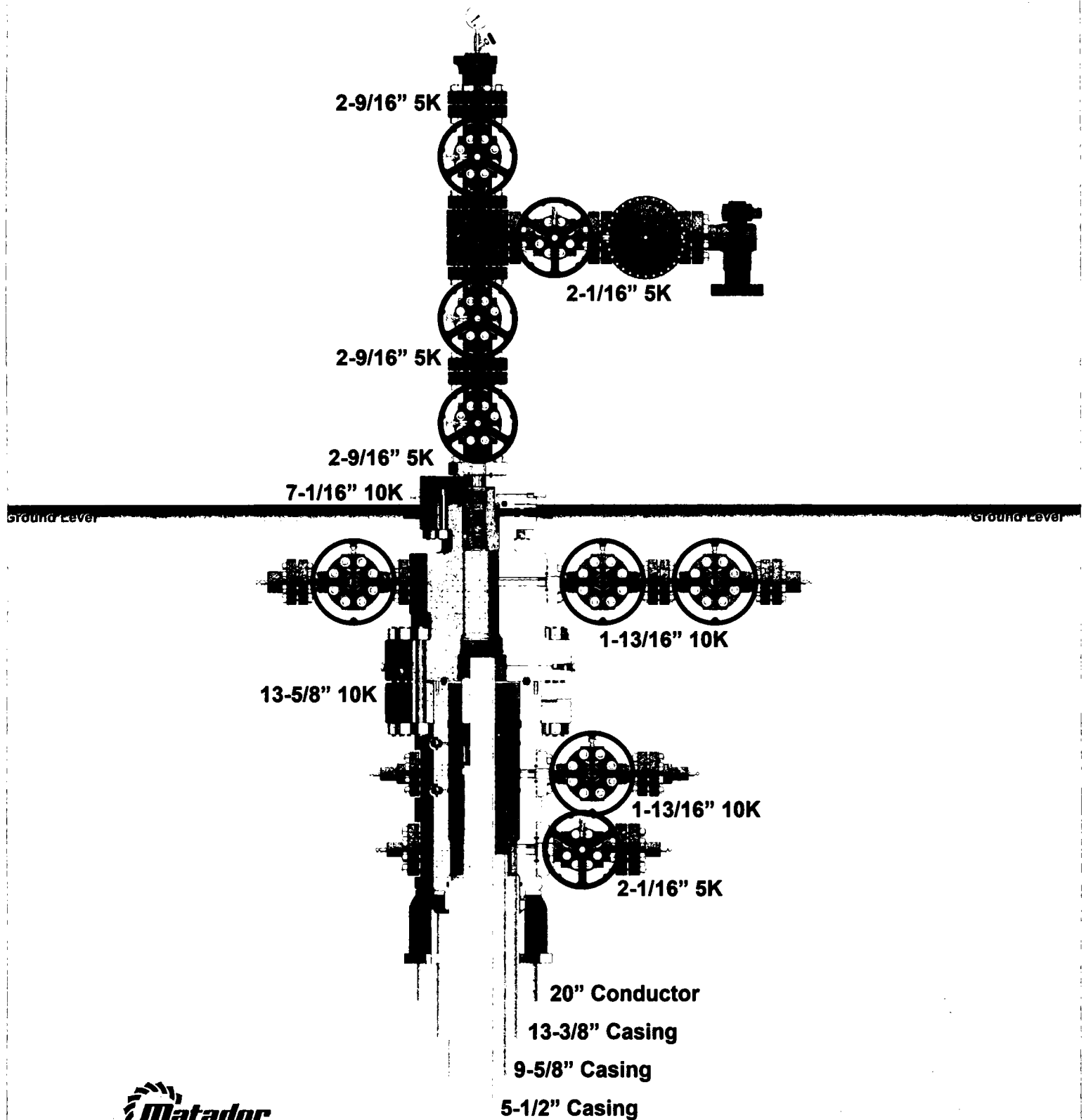
Date

12/9/2014

CAMERON

A Schlumberger Company

13-5/8" 10K MN-DS Wellhead 13-3/8 x 9-5/8 x 5-1/2 Casing Program



2018-147-03

Rev: 01

NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.

Rodney Robinson Federal #122H
SHL: 240' FNL & 1927' FWL Section 6
BHL: 60' FSL & 1834' FWL Section 7
Township/Range: 23S 33E
Elevation Above Sea Level: 3,732'

Drilling Operation Plan

Proposed Drilling Depth: 20972' MD / 10837' TVD

Type of well: Horizontal well, no pilot hole

Permitted Well Type: Oil

Geologic Name of Surface Formation: Quaternary Deposits

KOP Lat/Long (NAD83): 32.3409281744 N / -103.6135141602 W

TD Lat/Long (NAD83): 32.3121983974 N / -103.6138382203 W

1. Estimated Tops

Formation	MD (ft)	TVD (ft)	Thickness (ft)	Lithology	Resource
Rustler	1,256	1,256	527	Anhydrite	Barren
Top of Salt	1,783	1,783	1,608	Salt	Barren
Castile	3,391	3,391	1,592	Salt	Barren
Base of Salt	4,983	4,983	45	Salt	Barren
Bell Canyon	5,028	5,028	853	Sandstone	Oil/Natural Gas
Cherry Canyon	5,881	5,881	1,348	Sandstone	Oil/Natural Gas
Brushy Canyon	7,229	7,229	1,557	Sandstone	Oil/Natural Gas
Bone Spring Lime	8,786	8,786	1,060	Limestone	Oil/Natural Gas
1st Bone Spring Carbonate	9,846	9,846	91	Carbonate	Oil/Natural Gas
1st Bone Spring Sand	9,937	9,937	281	Sandstone	Oil/Natural Gas
KOP	10,187	10,178		Sandstone	Oil/Natural Gas
2nd Bone Spring Carbonate	10,221	10,218	430	Carbonate	Oil/Natural Gas
2nd Bone Spring Sand	10,648	10,648		Sandstone	Oil/Natural Gas
TD	20,972	10,837		Sandstone	Oil/Natural Gas

2. Notable Zones

2nd Bone Spring is the goal. All perforations will be within the setback requirements as prescribed or permitted by the New Mexico Oil Conservation Division. OSE estimated ground water depth at this location is 78'.

3. Pressure Control

Equipment

A 12,000' 5000-psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and one annular preventer will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams.

An accumulator complying with Onshore Order #2 requirements for the pressure rating of the BOP stack will be present. A rotating head will also be installed as needed.

Testing Procedure

BOP will be inspected and operated as required in Onshore Order #2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

After setting surface casing, a minimum 5M BOPE system will be installed. Test pressures will be 250 psi low and 5000 psi high with the annular preventer being tested to 250 psi low and 2500 psi high before drilling below surface shoe. In the event that the rig drills multiple wells on the pad and any seal subject to test pressures are broken, a full BOP test will be performed when the rig returns and the 5M BOPE system is re-installed.

Variance Request

Matador requests a variance to have the option of running a multi-bowl wellhead assembly for setting the Intermediate 1 and Production Strings. The BOPs will not be tested again unless any flanges are separated.

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

Matador requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, the wellbore will be secured with a blind flange of like pressure. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test.

4. Casing & Cement

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

String	Hole Size (in)	Set MD (ft)	Set TVD (ft)	Casing Size (in)	Wt. (lb/ft)	Grade	Joint	Collapse	Burst	Tension
Surface	17.5	0 - 1281	0 - 1281	13.375	54.5	J-55	BUTT	1.125	1.125	1.8
Intermediate 1	12.25	0 - 5053	0 - 5053	9.625	40	J-55	BUTT	1.125	1.125	1.8
Production	8.75	0 - 20972	0 - 10837	5.5	20	P-110	DWC/C-IS HT Plus	1.125	1.125	1.8

- All casing strings will be tested in accordance with Onshore Order #2 - III.B.1.h

- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed

String	Type	Sacks	Yield	Cu. Ft.	Weight	Percent Excess	Top of Cement	Class	Blend
Surface	Lead	640	1.72	1094	12.5	50%	0	C	5% NaCl + LCM
	Tail	250	1.38	347	14.8	50%	981	C	5% NaCl + LCM
Intermediate 1	Lead	940	2.13	1994	12.6	50%	0	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	370	1.38	509	14.8	50%	4042	C	5% NaCl + LCM
Production	Lead	680	2.22	1515	11.5	25%	4853	H	Fluid Loss + Dispersant + Retarder + LCM
	Tail	2650	1.35	3573	13.2	25%	9687	H	Fluid Loss + Dispersant + Retarder + LCM

5. Mud Program

An electronic Pason mud monitoring system complying with Onshore Order 2 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Hole Section	Hole Size (in)	Mud Type	Interval MD (ft)	Density (lb/gal)	Viscosity	Fluid Loss
Surface	17.5	Spud Mud	0 - 1281	8.4 - 8.8	28-30	NC
Intermediate 1	12.25	Brine Water	1281 - 5053	9.5 - 10.2	28-30	NC
Production	8.75	FW/Cut Brine	5053 - 20972	8.6 - 9.4	28-30	NC

6. Cores, Test, & Logs

No core or drill stem test is planned.

A 2-person mud logging program will be used from Kick-off point to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from Intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to top of curve.

7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum anticipated surface pressure is 2913 psi. Expected bottom hole temperature is 160° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of a "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have a H₂S safety package on all wells, attached is a "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of the equipment being used.



APD ID: 10400040350

Submission Date: 03/28/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

RR_Existing_Roads_map_20190326142516.pdf

Existing Road Purpose: ACCESS

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

RR_New_Roads_map_Plats_v1_031419_Map2_20190326143102.pdf

New road type: RESOURCE

Length: 2926.4

Feet

Width (ft.): 30

Max slope (%): 0

Max grade (%): 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information: Topsoil and brush will be windowed beside the road.

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: Crowned and ditched

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

RR_ALL_Slots_1mi_Well_Map_031219_Map3_20190326143403.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: This Surface Use Plan is in support of Matador's Rodney Robinson well pad and production facilities. Matador will operate twenty-nine (29) oil wells arranged across three (3) well pads (Slots 1, 2, and 3/4 "super pad"), two (2) central tank batteries (CTBs) (E2 & W2), a frac pond, flow lines, power lines, a gas pipeline (E2 & W2), and associated access roads. Matador intends to construct two central tank batteries. The W2 CTB will service the Slot 1 & 2 pads while the E2 CTB will service the combined Slot 3/4 super pad. Matador will install 300.00' of 4" buried flowline from Slots 1 & 2 to the W2 CTB and 971.57' from the Slot 3/4 pad to the E2 CTB, for a total of 1,271.57'. Matador will install a total of 3,031.27' of ~6" O.D. buried gas pipeline to connect to an existing gas line in the NWNW of Section 6. Approximately 3972.36' of power line will be installed to power both CTBs and all three well pads.

Production Facilities map:

RR_POD_map_v2_031219_Map2_20190326143522.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: DUST CONTROL,
INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE
CASING

Describe type:

Water source type: GW WELL

Source longitude:

Source latitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: FEDERAL

Water source transport method: TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 21000

Source volume (acre-feet): 2.706755

Source volume (gal): 882000

Water source and transportation map:

RR_H2O_Caliche_map_v1_031119_Map4_20190326143738.pdf

Water source comments:

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: 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 located on private land in Section 20 23E 33E. This site is operated by Basin.

Construction Materials source location attachment:

RR_ALL_Slots_Pad_Recontour_FIG2_20190326143848.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, and other chemicals; trash; human waste.

Amount of waste: 1000 barrels

Waste disposal frequency : Daily

Safe containment description: Drill cuttings, mud, salts, and other chemicals will be stored in steel mud tanks; trash will be placed in portable trash cage; human waste will be disposed on in chemical toilets.

Safe containmant attachment:

Waste disposal type: OTHER

Disposal location ownership: OTHER

Disposal type description: Public/Private

Disposal location description: Steel mud tanks will be hauled to R360's state approved (NM-01-0006) disposal site at Halfway, NM; portable trash cage will be hauled to the Lea County landfill; chemical toilets will be hauled to the Jal Wastewater Treatment Plant.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Description of cuttings location Steel tanks on pad.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

RR_RecProduction_ALL_SLOTS_v1_031119_FIG1_20190326144359.pdf

RR_ALL_Slots_Rig_Layout_031219_FIG3_20190326144449.pdf

RR_ALL_Slots_Pad_Recontour_FIG2_20190326144426.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: RODNEY ROBINSON

Multiple Well Pad Number: SLOT 2

Recontouring attachment:

RR_RecProduction_ALL_SLOTS_v1_031119_FIG1_20190326144520.pdf

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Disturbance Comments:

Reconstruction method: Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the Slot 1 and 2 pads by 0.55 acres by removing caliche and reclaiming the Northwest corner of each pad. Approximately 0.37 acres of topsoil will be retained on Slots 1 & 2. Interim reclamation on the Slot 3/4 super pad will consist of reclaiming 0.75 acres in the Northwest corner of the pad. Approximately 0.47 acres of topsoil will be retained on Slot 3/4. Topsoil stockpile acreage is included in the long-term disturbance figures in the table below. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

contour. Disturbed areas will be seeded in accordance with the land owner's requirements.

Topsoil redistribution: Enough stockpiled topsoil will be retained on the north edge of the well pads, both CTBs, and the frac pond. This soil will be used to cover the remainder of the pads, tank battery, and pond sites when the wells are plugged. Once the last well is plugged, the rest of the pad and associated roads will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled.

Soil treatment: None

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary	
Seed Type	Pounds/Acre

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name:

Last Name:

Phone:

Email:

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: PIPELINE

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Disturbance type: OTHER

Describe: Power Line

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Disturbance type: OTHER

Describe: Frac Pond

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Disturbance type: OTHER

Describe: Central Tank Battery

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: SANTA FE NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: On-site inspection was held on December 13, 2018 with Jesse Bassett (BLM).

Other SUPO Attachment

MPC_RR_ALL_SLOTS_SUPO_v3_031919_20190327071908.pdf



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

PWD Data Report

08/29/2019

APD ID: 10400040350

Submission Date: 03/28/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



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

Bond Info Data Report

08/29/2019

APD ID: 10400040350

Submission Date: 03/28/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

Well Type: OIL WELL

Well Work Type: Drill

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Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001079

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

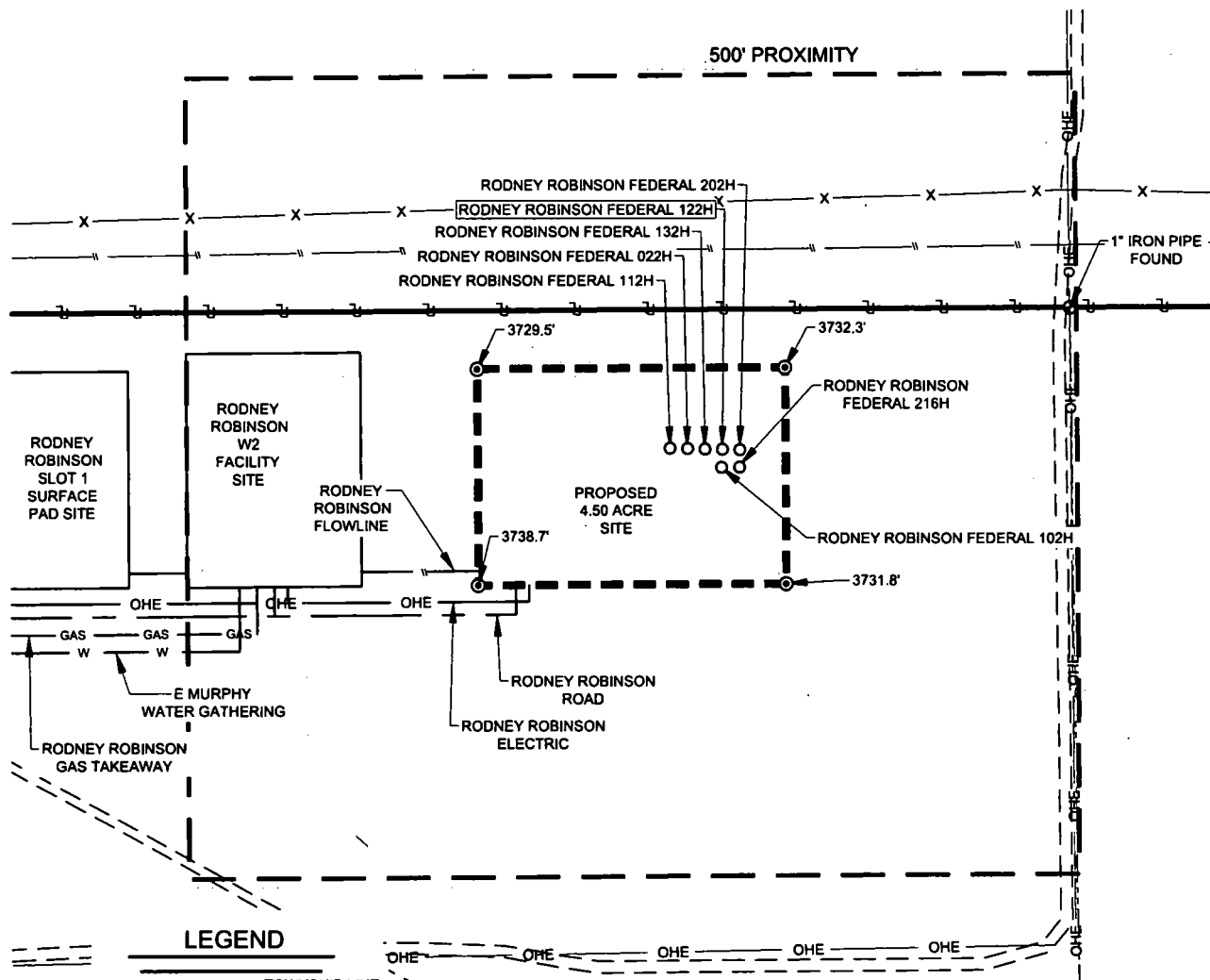
Well Number: 122H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	60	FSL	183 4	FWL	23S	33E	7	Aliquot SESW	32.31220 01	- 103.6138 378	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 138876	- 710 5	209 72	108 37
BHL Leg #1	60	FSL	183 4	FWL	23S	33E	7	Aliquot SESW	32.31220 01	- 103.6138 378	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 138876	- 710 5	209 72	108 37

SCALE: 1" = 300'

0' 150' 300'

SECTION 6, TOWNSHIP 23-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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Angel M. Baeza, P.S. No. 25116
MARCH 19, 2019

RODNEY ROBINSON FEDERAL 122H PROXIMITY MAP	REVISION:	
	MML	01/30/19
	EAH	03/19/19
DATE: 12/17/18		
FILE: LO_RODNEY_ROBINSON_FEDERAL_122H_REV3		
DRAWN BY: EAH		
SHEET: 7 OF 7		

- NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
 3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
 4. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

Rodney Robinson Federal #216H	N/A	UL-C Sec 6 T23S R33E	270 FNL 1957 FWL	+/-6500	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
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Gathering System and Pipeline Notification

The wells will be connected to a production facility after flowback operations are complete so long as the gas transporter system is in place. The gas produced from the production facility should be connected to Lucid Energy Delaware, LLC gathering system. It will require ~5,000' of pipeline to connect the facility to Lucid Energy Delaware, LLC gathering system. Matador Production Company periodically provides a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future to Lucid Energy Delaware, LLC. If changes occur that will affect the drilling and completion schedule, Matador Production Company will notify Lucid Energy Delaware, LLC. Additionally, the gas produced from the well will be processed at a processing plant further downstream and, although unanticipated, any issues with downstream facilities could cause flaring at the wellhead. The actual flow of the gas will be based on compression operating parameters and gathering system pressures measured when the well starts producing.

Flowback Strategy

After the fracture treatment/completion operations (flowback), the well will be produced to temporary production tanks and the gas will be flared or vented. During flowback, the fluids and sand content will be monitored. If the produced fluids contain minimal sand, then the well will be turned to production facilities. The gas sales should start as soon as the well starts flowing through the production facilities, unless there are operational issues on the midstream system at that time. Based on current information, it is Matador's belief the system will be able to take the gas upon completion of the well.

Safety requirements during cleanout operations may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Operating a generator will only utilize a portion of the produced gas and the remainder of gas would still need to be flared.
 - Power Company has to be willing to purchase gas back and if they are willing they require a 5 year commitment to supply the agreed upon amount of power back to them. With gas decline rates and unpredictability of markets it is impossible to agree to such long term demands. If the demands are not met then operator is burdened with penalty for not delivering.
- Compressed Natural Gas – On lease
 - Compressed Natural Gas is likely to be uneconomic to operate when the gas volume declines.
- NGL Removal – On lease
 - NGL Removal requires a plant and is expensive on such a small scale rendering it uneconomic and still requires residue gas to be flared.



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

Drilling Plan Data Report

08/29/2019

APD ID: 10400040350

Submission Date: 03/28/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: RODNEY ROBINSON FEDERAL

Well Number: 122H

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Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	QUATERNARY	3732	0	0		NONE	N
2	RUSTLER ANHYDRITE	2476	1256	1256		NONE	N
3	TOP SALT	1949	1783	1783		NATURAL GAS,OIL	N
4	CASTILE	341	3391	3391	SALT	NONE	N
5	BASE OF SALT	-1251	4983	4983		NONE	N
6	BELL CANYON	-1296	5028	5028	SANDSTONE	NATURAL GAS,OIL	N
7	CHERRY CANYON	-2149	5881	5881	SANDSTONE	NATURAL GAS,OIL	N
8	BRUSHY CANYON	-3497	7229	7229	SANDSTONE	NATURAL GAS,OIL	N
9	BONE SPRING LIME	-5054	8786	8786		NATURAL GAS,OIL	N
10	BONE SPRING 1ST	-6114	9846	9846	OTHER : Carbonate	NATURAL GAS,OIL	N
11	BONE SPRING 1ST	-6205	9937	9937	SANDSTONE	NATURAL GAS,OIL	N
12	BONE SPRING 2ND	-6486	10218	10221	OTHER : Carbonate	NATURAL GAS,OIL	N
13	BONE SPRING 2ND	-6916	10648	10648	SANDSTONE	NATURAL GAS,OIL	Y

Section 2 - Blowout Prevention