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

Sundry Print Report

06/12/2023

Well Name: BIG STAG FED COM

Well Location: T21S / R32E / SEC 1 / SWSE / 32.500699 / -103.62721

County or Parish/State: LEA / NM

Well Number: 304H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM127892

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002547561

Well Status: Approved Application for Permit to Drill

Operator: MATADOR PRODUCTION COMPANY

Notice of Intent

Sundry ID: 2699449

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 10/24/2022

Time Sundry Submitted: 02:26

Date proposed operation will begin: 08/01/2023

Procedure Description: BLM Bond No: NMB001079 Surety Bond No RLB0015172 “Matador respectfully request the option to make the following changes to the Big Stag Fed Com #304H: - Change the SHL from 195’ FNL & 2241’ FEL (NWNE) of section 12-21S-32E to 5’ FSL & 2276’ FEL (SWSE) of section 1-21S-32E. SHL remains on previously approved pad site. - Change the BHL from 1268’ FNL of Section 13-21S-32E & 1650’ FEL to 1210’ FNL & 2310’ FEL of sec 13-21S-32E. BHL remains in the previously approved unit. - Revise casing program to 16”, 10-3/4”, 8-5/8” by 5.5” and deepen well to 3rd Bone Spring, attached is revised drill plan with updated casing depths.”

NOI Attachments

Procedure Description

Big_Stag_Fed_Com_304H_Drill_Plan_Sundry_20230427163122.pdf

Big_Stag_Fed_Com_304H_Directional_AC_Report_v1_20230427163103.pdf

Big_Stag_Fed_Com_304H_Directional_Well_Plan_v1_20230427163036.pdf

Big_Stag_Fed_Com_304H_Directional_Wall_Plot_v1_20230427163027.pdf

2022101654_MATADOR_BIG_STAG_FED_COM_LEA_304H_C_102_FINAL_04_20_2023_FINALsigned_20230424160945.pdf

222101654_MATADOR_BIG_STAG_304H_WELL_SITE_20221024142526.pdf

Big_Stag_Fed_Com_304H_Casing_Specs_8.625in_32ppf_P110EC_SPRINT_FJ_20221024142447.pdf

Big_Stag_Fed_Com_304H_Casing_Specs_5.5in_20lb_P110EC_VAM_SPRINT_SF_20221024142422.pdf

Well Name: BIG STAG FED COM

Well Location: T21S / R32E / SEC 1 / SWSE / 32.500699 / -103.62721

County or Parish/State: LEA / NM

Well Number: 304H

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Allottee or Tribe Name:

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Big_Stag_Fed_Com_304H_4_String_Wellhead_Diagram_with_16in_CRC_20221024142416.pdf

Conditions of Approval

Additional

BIG_STAG_FED_COM_304H_APD_Change_COA_20230601143647.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CASSIE HAHN

Signed on: MAY 31, 2023 10:02 AM

Name: MATADOR PRODUCTION COMPANY

Title: Senior Landman

Street Address: 5400 LBJ FREEWAY, SUITE 1500

City: DALLAS **State:** TX

Phone: (972) 371-5440

Email address: CHAHN@MATADORRESOURCES.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY

BLM POC Title: ENGINEER

BLM POC Phone: 5759884722

BLM POC Email Address: KIMMATTY@BLM.GOV

Disposition: Approved

Disposition Date: 06/01/2023

Signature: Chris Walls

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. 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 the 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., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: NWNE / 195 FNL / 2241 FEL / TWSP: 21S / RANGE: 32E / SECTION: 12 / LAT: 32.50015 / LONG: -103.627095 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 63 FSL / 2486 FEL / TWSP: 21S / RANGE: 32E / SECTION: 1 / LAT: 32.5008564 / LONG: -103.6278875 (TVD: 8848 feet, MD: 8883 feet)

PPP: NWSE / 2640 FSL / 2310 FEL / TWSP: 21S / RANGE: 32E / SECTION: 12 / LAT: 32.49345 / LONG: -103.627327 (TVD: 9217 feet, MD: 11747 feet)

BHL: NWNE / 1270 FNL / 2310 FEL / TWSP: 21S / RANGE: 32E / SECTION: 13 / LAT: 32.482678 / LONG: -103.627335 (TVD: 9198 feet, MD: 15669 feet)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
WELL NAME & NO.:	BIG STAG FED COM 304H
SURFACE HOLE FOOTAGE:	5'/S & 2276'/E
BOTTOM HOLE FOOTAGE	1210'/N & 2310'/E
LOCATION:	Section 1, T.21 S., R.32 E., NMP
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	( ) None	( ) Secretary	(•) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Wellhead Variance	( ) Diverter		
Other	[x] 4 String	[x] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Pilot Hole	[ ] Open Annulus
Cementing	[x] Contingency Cement Squeeze	[ ] EchoMeter	[ ] Primary Cement Squeeze
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit
Special Requirements	[ ] Batch Sundry		
Special Requirements Variance	[ ] Break Testing	[ ] Offline Cementing	[ ] Casing Clearance

SEE ORIGINAL COA FOR ALL OTHER REQUIREMENTS.

A. CASING

Primary Casing Design:

1. The **16** inch surface casing shall be set at approximately **1,675 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 psi 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 psi compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **10-3/4** inch 1st intermediate casing shall be set at approximately **3,300** feet. The minimum required fill of cement behind the **10-3/4** 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 (2-stage with DV tool):

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. Operator must run a CBL from TD of the 10-3/4" casing to surface. Submit results to BLM.

- In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing string must come to surface.

3. The **8-5/8** inch 2nd intermediate casing shall be set at approximately **5,808** feet. The minimum required fill of cement behind the **8-5/8 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 (2-stage with DV tool):

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.

c. 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.

d. Second stage above DV tool:
   - ❖ Cement to surface. If cement does not circulate, contact the appropriate BLM office. Operator must run a CBL from TD of the 10-3/4" casing to surface. Submit results to BLM.

- ❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
  (Ensure FW based mud used across the Capitan Reef interval)

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

Bradenhead cement squeeze option for this intermediate string is approved. In this case, operator must run a CBL or echometer from TD of the 8-5/8" casing to surface. Submit results to BLM.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back at least **50 feet** above top of Capitan reef formation. Operator shall provide method of verification.

Excess cement for production casing is below CFO's recommendation of 25%.

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)

☒ 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) 689-5981

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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: The flex line must meet the requirements of API 16C. 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 cement), 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 cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. 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.

SA 06/01/2023

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

Sundry Print Report

11/01/2022

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County or Parish/State: LEA / NM

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Allottee or Tribe Name:

Lease Number: NMNM127892

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Unit or CA Number:

US Well Number: 3002547561

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Type of Action: APD Change

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NOI Attachments

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County or Parish/State: LEA / NM

Well Number: 304H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM127892

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002547561

Well Status: Approved Application for Permit to Drill

Operator: MATADOR PRODUCTION COMPANY

Big_Stag_304_plat_001_20221024142328.pdf

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: CASSIE HAHN

Signed on: OCT 24, 2022 02:25 PM

Name: MATADOR PRODUCTION COMPANY

Title: Landman

Street Address: 5400 LBJ Freeway, Suite 1500

City: Dallas **State:** TX

Phone: (972) 371-5440

Email address: chahn@matadorresources.com

Field

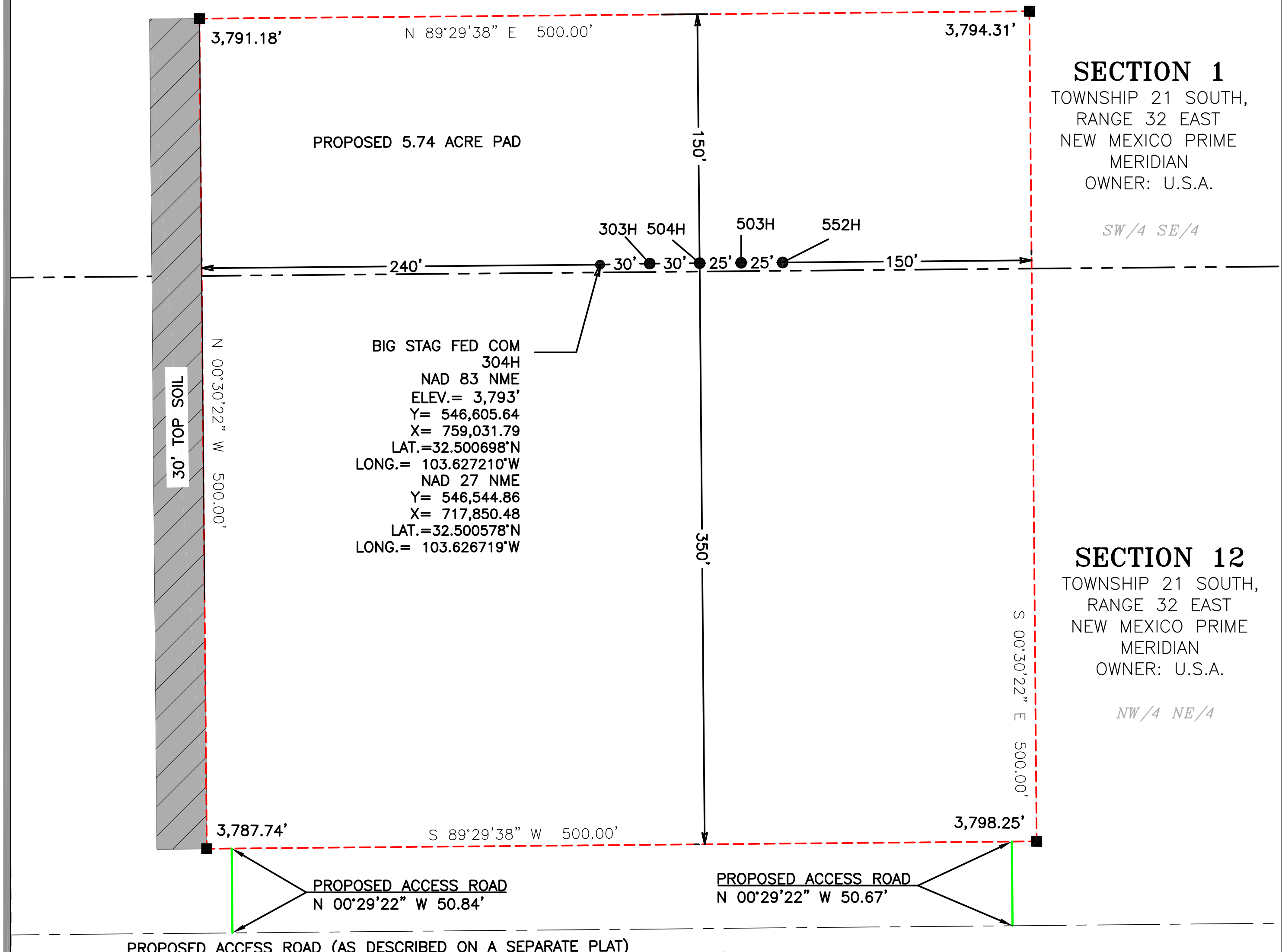
Representative Name:

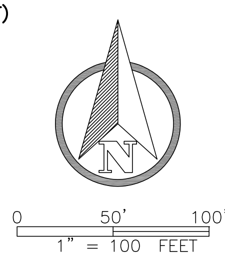
Street Address:

City: **State:** **Zip:**

Phone:

Email address:





NOTE:

1). SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION

DIRECTIONS TO THIS LOCATION:

FROM THE INTERSECTION OF N.M. HIGHWAY 176 AND BOOTLEG LANE, GO SOUTH ON BOOTLEG LANE APPROX. 1.7 MILES . TURN LEFT (EAST) ON A GRAVEL ROAD AND GO APPROX. 0.47 MILES TURN LEFT (NORTH) ,THE LOCATION IS TO THE NORTH.

LEGEND

- PROPOSED ACCESS RD.
- PROPOSED PAD
- SECTION LINE

I, MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23786, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

MARK DILLON HARP NEW MEXICO 23786 PROFESSIONAL SURVEYOR

MARK DILLON HARP
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF NEW MEXICO NO. 23786

FSC INC
SURVEYORS + ENGINEERS

550 Bailey Ave., 205 - Fort Worth, TX 76107
Ph: 817.349.9800 - Fax: 979.732.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

MATADOR PRODUCTION COMPANY

WELL SITE PLAN

BIG STAG FED COM 304H
LOCATED 2,276 FEET FROM THE EAST LINE AND 5 FEET FROM THE SOUTH LINE OF SECTION 1, TOWNSHIP 21 SOUTH, RANGE 32 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO

DATE:	10-7-2022	PROJECT NO:	2022101654
DRAWN BY:	RE	SCALE:	1" = 100'
CHECKED BY:	AR	SHEET:	1 OF 3
FIELD CREW:	RD	REVISION:	1

P:\PROJECTS\2022\2022101654\MATADOR\BIG_STAG\304H-LP\DWG\2022101654-MATADOR-BIG_STAG_304H_WELL_SITE.dwg, Adobe PDF, Letter

Drill Plan

Big Stag Fed Com 304H
SHL: 5' FSL & 2276' FEL Section 1
BHL: 1268' FNL & 2310' FEL Section 13
Township/Range: 21S 32E
Elevation Above Sea Level: 3793

- Matador respectfully requests the option to amend the well design of the Big Stag Fed Com 304H to make the following changes to the current APD.

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	20	0 - 1675	0 - 1675	16	75	J-55	BUTT	1.125	1.125	1.8
Intermediate 1	13.5	0 - 3300	0 - 3300	10.75	45.5	J-55	BUTT	1.125	1.125	1.8
Intermediate 2	9.875	0 - 5808	0 - 5808	8.625	32	P-110	VAM-Sprint FJ	1.125	1.125	1.8
Production	7.875	0 - 18307	0 - 11570	5.5	20	P-110	VAM Sprint SF	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
- All non-API joint connections will be of like or greater quality and as run specification sheets will be on location for review

String	Type	Sacks	Yield	Cu. Ft.	Weight	Percent Excess	Top of Cement (ft)	Class	Blend
Surface	Lead	940	1.78	1681	13.5	50%	0	C	5% NaCl + LCM
	Tail	1540	1.35	2075	14.8	50%	1340	C	5% NaCl + LCM
Intermediate 1	Lead	1120	1.78	2000	13.5	50%	0	C	5% NaCl + LCM
	Tail	280	1.35	382	14.8	50%	2640	C	5% NaCl + LCM
Intermediate 2	Lead	530	1.78	950	13.5	50%	0	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	160	1.35	217	14.8	50%	4808	C	5% NaCl + LCM
Production	Lead	400	3.66	1449	10.3	25%	3398	A/C	Fluid Loss + Dispersant + Retarder + LCM
	Tail	1160	1.35	1561	13.2	15%	10524	A/C	Fluid Loss + Dispersant + Retarder + LCM

-Matador requests the option to run a DV tool with annular packer as contingency in the intermediate 1 or 2 section on 10-3/4" or 8-5/8" casing if lost circulation is encountered. If losses occur, the DV tool with packer will be placed at least 100' above the loss zone to give the option to pump cement as either a single stage or two stage.
-Matador would also like to request a variance to perform a bradenhead squeeze on Intermediate 2 if needed.

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	20	Spud Mud	0 - 1675	8.4 - 8.8	28-30	NC
Intermediate 1	13.5	Brine Water	1675 - 3300	9.5 - 10.2	28-32	NC
Intermediate 2	9.875	Fresh Water	3300 - 5808	8.4 - 8.6	28-30	NC
Production	7.875	OBM/Cut Brine	5808 - 18307	8.6 - 9.4	28-30	NC

Matador Production Company

Ranger/Arrowhead
Big Game
Big Stag Fed Com #304H

Wellbore #1

Plan: BLM Plan #1

Standard Planning Report

21 October, 2022

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3821.5usft
Project:	Ranger/Arrowhead	**MD Reference:**	KB @ 3821.5usft
Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

Project Ranger/Arrowhead

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		Using geodetic scale factor

Site Big Game

Site Position:		**Northing:**	546,545.41 usft	**Latitude:**	32° 30' 2.084 N
From:	Lat/Long	**Easting:**	717,880.57 usft	**Longitude:**	103° 37' 35.839 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.38 °

Well Big Stag Fed Com #304H, Lea county, NM

Well Position	**+N/-S**	-0.2 usft	**Northing:**	546,545.21 usft	**Latitude:**	32° 30' 2.084 N
	+E/-W	-29.9 usft	**Easting:**	717,850.66 usft	**Longitude:**	103° 37' 36.188 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,793.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/16/2022	6.42	60.23	47,543.64655360

Design BLM Plan #1

Audit Notes:

Version:	1	**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.66

Plan Survey Tool Program **Date** 10/17/2022

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	18,306.8	BLM Plan #1 (Wellbore #1)	MWD	
				OWSG MWD - Standard	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	8.00	341.36	2,297.4	52.8	-17.8	1.00	1.00	0.00	341.36	
4,625.7	8.00	341.36	4,600.5	359.5	-121.3	0.00	0.00	0.00	0.00	
5,159.0	0.00	0.00	5,132.1	394.7	-133.2	1.50	-1.50	0.00	180.00	
11,024.0	0.00	0.00	10,997.0	394.7	-133.2	0.00	0.00	0.00	0.00	VP - Big Stag Fed Co
11,924.0	90.00	172.30	11,570.0	-173.0	-56.4	10.00	10.00	0.00	172.30	
12,292.2	90.00	179.66	11,570.0	-540.1	-30.6	2.00	0.00	2.00	90.00	
18,307.1	90.00	179.66	11,570.0	-6,555.0	4.6	0.00	0.00	0.00	0.00	BHL - Big Stag Fed C

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3821.5usft
Project:	Ranger/Arrowhead	**MD Reference:**	KB @ 3821.5usft
Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1.00									
1,600.0	1.00	341.36	1,600.0	0.8	-0.3	-0.8	1.00	1.00	0.00
1,700.0	2.00	341.36	1,700.0	3.3	-1.1	-3.3	1.00	1.00	0.00
1,800.0	3.00	341.36	1,799.9	7.4	-2.5	-7.5	1.00	1.00	0.00
1,900.0	4.00	341.36	1,899.7	13.2	-4.5	-13.3	1.00	1.00	0.00
2,000.0	5.00	341.36	1,999.4	20.7	-7.0	-20.7	1.00	1.00	0.00
2,100.0	6.00	341.36	2,098.9	29.7	-10.0	-29.8	1.00	1.00	0.00
2,200.0	7.00	341.36	2,198.3	40.5	-13.7	-40.5	1.00	1.00	0.00
2,300.0	8.00	341.36	2,297.4	52.8	-17.8	-52.9	1.00	1.00	0.00
Start 2325.7 hold at 2300.0 MD									
2,400.0	8.00	341.36	2,396.4	66.0	-22.3	-66.2	0.00	0.00	0.00
2,500.0	8.00	341.36	2,495.5	79.2	-26.7	-79.4	0.00	0.00	0.00
2,600.0	8.00	341.36	2,594.5	92.4	-31.2	-92.6	0.00	0.00	0.00
2,700.0	8.00	341.36	2,693.5	105.6	-35.6	-105.8	0.00	0.00	0.00
2,800.0	8.00	341.36	2,792.5	118.8	-40.1	-119.0	0.00	0.00	0.00
2,900.0	8.00	341.36	2,891.6	132.0	-44.5	-132.2	0.00	0.00	0.00
3,000.0	8.00	341.36	2,990.6	145.1	-49.0	-145.4	0.00	0.00	0.00
3,100.0	8.00	341.36	3,089.6	158.3	-53.4	-158.6	0.00	0.00	0.00
3,200.0	8.00	341.36	3,188.6	171.5	-57.9	-171.9	0.00	0.00	0.00
3,300.0	8.00	341.36	3,287.7	184.7	-62.3	-185.1	0.00	0.00	0.00
3,400.0	8.00	341.36	3,386.7	197.9	-66.8	-198.3	0.00	0.00	0.00
3,500.0	8.00	341.36	3,485.7	211.1	-71.2	-211.5	0.00	0.00	0.00
3,600.0	8.00	341.36	3,584.8	224.3	-75.7	-224.7	0.00	0.00	0.00
3,700.0	8.00	341.36	3,683.8	237.5	-80.1	-237.9	0.00	0.00	0.00
3,800.0	8.00	341.36	3,782.8	250.6	-84.6	-251.1	0.00	0.00	0.00
3,900.0	8.00	341.36	3,881.8	263.8	-89.0	-264.3	0.00	0.00	0.00
4,000.0	8.00	341.36	3,980.9	277.0	-93.5	-277.6	0.00	0.00	0.00
4,100.0	8.00	341.36	4,079.9	290.2	-97.9	-290.8	0.00	0.00	0.00
4,200.0	8.00	341.36	4,178.9	303.4	-102.4	-304.0	0.00	0.00	0.00
4,300.0	8.00	341.36	4,277.9	316.6	-106.8	-317.2	0.00	0.00	0.00
4,400.0	8.00	341.36	4,377.0	329.8	-111.3	-330.4	0.00	0.00	0.00
4,500.0	8.00	341.36	4,476.0	342.9	-115.7	-343.6	0.00	0.00	0.00
4,600.0	8.00	341.36	4,575.0	356.1	-120.2	-356.8	0.00	0.00	0.00
4,625.7	8.00	341.36	4,600.5	359.5	-121.3	-360.2	0.00	0.00	0.00
Start Drop -1.50									
4,700.0	6.89	341.36	4,674.1	368.6	-124.4	-369.4	1.50	-1.50	0.00
4,800.0	5.39	341.36	4,773.6	378.8	-127.8	-379.5	1.50	-1.50	0.00

Planning Report

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Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

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)
4,900.0	3.89	341.36	4,873.2	386.4	-130.4	-387.2	1.50	-1.50	0.00
5,000.0	2.39	341.36	4,973.1	391.6	-132.1	-392.4	1.50	-1.50	0.00
5,100.0	0.89	341.36	5,073.0	394.3	-133.0	-395.1	1.50	-1.50	0.00
5,159.0	0.00	0.00	5,132.1	394.7	-133.2	-395.5	1.50	-1.50	0.00
Start 5864.9 hold at 5159.0 MD									
5,200.0	0.00	0.00	5,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
5,900.0	0.00	0.00	5,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,100.0	0.00	0.00	6,073.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,100.0	0.00	0.00	7,073.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,500.0	0.00	0.00	7,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,700.0	0.00	0.00	7,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,100.0	0.00	0.00	8,073.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,200.0	0.00	0.00	8,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,300.0	0.00	0.00	8,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,400.0	0.00	0.00	8,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,600.0	0.00	0.00	8,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,700.0	0.00	0.00	8,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,800.0	0.00	0.00	8,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
8,900.0	0.00	0.00	8,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,000.0	0.00	0.00	8,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,100.0	0.00	0.00	9,073.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,200.0	0.00	0.00	9,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,300.0	0.00	0.00	9,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,400.0	0.00	0.00	9,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,500.0	0.00	0.00	9,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,600.0	0.00	0.00	9,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,700.0	0.00	0.00	9,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,800.0	0.00	0.00	9,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
9,900.0	0.00	0.00	9,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,000.0	0.00	0.00	9,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3821.5usft
Project:	Ranger/Arrowhead	**MD Reference:**	KB @ 3821.5usft
Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

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)
10,100.0	0.00	0.00	10,073.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,200.0	0.00	0.00	10,173.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,300.0	0.00	0.00	10,273.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,400.0	0.00	0.00	10,373.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,500.0	0.00	0.00	10,473.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,600.0	0.00	0.00	10,573.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,700.0	0.00	0.00	10,673.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,800.0	0.00	0.00	10,773.0	394.7	-133.2	-395.5	0.00	0.00	0.00
10,900.0	0.00	0.00	10,873.0	394.7	-133.2	-395.5	0.00	0.00	0.00
11,000.0	0.00	0.00	10,973.0	394.7	-133.2	-395.5	0.00	0.00	0.00
11,024.0	0.00	0.00	10,997.0	394.7	-133.2	-395.5	0.00	0.00	0.00
Start Build 10.00 - VP - Big Stag Fed Com #304H									
11,100.0	7.60	172.30	11,072.8	389.8	-132.5	-390.5	10.00	10.00	0.00
11,200.0	17.60	172.30	11,170.3	368.2	-129.6	-368.9	10.00	10.00	0.00
11,300.0	27.60	172.30	11,262.5	330.1	-124.4	-330.8	10.00	10.00	0.00
11,400.0	37.60	172.30	11,346.6	276.8	-117.2	-277.5	10.00	10.00	0.00
11,500.0	47.60	172.30	11,420.1	209.8	-108.2	-210.4	10.00	10.00	0.00
11,600.0	57.60	172.30	11,480.8	131.2	-97.5	-131.7	10.00	10.00	0.00
11,700.0	67.60	172.30	11,526.7	43.3	-85.7	-43.8	10.00	10.00	0.00
11,800.0	77.60	172.30	11,556.6	-51.2	-72.9	50.7	10.00	10.00	0.00
11,900.0	87.60	172.30	11,569.5	-149.3	-59.6	149.0	10.00	10.00	0.00
11,924.0	90.00	172.30	11,570.0	-173.0	-56.4	172.7	10.00	10.00	0.00
Start DLS 2.00 TFO 90.00									
12,000.0	90.00	173.82	11,570.0	-248.5	-47.2	248.2	2.00	0.00	2.00
12,100.0	90.00	175.82	11,570.0	-348.1	-38.2	347.9	2.00	0.00	2.00
12,200.0	90.00	177.82	11,570.0	-448.0	-32.7	447.8	2.00	0.00	2.00
12,292.2	90.00	179.66	11,570.0	-540.1	-30.6	539.9	2.00	0.00	2.00
Start 6014.9 hold at 12292.2 MD									
12,300.0	90.00	179.66	11,570.0	-547.9	-30.6	547.7	0.00	0.00	0.00
12,400.0	90.00	179.66	11,570.0	-647.9	-30.0	647.7	0.00	0.00	0.00
12,500.0	90.00	179.66	11,570.0	-747.9	-29.4	747.7	0.00	0.00	0.00
12,600.0	90.00	179.66	11,570.0	-847.9	-28.8	847.7	0.00	0.00	0.00
12,700.0	90.00	179.66	11,570.0	-947.9	-28.2	947.7	0.00	0.00	0.00
12,800.0	90.00	179.66	11,570.0	-1,047.9	-27.7	1,047.7	0.00	0.00	0.00
12,900.0	90.00	179.66	11,570.0	-1,147.9	-27.1	1,147.7	0.00	0.00	0.00
13,000.0	90.00	179.66	11,570.0	-1,247.9	-26.5	1,247.7	0.00	0.00	0.00
13,100.0	90.00	179.66	11,570.0	-1,347.9	-25.9	1,347.7	0.00	0.00	0.00
13,200.0	90.00	179.66	11,570.0	-1,447.9	-25.3	1,447.7	0.00	0.00	0.00
13,300.0	90.00	179.66	11,570.0	-1,547.9	-24.7	1,547.7	0.00	0.00	0.00
13,400.0	90.00	179.66	11,570.0	-1,647.9	-24.2	1,647.7	0.00	0.00	0.00
13,500.0	90.00	179.66	11,570.0	-1,747.9	-23.6	1,747.7	0.00	0.00	0.00
13,600.0	90.00	179.66	11,570.0	-1,847.9	-23.0	1,847.7	0.00	0.00	0.00
13,700.0	90.00	179.66	11,570.0	-1,947.9	-22.4	1,947.7	0.00	0.00	0.00
13,800.0	90.00	179.66	11,570.0	-2,047.9	-21.8	2,047.7	0.00	0.00	0.00
13,900.0	90.00	179.66	11,570.0	-2,147.9	-21.2	2,147.7	0.00	0.00	0.00
14,000.0	90.00	179.66	11,570.0	-2,247.9	-20.6	2,247.7	0.00	0.00	0.00
14,100.0	90.00	179.66	11,570.0	-2,347.9	-20.1	2,347.7	0.00	0.00	0.00
14,200.0	90.00	179.66	11,570.0	-2,447.9	-19.5	2,447.7	0.00	0.00	0.00
14,300.0	90.00	179.66	11,570.0	-2,547.9	-18.9	2,547.7	0.00	0.00	0.00
14,398.6	90.00	179.66	11,570.0	-2,646.5	-18.3	2,646.4	0.00	0.00	0.00
Exit NMNM 127892 (1) - Big Stag Fed Com #304H									
14,400.0	90.00	179.66	11,570.0	-2,647.9	-18.3	2,647.7	0.00	0.00	0.00
14,500.0	90.00	179.66	11,570.0	-2,747.9	-17.7	2,747.7	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3821.5usft
Project:	Ranger/Arrowhead	**MD Reference:**	KB @ 3821.5usft
Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

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)
14,600.0	90.00	179.66	11,570.0	-2,847.9	-17.1	2,847.7	0.00	0.00	0.00
14,700.0	90.00	179.66	11,570.0	-2,947.9	-16.5	2,947.7	0.00	0.00	0.00
14,800.0	90.00	179.66	11,570.0	-3,047.9	-16.0	3,047.7	0.00	0.00	0.00
14,900.0	90.00	179.66	11,570.0	-3,147.9	-15.4	3,147.7	0.00	0.00	0.00
15,000.0	90.00	179.66	11,570.0	-3,247.9	-14.8	3,247.7	0.00	0.00	0.00
15,100.0	90.00	179.66	11,570.0	-3,347.9	-14.2	3,347.7	0.00	0.00	0.00
15,200.0	90.00	179.66	11,570.0	-3,447.9	-13.6	3,447.7	0.00	0.00	0.00
15,300.0	90.00	179.66	11,570.0	-3,547.9	-13.0	3,547.7	0.00	0.00	0.00
15,400.0	90.00	179.66	11,570.0	-3,647.9	-12.4	3,647.7	0.00	0.00	0.00
15,500.0	90.00	179.66	11,570.0	-3,747.9	-11.9	3,747.7	0.00	0.00	0.00
15,600.0	90.00	179.66	11,570.0	-3,847.9	-11.3	3,847.7	0.00	0.00	0.00
15,700.0	90.00	179.66	11,570.0	-3,947.9	-10.7	3,947.7	0.00	0.00	0.00
15,717.9	90.00	179.66	11,570.0	-3,965.8	-10.6	3,965.6	0.00	0.00	0.00
Exit NMNM 0553706 - Big Stag Fed Com #304H									
15,800.0	90.00	179.66	11,570.0	-4,047.9	-10.1	4,047.7	0.00	0.00	0.00
15,900.0	90.00	179.66	11,570.0	-4,147.9	-9.5	4,147.7	0.00	0.00	0.00
16,000.0	90.00	179.66	11,570.0	-4,247.9	-8.9	4,247.7	0.00	0.00	0.00
16,100.0	90.00	179.66	11,570.0	-4,347.9	-8.3	4,347.7	0.00	0.00	0.00
16,200.0	90.00	179.66	11,570.0	-4,447.9	-7.8	4,447.7	0.00	0.00	0.00
16,300.0	90.00	179.66	11,570.0	-4,547.9	-7.2	4,547.7	0.00	0.00	0.00
16,400.0	90.00	179.66	11,570.0	-4,647.9	-6.6	4,647.7	0.00	0.00	0.00
16,500.0	90.00	179.66	11,570.0	-4,747.9	-6.0	4,747.7	0.00	0.00	0.00
16,600.0	90.00	179.66	11,570.0	-4,847.9	-5.4	4,847.7	0.00	0.00	0.00
16,700.0	90.00	179.66	11,570.0	-4,947.9	-4.8	4,947.7	0.00	0.00	0.00
16,800.0	90.00	179.66	11,570.0	-5,047.9	-4.3	5,047.7	0.00	0.00	0.00
16,900.0	90.00	179.66	11,570.0	-5,147.9	-3.7	5,147.7	0.00	0.00	0.00
17,000.0	90.00	179.66	11,570.0	-5,247.8	-3.1	5,247.7	0.00	0.00	0.00
17,037.7	90.00	179.66	11,570.0	-5,285.6	-2.9	5,285.4	0.00	0.00	0.00
Exit NMNM 127892 (2) - Big Stag Fed Com #304H									
17,100.0	90.00	179.66	11,570.0	-5,347.8	-2.5	5,347.7	0.00	0.00	0.00
17,200.0	90.00	179.66	11,570.0	-5,447.8	-1.9	5,447.7	0.00	0.00	0.00
17,300.0	90.00	179.66	11,570.0	-5,547.8	-1.3	5,547.7	0.00	0.00	0.00
17,400.0	90.00	179.66	11,570.0	-5,647.8	-0.7	5,647.7	0.00	0.00	0.00
17,500.0	90.00	179.66	11,570.0	-5,747.8	-0.2	5,747.7	0.00	0.00	0.00
17,600.0	90.00	179.66	11,570.0	-5,847.8	0.4	5,847.7	0.00	0.00	0.00
17,700.0	90.00	179.66	11,570.0	-5,947.8	1.0	5,947.7	0.00	0.00	0.00
17,800.0	90.00	179.66	11,570.0	-6,047.8	1.6	6,047.7	0.00	0.00	0.00
17,900.0	90.00	179.66	11,570.0	-6,147.8	2.2	6,147.7	0.00	0.00	0.00
18,000.0	90.00	179.66	11,570.0	-6,247.8	2.8	6,247.7	0.00	0.00	0.00
18,100.0	90.00	179.66	11,570.0	-6,347.8	3.4	6,347.7	0.00	0.00	0.00
18,200.0	90.00	179.66	11,570.0	-6,447.8	3.9	6,447.7	0.00	0.00	0.00
18,300.0	90.00	179.66	11,570.0	-6,547.8	4.5	6,547.7	0.00	0.00	0.00
18,307.1	90.00	179.66	11,570.0	-6,555.0	4.6	6,554.9	0.00	0.00	0.00
TD at 18307.1 - BHL - Big Stag Fed Com #304H									

Planning Report

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3821.5usft
Project:	Ranger/Arrowhead	**MD Reference:**	KB @ 3821.5usft
Site:	Big Game	**North Reference:**	Grid
Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

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 - Big Stag Fed Com - plan hits target center - Point	0.00	0.00	10,997.0	394.7	-133.2	546,939.90	717,717.50	32° 30' 5.999 N	103° 37' 37.713 W
Exit NMNM 127892 (1) - - plan misses target center by 22.1usft at 14398.6usft MD (11570.0 TVD, -2646.5 N, -18.3 E) - Point	0.00	0.00	11,570.0	-2,646.4	3.8	543,899.01	717,854.48	32° 29' 35.899 N	103° 37' 36.349 W
Exit NMNM 0553706 - B - plan misses target center by 14.7usft at 15717.9usft MD (11570.0 TVD, -3965.8 N, -10.6 E) - Point	0.00	0.00	11,570.0	-3,965.7	4.1	542,579.76	717,854.73	32° 29' 22.845 N	103° 37' 36.448 W
Exit NMNM 127892 (2) - - plan misses target center by 7.2usft at 17037.7usft MD (11570.0 TVD, -5285.6 N, -2.9 E) - Point	0.00	0.00	11,570.0	-5,285.5	4.3	541,259.91	717,854.99	32° 29' 9.785 N	103° 37' 36.547 W
BHL - Big Stag Fed Com - plan hits target center - Point	0.00	0.00	11,570.0	-6,555.0	4.6	539,990.43	717,855.23	32° 28' 57.223 N	103° 37' 36.642 W

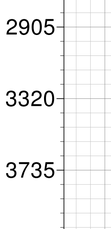
Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	Start Build 1.00
2,300.0	2,297.4	52.8	-17.8	Start 2325.7 hold at 2300.0 MD
4,625.7	4,600.5	359.5	-121.3	Start Drop -1.50
5,159.0	5,132.1	394.7	-133.2	Start 5864.9 hold at 5159.0 MD
11,024.0	10,997.0	394.7	-133.2	Start Build 10.00
11,924.0	11,570.0	-173.0	-56.4	Start DLS 2.00 TFO 90.00
12,292.2	11,570.0	-540.1	-30.6	Start 6014.9 hold at 12292.2 MD
18,307.1	11,570.0	-6,555.0	4.6	TD at 18307.1

Company: Matador Production Company
Well: Big Stag Fed Com #304H
County: Lea county, NM
Wellbore: Wellbore #1
Plan: BLM Plan #1
Date: 10/16/2022

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 6.04°
To convert a Magnetic Direction to a True Direction, Add 6.42° East
To convert a True Direction to a Grid Direction, Subtract 0.38°



Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.04°

Magnetic Field
Strength: 47543.6snT
Dip Angle: 60.23°
Date: 10/16/2022
Model: IGRF2015

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.0	18306.8	BLM Plan #1 (Wellbore #1)	MWD

WELL DETAILS: Big Stag Fed Com #304H

GL @ 3793.0 KB @ 3821.5usft

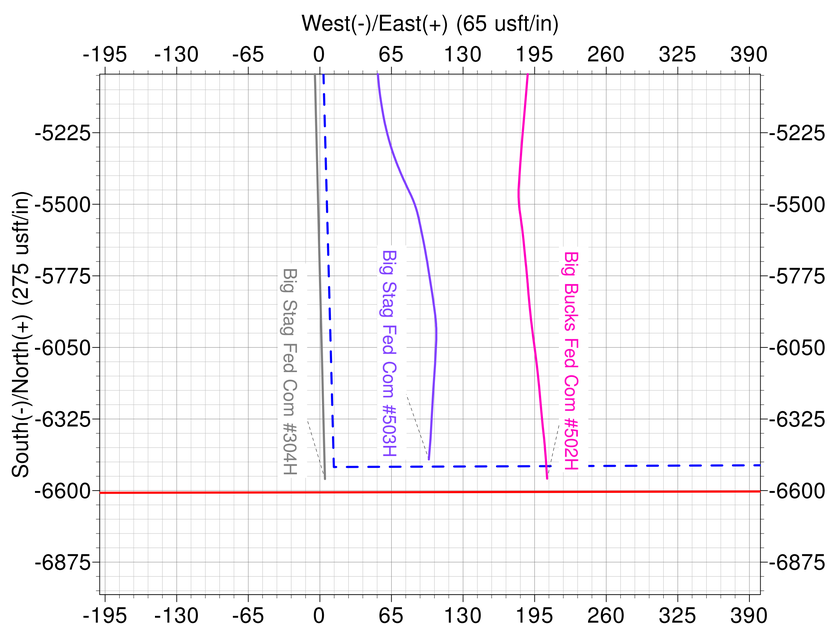
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	546545.21	717850.67	32° 30' 2.084 N	103° 37' 36.188 W	

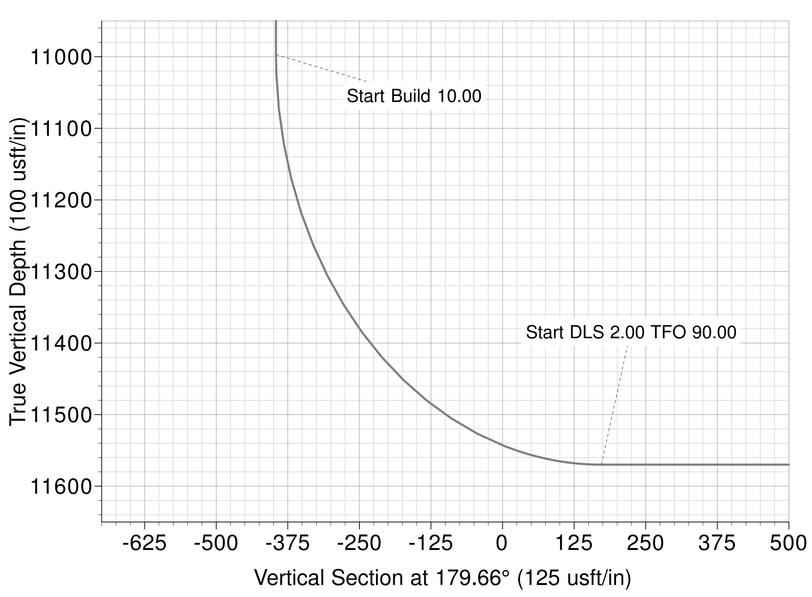
DESIGN TARGET DETAILS

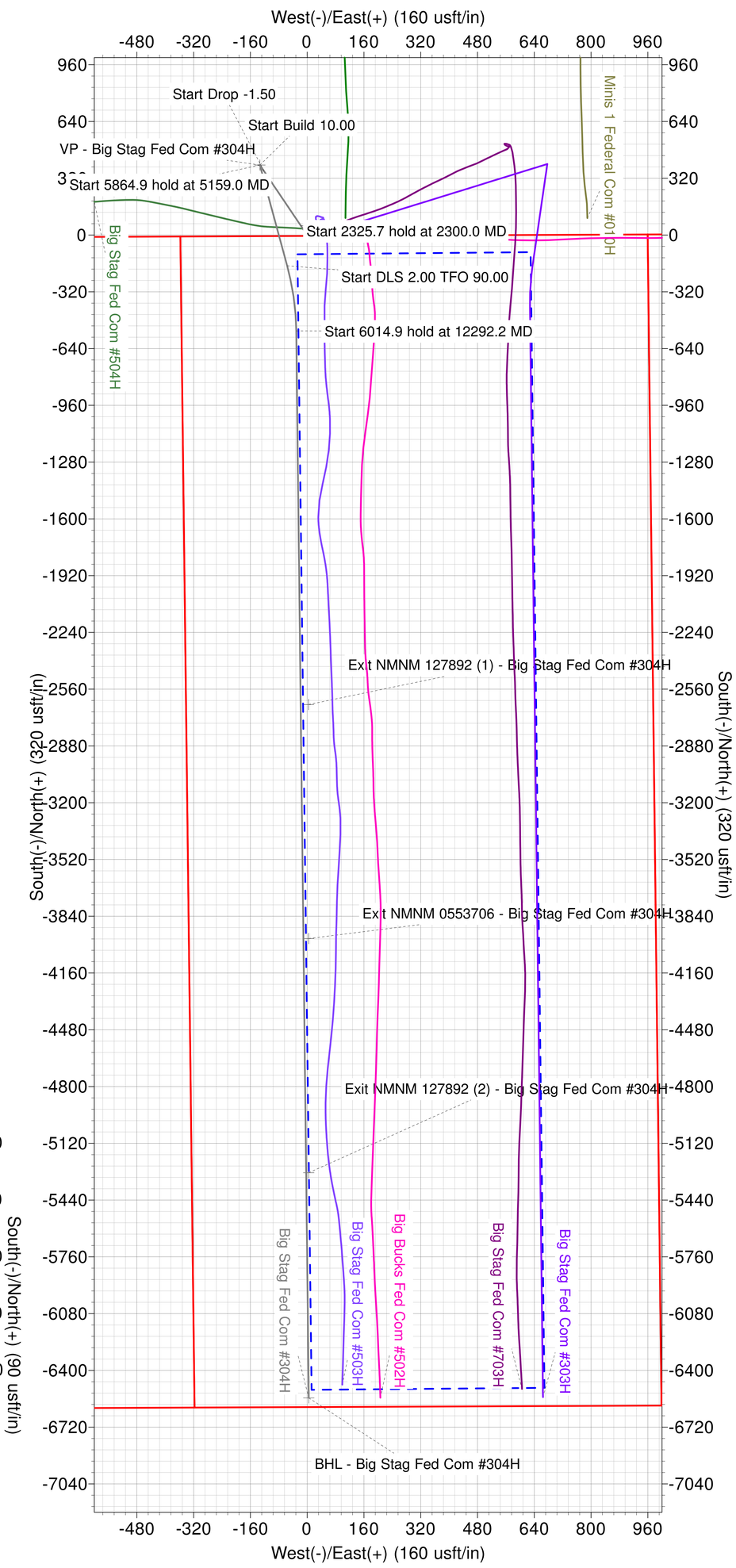
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP - Big Stag Fed Com #304H	10997.0	394.7	-133.2	546939.90	717717.50	32° 30' 5.999 N	103° 37' 37.713 W
BHL - Big Stag Fed Com #304H	11570.0	-6555.0	4.6	539990.43	717855.24	32° 28' 57.223 N	103° 37' 36.642 W
Exit NMNM 0553706 - Big Stag Fed Com #304H	11570.0	-3965.7	4.1	542579.75	717854.74	32° 29' 22.845 N	103° 37' 36.448 W
Exit NMNM 127892 (1) - Big Stag Fed Com #304H	11570.0	-2646.4	3.8	543899.00	717854.48	32° 29' 35.899 N	103° 37' 36.349 W
Exit NMNM 127892 (2) - Big Stag Fed Com #304H	11570.0	-5285.5	4.3	541259.91	717854.99	32° 29' 9.785 N	103° 37' 36.547 W

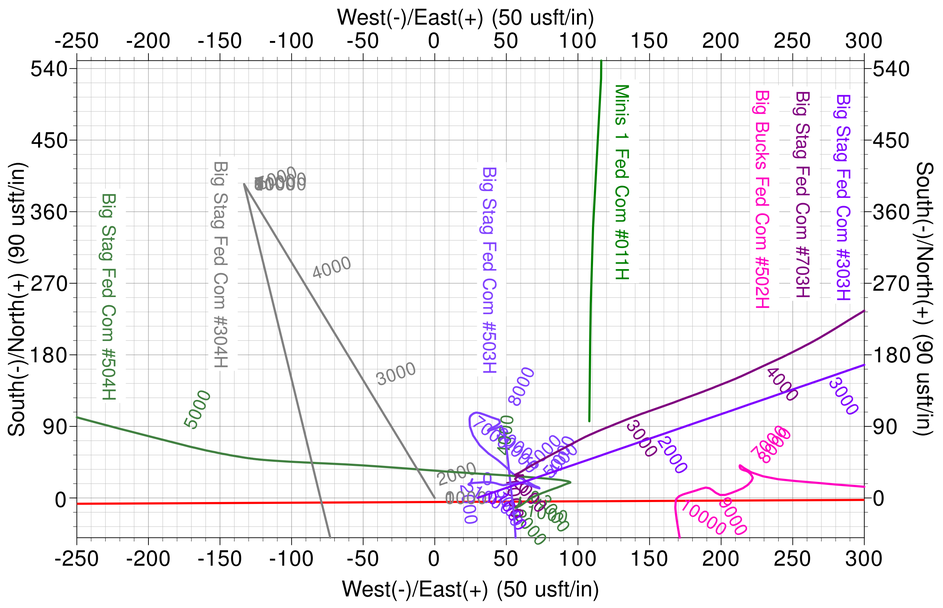
SECTION DETAILS

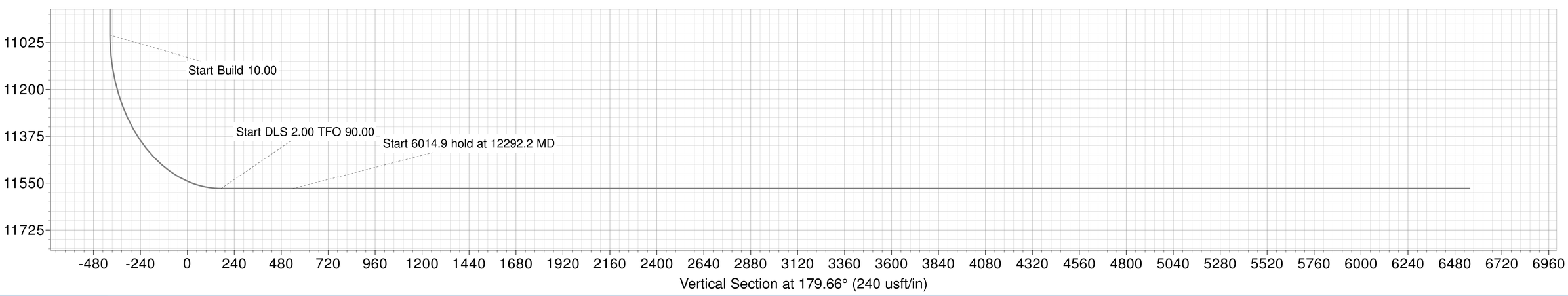
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	Start Build 1.00
2300.0	8.00	341.36	2297.4	52.8	-17.8	1.00	341.36	-52.9	Start 2325.7 hold at 2300.0 MD
4625.7	8.00	341.36	4600.5	359.5	-121.3	0.00	0.00	-360.2	Start Drop -1.50
5159.0	0.00	0.00	5132.1	394.7	-133.2	1.50	180.00	-395.5	Start 5864.9 hold at 5159.0 MD
11024.0	0.00	0.00	10997.0	394.7	-133.2	0.00	0.00	-395.5	Start Build 10.00
11924.0	90.00	172.30	11570.0	-173.0	-56.4	10.00	172.30	172.7	Start DLS 2.00 TFO 90.00
12292.2	90.00	179.66	11570.0	-540.1	-30.6	2.00	90.00	539.9	Start 6014.9 hold at 12292.2 MD
18307.1	90.00	179.66	11570.0	-6555.0	4.6	0.00	0.00	6554.9	TD at 18307.1

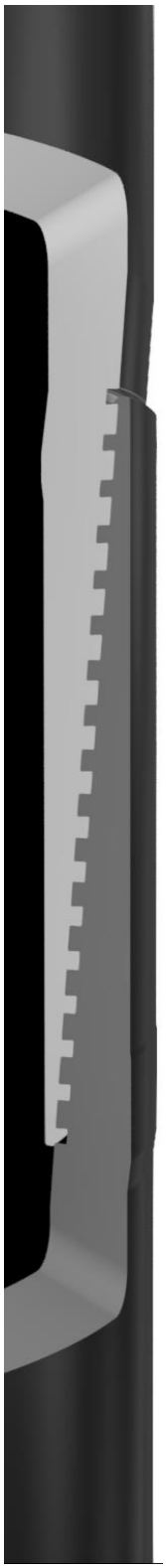












Issued on: 22 Apr. 2021 by Logan Van Gorp

VAM SPRINT-FJ

Connection Data Sheet

OD	Weight (lb/ft)	Wall Th.	Grade	Alt. Drift:	Connection
8 5/8 in.	Nominal: 32.00 Plain End: 31.13	0.352 in.	P110EC	7.875 in.	VAM® SPRINT-FJ

PIPE PROPERTIES		
Nominal OD	8.625	in.
Nominal ID	7.921	in.
Nominal Cross Section Area	9.149	sqin.
Grade Type	High Yield	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

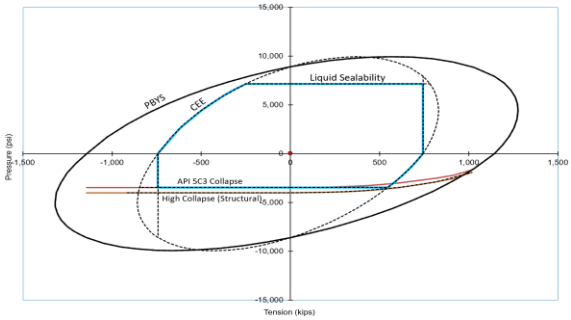
CONNECTION PROPERTIES		
Connection Type	Semi-Premium Integral Flush	
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	6.038	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

CONNECTION PERFORMANCES		
Tensile Yield Strength	744	klb
Compression Resistance	744	klb
Max. Internal Pressure	7,150	psi
Structural Collapse Resistance	4,000	psi
Max. Structural Bending	41	°/100ft
Max. Bending with Sealability	10	°/100ft

* 87.5% RBW

TORQUE VALUES		
Min. Make-up torque	15,000	ft.lb
Opt. Make-up torque	16,500	ft.lb
Max. Make-up torque	18,000	ft.lb
Max. Torque with Sealability (MTS)	48,000	ft.lb

VAM® SPRINT-FJ is a semi-premium flush connection designed for shale applications, where maximum clearance and high tension capacity are required for intermediate casing strings.



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

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Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

VAM USA

Matador Production Company

Ranger/Arrowhead
Big Game
Big Stag Fed Com #304H

Wellbore #1
BLM Plan #1

Anticollision Report

17 October, 2022

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Reference BLM Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 10/17/2022

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,306.8	BLM Plan #1 (Wellbore #1)	MWD	OWSG MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Big Game						
Big Bucks Fed Com #501H - Wellbore #1 - Actual	1,017.1	1,038.1	1,876.3	1,869.9	291.592	CC
Big Bucks Fed Com #501H - Wellbore #1 - Actual	1,600.0	1,619.5	1,877.8	1,867.2	178.341	ES
Big Bucks Fed Com #501H - Wellbore #1 - Actual	18,307.7	17,008.6	2,155.7	1,939.6	9.973	SF
Big Bucks Fed Com #502H - Wellbore #1 - Actual	7,076.4	7,151.9	495.0	443.2	9.569	CC
Big Bucks Fed Com #502H - Wellbore #1 - Actual	10,000.0	10,074.0	496.3	424.3	6.888	ES
Big Bucks Fed Com #502H - Wellbore #1 - Actual	18,307.1	17,190.0	762.7	642.6	6.347	SF
Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1	12,377.0	11,918.0	1,759.1	1,674.5	20.791	CC
Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1	18,307.1	17,837.0	1,760.1	1,527.8	7.577	ES, SF
Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1	1,527.0	1,510.0	878.0	867.6	84.213	CC
Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1	1,600.0	1,572.5	878.1	867.2	80.543	ES
Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1	18,307.7	17,351.4	1,662.7	1,436.2	7.339	SF
Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1	1,537.8	1,518.4	848.0	837.5	80.819	CC
Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1	1,600.0	1,573.5	848.1	837.2	77.771	ES
Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1	18,307.7	17,840.7	1,204.6	970.3	5.142	SF
Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1	500.0	500.0	29.9	26.8	9.573	CC, ES
Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1	18,307.7	18,429.0	667.5	435.1	2.872	SF
Big Stag Fed Com #503H - Wellbore #1 - Actual	1,709.9	1,710.8	28.7	17.4	2.544	CC
Big Stag Fed Com #503H - Wellbore #1 - Actual	1,800.0	1,800.6	29.2	17.3	2.452	ES, SF
Big Stag Fed Com #504H - Wellbore #1 - Actual	1,526.6	1,528.8	58.0	47.9	5.786	CC
Big Stag Fed Com #504H - Wellbore #1 - Actual	1,600.0	1,602.2	58.3	47.7	5.532	ES
Big Stag Fed Com #504H - Wellbore #1 - Actual	1,800.0	1,801.5	62.4	50.4	5.233	SF
Big Stag Fed Com #703H - Wellbore #1 - Actual	0.0	2.0	61.0			
Big Stag Fed Com #703H - Wellbore #1 - Actual	1,900.0	1,901.3	63.0	50.1	4.907	ES
Big Stag Fed Com #703H - Wellbore #1 - Actual	18,307.1	18,029.0	680.0	464.7	3.158	SF
Minis 1 Fed Com #011H - Wellbore #1 - Actual	10,824.1	17,981.2	245.1	79.4	1.479	Level 3, CC, ES, SF
Minis 1 Federal Com #004H - Wellbore #1 - Actual	11,392.8	18,737.6	2,492.1	2,321.7	14.621	CC
Minis 1 Federal Com #004H - Wellbore #1 - Actual	11,450.0	18,775.4	2,492.9	2,321.5	14.545	ES
Minis 1 Federal Com #004H - Wellbore #1 - Actual	11,650.0	18,929.6	2,505.9	2,331.3	14.348	SF
Minis 1 Federal Com #005H - Wellbore #1 - Actual	11,507.4	18,770.6	1,093.4	921.7	6.368	CC
Minis 1 Federal Com #005H - Wellbore #1 - Actual	11,550.0	18,803.1	1,094.0	921.4	6.337	ES
Minis 1 Federal Com #005H - Wellbore #1 - Actual	11,650.0	18,876.0	1,099.7	925.4	6.308	SF
Minis 1 Federal Com #006H - Wellbore #1 - Actual	11,850.0	18,949.0	1,439.2	1,266.2	8.319	SF
Minis 1 Federal Com #006H - Wellbore #1 - Actual	11,869.4	18,949.0	1,439.1	1,266.2	8.322	CC, ES
Minis 1 Federal Com #007H - Wellbore #1 - Actual	11,800.0	19,030.0	1,908.7	1,735.6	11.027	ES, SF
Minis 1 Federal Com #007H - Wellbore #1 - Actual	11,800.2	19,030.0	1,908.7	1,735.6	11.027	CC
Minis 1 Federal Com #010H - Wellbore #1 - Actual	11,750.0	18,850.0	886.9	716.9	5.219	SF
Minis 1 Federal Com #010H - Wellbore #1 - Actual	11,799.5	18,850.0	885.2	715.8	5.227	CC, ES

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Big Game						
Minis 1 Federal Com #016H - Wellbore #1 - Actual	11,915.3	19,030.0	1,960.1	1,786.6	11.297	CC, ES, SF

Offset Design Big Game - Big Bucks Fed Com #501H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 339-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	21.0	21.0	0.0	0.0	92.71	-88.7	1,876.2	1,878.3				
100.0	100.0	120.9	120.9	0.1	0.2	92.70	-88.6	1,876.2	1,878.3	1,878.0	0.33	5,749.856	
200.0	200.0	220.9	220.9	0.5	0.4	92.70	-88.5	1,876.2	1,878.3	1,877.4	0.85	2,211.839	
300.0	300.0	320.8	320.8	0.8	0.5	92.69	-88.3	1,876.2	1,878.3	1,876.9	1.37	1,369.291	
400.0	400.0	429.3	429.3	1.2	0.9	92.69	-88.0	1,876.0	1,878.1	1,876.0	2.08	902.571	
500.0	500.0	526.5	526.5	1.6	1.2	92.68	-87.8	1,875.7	1,877.8	1,875.0	2.78	674.979	
600.0	600.0	626.0	626.0	1.9	1.6	92.68	-87.7	1,875.4	1,877.5	1,874.0	3.49	537.464	
700.0	700.0	727.6	727.6	2.3	1.9	92.68	-87.7	1,875.1	1,877.2	1,873.0	4.21	445.965	
800.0	800.0	828.0	828.0	2.6	2.3	92.68	-87.9	1,874.7	1,876.8	1,871.9	4.92	381.444	
900.0	900.0	925.3	925.3	3.0	2.6	92.68	-87.9	1,874.5	1,876.5	1,870.9	5.62	333.726	
1,000.0	1,000.0	1,022.3	1,022.3	3.4	3.0	92.69	-88.0	1,874.2	1,876.3	1,870.0	6.32	296.907	
1,017.1	1,017.1	1,038.1	1,038.1	3.4	3.0	92.69	-88.0	1,874.2	1,876.3	1,869.9	6.43	291.592	CC
1,100.0	1,100.0	1,116.4	1,116.4	3.7	3.3	92.69	-88.2	1,874.3	1,876.4	1,869.4	7.00	268.165	
1,200.0	1,200.0	1,209.6	1,209.6	4.1	3.6	92.71	-88.6	1,874.7	1,876.8	1,869.1	7.67	244.662	
1,300.0	1,300.0	1,314.0	1,313.9	4.4	4.0	92.72	-89.1	1,875.3	1,877.5	1,869.1	8.39	223.862	
1,400.0	1,400.0	1,420.2	1,420.2	4.8	4.3	92.74	-89.7	1,875.5	1,877.6	1,868.5	9.11	206.020	
1,500.0	1,500.0	1,525.5	1,525.5	5.1	4.7	92.75	-90.0	1,875.4	1,877.5	1,867.7	9.84	190.770	
1,524.0	1,524.0	1,547.9	1,547.9	5.2	4.8	111.39	-90.0	1,875.3	1,877.5	1,867.5	10.01	187.614	
1,600.0	1,600.0	1,619.5	1,619.5	5.5	5.0	111.41	-89.9	1,875.3	1,877.8	1,867.2	10.53	178.341	ES
1,700.0	1,700.0	1,714.1	1,714.1	5.9	5.4	111.45	-89.3	1,875.6	1,879.0	1,867.7	11.22	167.533	
1,800.0	1,799.9	1,809.5	1,809.5	6.2	5.7	111.53	-88.6	1,876.0	1,881.0	1,869.1	11.90	158.048	
1,900.0	1,899.7	1,902.7	1,902.7	6.6	6.0	111.64	-88.0	1,876.8	1,884.1	1,871.5	12.58	149.751	
2,000.0	1,999.4	2,002.4	2,002.4	6.9	6.4	111.80	-87.3	1,877.9	1,888.0	1,874.7	13.29	142.099	
2,100.0	2,098.9	2,107.4	2,107.3	7.3	6.7	112.02	-86.6	1,878.7	1,892.4	1,878.4	14.01	135.039	
2,200.0	2,198.3	2,206.0	2,206.0	7.7	7.1	112.27	-85.9	1,879.4	1,897.3	1,882.6	14.72	128.869	
2,300.0	2,297.4	2,300.0	2,299.9	8.0	7.4	112.53	-85.2	1,880.2	1,903.2	1,887.7	15.42	123.422	
2,400.0	2,396.4	2,393.9	2,393.8	8.4	7.7	112.85	-83.8	1,881.4	1,909.7	1,893.6	16.12	118.455	
2,500.0	2,495.5	2,482.8	2,482.7	8.8	8.0	113.09	-80.6	1,882.9	1,916.6	1,899.8	16.81	114.025	
2,600.0	2,594.5	2,565.9	2,565.6	9.2	8.3	113.28	-76.2	1,885.1	1,924.3	1,906.8	17.48	110.108	
2,700.0	2,693.5	2,649.2	2,648.7	9.6	8.6	113.41	-70.4	1,888.1	1,932.9	1,914.7	18.15	106.508	
2,800.0	2,792.5	2,729.0	2,728.0	10.0	8.9	113.48	-62.7	1,892.0	1,942.4	1,923.6	18.81	103.284	
2,900.0	2,891.6	2,804.3	2,802.6	10.3	9.2	113.48	-53.5	1,896.6	1,953.1	1,933.7	19.45	100.419	
3,000.0	2,990.6	2,876.1	2,873.5	10.7	9.4	113.44	-43.4	1,902.1	1,965.0	1,944.9	20.08	97.867	
3,100.0	3,089.6	2,945.7	2,941.9	11.1	9.7	113.37	-32.8	1,908.5	1,978.4	1,957.7	20.70	95.590	
3,200.0	3,188.6	3,014.8	3,009.7	11.5	10.0	113.27	-21.2	1,916.0	1,993.3	1,972.0	21.31	93.530	
3,300.0	3,287.7	3,098.7	3,091.6	11.9	10.3	113.12	-6.2	1,926.1	2,009.3	1,987.3	22.00	91.321	
3,400.0	3,386.7	3,580.8	3,558.5	12.3	12.3	111.72	102.7	1,942.5	2,017.2	1,992.8	24.43	82.576	
3,500.0	3,485.7	3,644.8	3,620.1	12.7	12.5	111.47	120.0	1,939.3	2,015.8	1,990.6	25.13	80.211	
3,530.5	3,516.0	3,664.7	3,639.3	12.9	12.6	111.39	125.2	1,938.5	2,015.7	1,990.3	25.35	79.527	
3,600.0	3,584.8	3,712.8	3,685.7	13.1	12.8	111.22	137.5	1,937.0	2,016.1	1,990.3	25.84	78.011	
3,700.0	3,683.8	3,798.4	3,768.6	13.5	13.2	110.93	159.0	1,934.9	2,017.6	1,990.9	26.63	75.773	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #501H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 339-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,800.0	3,782.8	3,898.3	3,865.3	13.9	13.6	110.59	183.7	1,932.8	2,019.4	1,991.9	27.47	73.507	
3,900.0	3,881.8	3,995.4	3,959.5	14.3	14.1	110.28	207.2	1,930.8	2,021.4	1,993.1	28.31	71.399	
4,000.0	3,980.9	4,097.2	4,058.3	14.7	14.5	109.96	231.8	1,928.6	2,023.4	1,994.2	29.17	69.355	
4,100.0	4,079.9	4,192.3	4,150.6	15.2	15.0	109.66	254.5	1,926.6	2,025.5	1,995.4	30.01	67.488	
4,200.0	4,178.9	4,281.2	4,237.1	15.6	15.4	109.41	275.0	1,925.1	2,028.0	1,997.2	30.82	65.796	
4,300.0	4,277.9	4,367.1	4,321.0	16.0	15.8	109.20	293.5	1,924.1	2,031.2	1,999.5	31.61	64.248	
4,400.0	4,377.0	4,458.1	4,410.2	16.4	16.2	109.03	311.5	1,923.5	2,034.9	2,002.5	32.42	62.765	
4,500.0	4,476.0	4,547.0	4,497.7	16.8	16.5	108.92	327.2	1,923.4	2,039.2	2,005.9	33.21	61.406	
4,600.0	4,575.0	4,647.7	4,597.1	17.2	17.0	108.85	342.8	1,923.5	2,043.7	2,009.6	34.04	60.046	
4,625.7	4,600.5	4,671.9	4,621.1	17.3	17.1	108.84	346.3	1,923.5	2,044.8	2,010.6	34.24	59.723	
4,700.0	4,674.1	4,742.5	4,691.0	17.6	17.4	108.85	356.2	1,923.6	2,048.0	2,013.2	34.83	58.808	
4,800.0	4,773.6	4,826.9	4,774.7	18.0	17.7	108.84	367.1	1,924.2	2,052.1	2,016.6	35.55	57.720	
4,900.0	4,873.2	4,910.8	4,858.0	18.4	18.0	108.81	376.7	1,925.4	2,056.1	2,019.8	36.26	56.712	
5,000.0	4,973.1	5,002.3	4,949.1	18.7	18.4	108.75	385.3	1,927.2	2,059.9	2,022.9	36.97	55.723	
5,100.0	5,073.0	5,089.2	5,035.7	19.1	18.7	108.69	391.7	1,929.4	2,063.3	2,025.6	37.63	54.827	
5,159.0	5,132.1	5,140.3	5,086.7	19.3	18.9	90.00	394.7	1,930.9	2,065.2	2,027.2	38.01	54.329	
5,200.0	5,173.0	5,176.5	5,122.9	19.4	19.0	89.95	396.5	1,932.1	2,066.6	2,028.3	38.28	53.991	
5,300.0	5,273.0	5,271.5	5,217.7	19.8	19.3	89.86	400.0	1,935.6	2,070.2	2,031.2	38.94	53.164	
5,400.0	5,373.0	5,369.0	5,315.2	20.1	19.7	89.79	402.3	1,939.2	2,073.9	2,034.3	39.61	52.363	
5,500.0	5,473.0	5,464.9	5,411.0	20.4	20.0	89.74	404.3	1,942.9	2,077.8	2,037.5	40.27	51.603	
5,600.0	5,573.0	5,570.0	5,516.0	20.8	20.4	89.68	406.3	1,947.0	2,081.7	2,040.7	40.96	50.820	
5,700.0	5,673.0	5,677.8	5,623.6	21.1	20.7	89.64	408.0	1,950.8	2,085.2	2,043.6	41.67	50.042	
5,800.0	5,773.0	5,772.6	5,718.4	21.4	21.0	89.60	409.2	1,954.1	2,088.7	2,046.4	42.32	49.353	
5,900.0	5,873.0	5,870.3	5,816.0	21.8	21.4	89.58	410.1	1,957.7	2,092.4	2,049.4	42.98	48.678	
6,000.0	5,973.0	5,969.6	5,915.3	22.1	21.7	89.62	408.6	1,961.5	2,096.2	2,052.6	43.64	48.034	
6,100.0	6,073.0	6,097.1	6,042.5	22.5	22.1	89.78	402.7	1,965.7	2,099.5	2,055.2	44.38	47.306	
6,200.0	6,173.0	6,229.4	6,174.6	22.8	22.4	90.00	394.9	1,967.8	2,101.1	2,056.0	45.13	46.561	
6,300.0	6,273.0	6,329.8	6,274.8	23.1	22.7	90.19	387.9	1,968.8	2,102.1	2,056.3	45.76	45.937	
6,400.0	6,373.0	6,455.8	6,400.3	23.5	23.1	90.48	377.0	1,969.1	2,102.3	2,055.9	46.47	45.244	
6,500.0	6,473.0	6,565.4	6,509.0	23.8	23.4	90.84	363.8	1,968.3	2,101.8	2,054.6	47.11	44.614	
6,600.0	6,573.0	6,657.2	6,599.7	24.2	23.6	91.24	349.4	1,967.5	2,101.2	2,053.5	47.70	44.051	
6,633.0	6,606.0	6,684.8	6,627.0	24.3	23.7	91.36	344.9	1,967.3	2,101.1	2,053.2	47.88	43.879	
6,700.0	6,673.0	6,746.2	6,687.5	24.5	23.9	91.63	334.9	1,967.2	2,101.2	2,053.0	48.28	43.523	
6,800.0	6,773.0	6,842.3	6,782.4	24.9	24.1	92.04	319.8	1,967.1	2,101.7	2,052.8	48.89	42.992	
6,900.0	6,873.0	6,964.6	6,903.4	25.2	24.5	92.55	301.3	1,966.7	2,102.0	2,052.4	49.57	42.401	
7,000.0	6,973.0	7,069.5	7,007.0	25.6	24.8	92.99	285.2	1,965.3	2,101.4	2,051.1	50.22	41.845	
7,100.0	7,073.0	7,160.0	7,096.5	25.9	25.0	93.36	271.6	1,964.2	2,101.0	2,050.2	50.82	41.338	
7,200.0	7,173.0	7,288.9	7,223.9	26.3	25.4	93.88	252.7	1,961.9	2,100.1	2,048.6	51.55	40.741	
7,300.0	7,273.0	7,382.2	7,316.1	26.6	25.7	94.27	238.6	1,959.7	2,098.9	2,046.7	52.17	40.230	
7,400.0	7,373.0	7,475.6	7,408.4	26.9	26.0	94.66	224.2	1,957.8	2,098.0	2,045.2	52.80	39.735	
7,500.0	7,473.0	7,568.5	7,500.3	27.3	26.3	95.04	210.5	1,956.2	2,097.5	2,044.1	53.43	39.258	
7,600.0	7,573.0	7,665.9	7,596.6	27.6	26.6	95.44	195.8	1,954.7	2,097.3	2,043.2	54.08	38.785	
7,631.5	7,604.6	7,695.3	7,625.6	27.7	26.7	95.56	191.4	1,954.2	2,097.3	2,043.0	54.28	38.641	
7,700.0	7,673.0	7,759.4	7,689.0	28.0	26.9	95.82	181.9	1,953.3	2,097.4	2,042.6	54.71	38.335	
7,800.0	7,773.0	7,851.8	7,780.5	28.3	27.2	96.18	169.1	1,952.4	2,097.8	2,042.4	55.35	37.901	
7,900.0	7,873.0	7,937.6	7,865.4	28.7	27.4	96.52	156.6	1,951.8	2,098.8	2,042.8	55.96	37.503	
8,000.0	7,973.0	8,031.0	7,957.6	29.0	27.7	96.91	142.1	1,951.6	2,100.4	2,043.7	56.60	37.106	
8,100.0	8,073.0	8,132.0	8,057.4	29.4	28.1	97.33	126.7	1,951.4	2,102.1	2,044.8	57.28	36.700	
8,200.0	8,173.0	8,232.2	8,156.6	29.7	28.4	97.73	111.9	1,951.2	2,103.8	2,045.9	57.95	36.303	
8,300.0	8,273.0	8,327.3	8,250.6	30.1	28.7	98.11	97.9	1,951.1	2,105.7	2,047.1	58.61	35.929	
8,400.0	8,373.0	8,422.7	8,345.0	30.4	29.0	98.47	84.2	1,951.2	2,107.9	2,048.7	59.27	35.565	
8,500.0	8,473.0	8,541.2	8,462.3	30.8	29.4	98.92	67.4	1,951.3	2,110.2	2,050.2	60.03	35.155	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #501H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 339-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,600.0	8,573.0	8,667.4	8,587.3	31.1	29.8	99.39	50.4	1,949.4	2,110.9	2,050.0	60.81	34.712	
8,700.0	8,673.0	8,763.6	8,682.8	31.5	30.2	99.71	38.6	1,947.8	2,111.2	2,049.8	61.49	34.337	
8,800.0	8,773.0	8,866.0	8,784.6	31.8	30.5	100.02	27.3	1,946.3	2,111.7	2,049.6	62.19	33.958	
8,900.0	8,873.0	8,951.0	8,869.2	32.2	30.8	100.24	19.3	1,945.6	2,112.5	2,049.7	62.82	33.627	
9,000.0	8,973.0	9,037.0	8,955.0	32.5	31.1	100.40	13.2	1,945.8	2,114.1	2,050.6	63.46	33.313	
9,100.0	9,073.0	9,134.7	9,052.5	32.9	31.5	100.55	7.6	1,946.7	2,116.0	2,051.9	64.15	32.986	
9,200.0	9,173.0	9,233.0	9,150.7	33.2	31.8	100.66	2.9	1,947.8	2,118.0	2,053.2	64.84	32.665	
9,300.0	9,273.0	9,384.0	9,301.6	33.6	32.3	100.83	-3.4	1,948.5	2,119.4	2,053.7	65.74	32.241	
9,400.0	9,373.0	9,485.8	9,403.4	33.9	32.7	100.89	-5.5	1,947.1	2,118.4	2,052.0	66.44	31.884	
9,500.0	9,473.0	9,588.4	9,506.0	34.3	33.0	100.90	-5.9	1,946.9	2,118.3	2,051.1	67.15	31.546	
9,600.0	9,573.0	9,686.4	9,603.8	34.6	33.4	100.83	-3.2	1,946.7	2,117.6	2,049.8	67.84	31.214	
9,700.0	9,673.0	9,787.9	9,705.3	35.0	33.7	100.74	0.1	1,946.9	2,117.2	2,048.6	68.55	30.887	
9,800.0	9,773.0	9,880.3	9,797.7	35.3	34.0	100.64	3.8	1,947.2	2,116.8	2,047.6	69.22	30.581	
9,900.0	9,873.0	10,043.6	9,960.8	35.7	34.6	100.51	9.3	1,945.5	2,115.1	2,045.0	70.12	30.164	
10,000.0	9,973.0	10,119.7	10,036.9	36.0	34.9	100.46	11.5	1,943.7	2,112.4	2,041.6	70.75	29.856	
10,100.0	10,073.0	10,177.0	10,094.2	36.4	35.1	100.50	10.2	1,942.6	2,111.2	2,039.8	71.31	29.607	
10,100.1	10,073.2	10,177.0	10,094.2	36.4	35.1	100.50	10.2	1,942.6	2,111.2	2,039.8	71.31	29.607	
10,200.0	10,173.0	10,219.7	10,136.7	36.7	35.2	100.60	6.3	1,942.4	2,112.4	2,040.6	71.77	29.433	
10,300.0	10,273.0	10,271.0	10,187.0	37.1	35.4	100.85	-3.2	1,943.0	2,116.7	2,044.5	72.23	29.306	
10,400.0	10,373.0	10,271.0	10,187.0	37.4	35.4	100.85	-3.2	1,943.0	2,124.1	2,051.8	72.34	29.364	
10,500.0	10,473.0	10,331.9	10,245.4	37.8	35.6	101.30	-20.4	1,945.2	2,134.0	2,061.2	72.75	29.332	
10,600.0	10,573.0	10,365.0	10,276.3	38.2	35.7	101.59	-32.1	1,947.0	2,147.1	2,074.2	72.93	29.441	
10,700.0	10,673.0	10,402.1	10,310.3	38.5	35.9	101.97	-46.6	1,949.6	2,163.3	2,090.2	73.08	29.604	
10,800.0	10,773.0	10,460.0	10,362.0	38.9	36.1	102.60	-72.1	1,955.1	2,183.0	2,109.6	73.35	29.761	
10,900.0	10,873.0	10,472.1	10,372.6	39.2	36.1	102.75	-77.9	1,956.4	2,204.9	2,131.7	73.16	30.137	
11,000.0	10,973.0	10,525.5	10,417.3	39.6	36.3	103.46	-106.6	1,961.4	2,229.6	2,156.3	73.30	30.418	
11,024.0	10,997.0	10,537.2	10,426.7	39.7	36.3	103.63	-113.6	1,962.3	2,235.9	2,162.6	73.32	30.497	
11,050.0	11,023.0	10,554.0	10,439.8	39.7	36.4	-67.77	-123.9	1,963.6	2,242.7	2,169.3	73.36	30.570	
11,100.0	11,072.8	10,631.0	10,496.8	39.9	36.7	-65.51	-175.5	1,966.7	2,254.4	2,180.6	73.84	30.530	
11,150.0	11,122.0	11,150.0	10,514.8	40.0	38.9	-64.22	-193.4	1,967.0	2,264.4	2,189.3	75.15	30.131	
11,200.0	11,170.3	10,648.0	10,508.7	40.2	36.7	-63.49	-187.7	1,966.7	2,273.7	2,200.2	73.47	30.945	
11,250.0	11,217.2	10,688.5	10,535.5	40.3	36.9	-62.29	-218.1	1,966.7	2,280.9	2,207.4	73.57	31.005	
11,300.0	11,262.5	10,703.5	10,544.8	40.4	36.9	-61.55	-229.8	1,966.8	2,287.4	2,214.0	73.41	31.161	
11,350.0	11,305.7	10,742.0	10,567.3	40.5	37.1	-60.72	-261.0	1,967.0	2,293.0	2,219.5	73.45	31.217	
11,400.0	11,346.6	10,742.0	10,567.3	40.6	37.1	-60.41	-261.0	1,967.0	2,296.5	2,223.4	73.15	31.396	
11,450.0	11,384.8	10,742.0	10,567.3	40.6	37.1	-60.20	-261.0	1,967.0	2,299.0	2,226.2	72.84	31.562	
11,500.0	11,420.1	10,742.0	10,567.3	40.7	37.1	-60.08	-261.0	1,967.0	2,300.4	2,227.8	72.54	31.712	
11,550.0	11,452.2	10,777.9	10,586.0	40.8	37.2	-59.92	-291.7	1,967.4	2,299.7	2,227.2	72.59	31.681	
11,600.0	11,480.8	10,792.5	10,592.8	40.9	37.3	-60.02	-304.5	1,967.6	2,298.0	2,225.6	72.46	31.714	
11,650.0	11,505.7	10,837.0	10,611.1	40.9	37.5	-60.16	-345.1	1,968.3	2,295.6	2,223.0	72.60	31.618	
11,700.0	11,526.7	10,837.0	10,611.1	41.0	37.5	-60.60	-345.1	1,968.3	2,290.6	2,218.2	72.41	31.634	
11,750.0	11,543.8	10,837.0	10,611.1	41.1	37.5	-61.13	-345.1	1,968.3	2,284.5	2,212.3	72.25	31.619	
11,800.0	11,556.6	10,867.0	10,621.4	41.2	37.6	-61.81	-373.3	1,968.5	2,277.2	2,204.8	72.38	31.462	
11,850.0	11,565.2	10,898.8	10,630.9	41.2	37.7	-62.67	-403.6	1,968.3	2,268.1	2,195.6	72.55	31.263	
11,900.0	11,569.5	10,932.0	10,639.4	41.3	37.9	-63.71	-435.7	1,967.7	2,257.5	2,184.8	72.76	31.026	
11,924.0	11,570.0	10,956.2	10,644.5	41.4	38.0	-64.30	-459.4	1,966.7	2,251.9	2,178.9	72.93	30.878	
12,000.0	11,570.0	11,042.4	10,653.3	41.5	38.3	-64.46	-544.6	1,958.5	2,233.8	2,160.4	73.42	30.424	
12,100.0	11,570.0	11,067.3	10,654.6	41.8	38.5	-64.61	-569.4	1,956.2	2,214.4	2,140.7	73.72	30.036	
12,200.0	11,570.0	11,120.0	10,656.0	42.1	38.7	-64.69	-621.9	1,952.3	2,201.0	2,126.7	74.22	29.654	
12,292.2	11,570.0	11,163.2	10,656.9	42.5	38.9	-64.74	-665.0	1,949.9	2,193.3	2,118.5	74.75	29.340	
12,300.0	11,570.0	11,170.1	10,657.0	42.5	39.0	-64.74	-671.9	1,949.5	2,192.8	2,118.0	74.82	29.309	
12,400.0	11,570.0	11,257.7	10,658.7	42.9	39.4	-64.73	-759.4	1,945.1	2,186.9	2,111.2	75.68	28.898	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #501H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 339-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,500.0	11,570.0	11,501.8	10,662.5	43.4	41.0	-64.58	-1,002.5	1,925.5	2,179.1	2,101.6	77.46	28.130	
12,600.0	11,570.0	11,561.0	10,663.6	44.0	41.4	-64.53	-1,061.4	1,919.2	2,168.1	2,089.7	78.37	27.664	
12,700.0	11,570.0	11,595.2	10,664.0	44.6	41.7	-64.50	-1,095.5	1,916.4	2,159.3	2,080.1	79.21	27.261	
12,800.0	11,570.0	11,655.0	10,664.3	45.3	42.1	-64.47	-1,155.2	1,913.3	2,153.5	2,073.2	80.27	26.829	
12,900.0	11,570.0	11,709.7	10,664.3	46.0	42.6	-64.45	-1,209.8	1,911.4	2,149.5	2,068.1	81.36	26.419	
13,000.0	11,570.0	11,822.1	10,664.6	46.7	43.5	-64.41	-1,322.2	1,907.9	2,146.0	2,063.1	82.93	25.879	
13,100.0	11,570.0	11,875.0	10,664.7	47.6	44.0	-64.38	-1,375.1	1,906.2	2,142.8	2,058.7	84.14	25.468	
13,161.4	11,570.0	11,897.9	10,664.5	48.1	44.2	-64.38	-1,398.0	1,906.0	2,142.3	2,057.5	84.84	25.252	
13,200.0	11,570.0	11,938.0	10,663.9	48.4	44.6	-64.37	-1,438.0	1,906.7	2,142.9	2,057.4	85.48	25.070	
13,201.4	11,570.0	11,938.0	10,663.9	48.4	44.6	-64.37	-1,438.0	1,906.7	2,142.9	2,057.4	85.49	25.067	
13,300.0	11,570.0	11,938.0	10,663.9	49.3	44.6	-64.37	-1,438.0	1,906.7	2,145.2	2,058.8	86.35	24.844	
13,400.0	11,570.0	12,000.0	10,662.6	50.2	45.1	-64.37	-1,499.9	1,909.7	2,150.2	2,062.4	87.76	24.500	
13,500.0	11,570.0	12,058.1	10,661.4	51.2	45.7	-64.39	-1,557.9	1,914.3	2,157.7	2,068.5	89.19	24.192	
13,600.0	11,570.0	12,458.4	10,676.1	52.2	49.9	-64.92	-1,956.7	1,932.1	2,161.3	2,067.1	94.22	22.940	
13,700.0	11,570.0	12,547.1	10,678.9	53.2	50.9	-64.94	-2,045.4	1,928.7	2,156.0	2,059.8	96.14	22.424	
13,800.0	11,570.0	12,630.4	10,680.9	54.3	51.9	-64.95	-2,128.6	1,925.8	2,151.3	2,053.2	98.06	21.938	
13,900.0	11,570.0	12,693.0	10,682.3	55.4	52.6	-64.96	-2,191.2	1,924.1	2,147.5	2,047.7	99.82	21.514	
14,000.0	11,570.0	12,752.1	10,682.6	56.5	53.3	-64.95	-2,250.2	1,923.2	2,145.6	2,044.1	101.56	21.127	
14,026.6	11,570.0	12,765.0	10,682.4	56.8	53.4	-64.95	-2,263.2	1,923.2	2,145.6	2,043.6	101.99	21.036	
14,100.0	11,570.0	12,814.7	10,680.8	57.7	54.0	-64.90	-2,312.8	1,923.2	2,146.1	2,042.8	103.33	20.770	
14,200.0	11,570.0	12,902.1	10,677.2	58.9	55.1	-64.81	-2,400.1	1,923.2	2,147.3	2,042.0	105.36	20.381	
14,300.0	11,570.0	12,976.0	10,673.9	60.1	56.0	-64.74	-2,474.0	1,924.2	2,149.9	2,042.6	107.28	20.040	
14,400.0	11,570.0	13,069.3	10,670.6	61.3	57.2	-64.68	-2,567.2	1,926.8	2,153.3	2,043.9	109.47	19.671	
14,500.0	11,570.0	13,176.3	10,668.6	62.5	58.6	-64.66	-2,674.1	1,930.1	2,156.4	2,044.5	111.88	19.274	
14,600.0	11,570.0	13,289.3	10,668.0	63.8	60.0	-64.68	-2,787.0	1,933.6	2,158.9	2,044.5	114.43	18.867	
14,700.0	11,570.0	13,384.3	10,668.8	65.0	61.3	-64.73	-2,882.0	1,937.0	2,161.2	2,044.4	116.82	18.501	
14,800.0	11,570.0	13,476.0	10,669.3	66.3	62.5	-64.78	-2,973.6	1,940.7	2,164.1	2,044.9	119.19	18.157	
14,900.0	11,570.0	13,603.1	10,669.7	67.6	64.2	-64.83	-3,100.6	1,944.8	2,166.4	2,044.4	122.04	17.752	
15,000.0	11,570.0	13,707.2	10,670.1	69.0	65.6	-64.86	-3,204.7	1,947.2	2,167.8	2,043.2	124.61	17.397	
15,100.0	11,570.0	13,817.6	10,671.0	70.3	67.2	-64.90	-3,315.1	1,949.9	2,169.1	2,041.8	127.30	17.039	
15,200.0	11,570.0	13,921.8	10,671.3	71.7	68.6	-64.92	-3,419.2	1,951.6	2,170.0	2,040.1	129.92	16.703	
15,300.0	11,570.0	14,027.3	10,671.6	73.0	70.1	-64.94	-3,524.7	1,953.2	2,170.7	2,038.1	132.58	16.373	
15,400.0	11,570.0	14,107.7	10,671.8	74.4	71.2	-64.96	-3,605.2	1,954.7	2,171.7	2,036.8	134.94	16.094	
15,500.0	11,570.0	14,223.4	10,672.0	75.8	72.9	-64.98	-3,720.8	1,956.9	2,172.9	2,035.1	137.78	15.771	
15,600.0	11,570.0	14,329.9	10,674.1	77.2	74.4	-65.04	-3,827.3	1,958.8	2,173.1	2,032.5	140.55	15.461	
15,700.0	11,570.0	14,402.7	10,675.0	78.6	75.4	-65.08	-3,900.1	1,960.5	2,174.2	2,031.3	142.89	15.216	
15,800.0	11,570.0	14,488.4	10,675.6	80.0	76.7	-65.12	-3,985.7	1,963.2	2,176.2	2,030.8	145.40	14.967	
15,900.0	11,570.0	14,574.0	10,676.0	81.4	77.9	-65.16	-4,071.2	1,966.4	2,178.8	2,030.9	147.92	14.730	
16,000.0	11,570.0	14,692.9	10,675.5	82.9	79.7	-65.18	-4,190.0	1,970.4	2,181.5	2,030.6	150.91	14.456	
16,100.0	11,570.0	14,791.7	10,674.8	84.3	81.1	-65.18	-4,288.9	1,972.3	2,183.1	2,029.5	153.61	14.212	
16,200.0	11,570.0	14,854.0	10,674.2	85.8	82.1	-65.19	-4,351.1	1,974.6	2,186.3	2,030.5	155.80	14.032	
16,300.0	11,570.0	15,250.1	10,690.5	87.2	88.0	-65.48	-4,746.4	1,967.8	2,179.6	2,017.5	162.16	13.441	
16,400.0	11,570.0	15,330.8	10,691.9	88.7	89.2	-65.43	-4,826.7	1,960.7	2,170.4	2,005.7	164.71	13.177	
16,500.0	11,570.0	15,415.4	10,691.5	90.2	90.4	-65.33	-4,911.0	1,953.2	2,162.0	1,994.7	167.24	12.927	
16,600.0	11,570.0	15,513.1	10,690.9	91.6	91.9	-65.21	-5,008.4	1,944.9	2,154.0	1,984.1	169.87	12.680	
16,700.0	11,570.0	15,571.4	10,690.9	93.1	92.7	-65.16	-5,066.4	1,940.7	2,147.0	1,974.7	172.23	12.466	
16,800.0	11,570.0	15,626.5	10,690.7	94.6	93.6	-65.12	-5,121.5	1,937.8	2,141.9	1,967.4	174.53	12.273	
16,900.0	11,570.0	15,676.5	10,690.5	96.1	94.3	-65.10	-5,171.5	1,936.5	2,139.1	1,962.4	176.73	12.104	
16,992.6	11,570.0	15,734.1	10,690.5	97.5	95.2	-65.10	-5,229.1	1,936.5	2,138.5	1,959.6	178.88	11.955	
17,000.0	11,570.0	15,739.7	10,690.5	97.6	95.3	-65.10	-5,234.7	1,936.5	2,138.5	1,959.4	179.07	11.942	
17,100.0	11,570.0	15,812.2	10,691.0	99.1	96.4	-65.12	-5,307.2	1,937.7	2,139.1	1,957.6	181.53	11.784	
17,200.0	11,570.0	15,875.1	10,691.1	100.6	97.4	-65.14	-5,370.0	1,939.6	2,141.4	1,957.6	183.83	11.649	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #501H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 339-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,300.0	11,570.0	16,013.8	10,691.3	102.1	99.5	-65.19	-5,508.6	1,944.3	2,143.9	1,956.6	187.30	11.446	
17,400.0	11,570.0	16,145.3	10,691.8	103.7	101.5	-65.21	-5,640.1	1,946.0	2,144.4	1,953.8	190.62	11.250	
17,455.7	11,570.0	16,197.3	10,691.9	104.5	102.3	-65.21	-5,692.1	1,946.2	2,144.3	1,952.1	192.16	11.158	
17,500.0	11,570.0	16,229.5	10,692.1	105.2	102.8	-65.22	-5,724.3	1,946.6	2,144.4	1,951.1	193.27	11.095	
17,600.0	11,570.0	16,308.9	10,692.7	106.7	104.1	-65.24	-5,803.7	1,948.3	2,145.5	1,949.6	195.87	10.954	
17,700.0	11,570.0	16,440.9	10,693.5	108.3	106.1	-65.29	-5,935.7	1,951.3	2,146.9	1,947.7	199.25	10.775	
17,800.0	11,570.0	16,516.2	10,693.9	109.8	107.3	-65.30	-6,010.9	1,952.2	2,147.3	1,945.5	201.80	10.641	
17,900.0	11,570.0	16,605.7	10,693.8	111.3	108.7	-65.32	-6,100.5	1,954.4	2,149.0	1,944.5	204.55	10.506	
18,000.0	11,570.0	16,719.9	10,693.5	112.9	110.5	-65.33	-6,214.6	1,956.6	2,150.4	1,942.7	207.66	10.355	
18,100.0	11,570.0	16,822.0	10,693.8	114.4	112.1	-65.35	-6,316.7	1,958.4	2,151.3	1,940.7	210.61	10.214	
18,200.0	11,570.0	16,891.1	10,693.6	116.0	113.1	-65.36	-6,385.7	1,959.9	2,152.9	1,939.8	213.06	10.104	
18,307.1	11,570.0	17,007.8	10,693.3	117.4	115.0	-65.39	-6,502.4	1,963.8	2,155.7	1,939.6	216.14	9.974	
18,307.7	11,570.0	17,008.6	10,693.3	117.4	115.0	-65.39	-6,503.2	1,963.8	2,155.7	1,939.6	216.16	9.973	SF

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #502H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 241-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	20.9	20.9	0.0	0.0	93.87	-69.2	1,022.6	1,024.9				
100.0	100.0	120.4	120.4	0.1	0.2	93.86	-68.9	1,022.6	1,025.0	1,024.6	0.32	3,217.272	
200.0	200.0	220.0	220.0	0.5	0.3	93.82	-68.2	1,022.8	1,025.0	1,024.2	0.83	1,228.488	
300.0	300.0	320.4	320.4	0.8	0.7	93.75	-67.0	1,022.9	1,025.1	1,023.6	1.51	678.552	
400.0	400.0	417.9	417.9	1.2	1.0	93.66	-65.4	1,023.2	1,025.3	1,023.1	2.22	461.997	
500.0	500.0	520.7	520.6	1.6	1.4	93.54	-63.4	1,023.5	1,025.5	1,022.5	2.95	348.012	
600.0	600.0	624.3	624.2	1.9	1.8	93.42	-61.1	1,023.4	1,025.3	1,021.6	3.68	278.807	
700.0	700.0	723.1	723.0	2.3	2.1	93.24	-58.0	1,023.4	1,025.1	1,020.7	4.39	233.415	
800.0	800.0	825.5	825.3	2.6	2.5	93.01	-53.9	1,023.4	1,024.8	1,019.7	5.12	200.157	
897.2	897.2	918.5	918.2	3.0	2.8	92.80	-50.0	1,023.2	1,024.4	1,018.6	5.80	176.470	
900.0	900.0	920.9	920.6	3.0	2.8	92.79	-49.9	1,023.2	1,024.4	1,018.6	5.82	175.907	
1,000.0	1,000.0	1,008.8	1,008.4	3.4	3.1	92.65	-47.4	1,023.9	1,025.0	1,018.5	6.50	157.755	
1,100.0	1,100.0	1,098.5	1,098.1	3.7	3.5	92.53	-45.4	1,025.5	1,026.8	1,019.6	7.18	143.072	
1,200.0	1,200.0	1,192.9	1,192.5	4.1	3.8	92.36	-42.4	1,028.1	1,029.4	1,021.5	7.87	130.746	
1,300.0	1,300.0	1,292.2	1,291.6	4.4	4.2	92.15	-38.6	1,031.1	1,032.2	1,023.6	8.59	120.184	
1,400.0	1,400.0	1,400.0	1,399.3	4.8	4.6	91.93	-34.8	1,034.0	1,034.8	1,025.4	9.34	110.842	
1,500.0	1,500.0	1,496.7	1,495.9	5.1	4.9	91.76	-31.8	1,036.2	1,037.0	1,026.9	10.04	103.265	
1,600.0	1,600.0	1,593.6	1,592.8	5.5	5.3	110.21	-28.2	1,038.8	1,039.9	1,029.1	10.75	96.736	
1,700.0	1,700.0	1,695.8	1,694.8	5.9	5.6	110.09	-24.2	1,041.6	1,043.4	1,031.9	11.48	90.915	
1,800.0	1,799.9	1,794.9	1,793.9	6.2	6.0	110.08	-20.5	1,044.2	1,047.5	1,035.3	12.19	85.919	
1,900.0	1,899.7	1,912.5	1,911.4	6.6	6.4	110.21	-16.9	1,046.3	1,051.2	1,038.2	12.97	81.019	
2,000.0	1,999.4	2,024.8	2,023.6	6.9	6.8	110.49	-14.3	1,046.7	1,054.3	1,040.6	13.73	76.763	
2,100.0	2,098.9	2,148.1	2,146.9	7.3	7.2	111.02	-13.4	1,045.2	1,056.4	1,041.9	14.52	72.773	
2,200.0	2,198.3	2,274.0	2,272.7	7.7	7.6	111.80	-14.3	1,040.3	1,056.7	1,041.5	15.29	69.130	
2,300.0	2,297.4	2,397.1	2,395.5	8.0	8.1	112.70	-15.3	1,032.5	1,055.3	1,039.3	16.05	65.764	
2,400.0	2,396.4	2,519.2	2,517.2	8.4	8.5	113.60	-15.6	1,022.4	1,052.6	1,035.7	16.81	62.630	
2,500.0	2,495.5	2,648.3	2,645.6	8.8	8.9	114.58	-15.6	1,008.2	1,047.3	1,029.7	17.57	59.593	
2,600.0	2,594.5	2,775.9	2,772.0	9.2	9.4	115.60	-16.2	990.8	1,039.6	1,021.3	18.33	56.722	
2,700.0	2,693.5	2,925.0	2,918.7	9.6	9.9	116.85	-16.8	964.7	1,028.3	1,009.2	19.08	53.896	
2,800.0	2,792.5	3,047.6	3,038.4	10.0	10.4	117.90	-16.5	938.4	1,013.0	993.2	19.80	51.170	
2,900.0	2,891.6	3,142.7	3,131.2	10.3	10.8	118.75	-16.1	917.2	997.3	976.8	20.52	48.600	
3,000.0	2,990.6	3,241.4	3,227.4	10.7	11.2	119.64	-15.8	895.5	982.1	960.8	21.25	46.222	
3,100.0	3,089.6	3,343.5	3,326.9	11.1	11.6	120.63	-15.6	872.4	966.5	944.6	21.97	43.983	
3,200.0	3,188.6	3,440.3	3,421.1	11.5	12.0	121.62	-16.1	850.3	951.2	928.5	22.71	41.883	
3,300.0	3,287.7	3,538.5	3,516.7	11.9	12.4	122.69	-16.8	827.9	936.2	912.7	23.45	39.924	
3,400.0	3,386.7	3,636.4	3,612.0	12.3	12.9	123.79	-17.8	805.3	921.3	897.1	24.19	38.083	
3,500.0	3,485.7	3,736.2	3,709.1	12.7	13.3	124.98	-19.1	782.2	906.8	881.8	24.94	36.360	
3,600.0	3,584.8	3,838.4	3,808.3	13.1	13.8	126.28	-21.0	757.8	892.1	866.5	25.69	34.729	
3,700.0	3,683.8	3,940.4	3,907.2	13.5	14.2	127.67	-23.4	732.8	877.4	850.9	26.44	33.179	
3,800.0	3,782.8	4,041.5	4,004.9	13.9	14.7	129.14	-26.2	707.2	862.6	835.4	27.21	31.704	
3,900.0	3,881.8	4,138.4	4,098.6	14.3	15.2	130.57	-28.5	682.6	848.0	820.1	27.98	30.304	
4,000.0	3,980.9	4,226.9	4,184.4	14.7	15.6	131.83	-29.6	660.9	834.5	805.7	28.78	28.998	
4,100.0	4,079.9	4,314.4	4,269.5	15.2	16.0	133.03	-29.9	640.7	822.5	792.9	29.57	27.815	
4,200.0	4,178.9	4,397.7	4,350.9	15.6	16.4	134.13	-29.9	622.9	812.3	782.0	30.36	26.756	
4,300.0	4,277.9	4,488.3	4,439.8	16.0	16.8	135.27	-29.3	605.3	804.1	773.0	31.14	25.820	
4,400.0	4,377.0	4,583.6	4,533.4	16.4	17.3	136.46	-28.4	587.5	796.8	764.8	31.93	24.956	
4,500.0	4,476.0	4,685.7	4,633.7	16.8	17.7	137.70	-26.9	568.7	789.9	757.2	32.71	24.149	
4,600.0	4,575.0	4,786.5	4,732.8	17.2	18.2	138.81	-23.5	550.5	782.7	749.2	33.49	23.372	
4,625.7	4,600.5	4,812.1	4,758.0	17.3	18.3	139.09	-22.5	545.9	780.8	747.2	33.69	23.179	
4,700.0	4,674.1	4,887.2	4,831.8	17.6	18.6	139.84	-19.8	532.2	775.0	740.8	34.26	22.619	
4,800.0	4,773.6	4,984.4	4,927.3	18.0	19.1	140.72	-16.4	514.4	765.7	730.6	35.04	21.852	
4,900.0	4,873.2	5,080.2	5,021.4	18.4	19.5	141.48	-13.2	497.2	754.8	719.0	35.80	21.080	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #502H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 241-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	5,178.0	5,117.6	18.7	19.9	142.16	-10.2	479.7	742.3	705.7	36.56	20.301	
5,100.0	5,073.0	5,272.6	5,210.7	19.1	20.3	142.71	-7.4	463.0	728.2	690.9	37.31	19.514	
5,159.0	5,132.1	5,327.7	5,265.0	19.3	20.6	124.33	-5.9	453.5	719.2	681.4	37.75	19.051	
5,200.0	5,173.0	5,365.9	5,302.7	19.4	20.8	124.56	-5.0	447.0	712.9	674.8	38.05	18.733	
5,300.0	5,273.0	5,466.3	5,401.5	19.8	21.2	125.19	-2.5	430.1	697.6	658.8	38.80	17.981	
5,400.0	5,373.0	5,564.6	5,498.4	20.1	21.6	125.86	-0.2	413.2	682.2	642.7	39.54	17.253	
5,500.0	5,473.0	5,659.3	5,591.7	20.4	22.1	126.56	1.6	397.1	667.3	627.0	40.29	16.560	
5,600.0	5,573.0	5,755.8	5,686.8	20.8	22.5	127.27	3.3	381.1	652.9	611.8	41.05	15.905	
5,700.0	5,673.0	5,853.3	5,783.0	21.1	22.9	128.01	5.1	365.3	638.9	597.1	41.80	15.283	
5,800.0	5,773.0	5,951.2	5,879.7	21.4	23.3	128.76	7.2	349.6	625.0	582.5	42.56	14.686	
5,900.0	5,873.0	6,047.0	5,974.3	21.8	23.8	129.49	9.2	334.8	611.7	568.4	43.32	14.120	
6,000.0	5,973.0	6,146.4	6,072.5	22.1	24.2	130.27	11.2	319.6	598.6	554.5	44.08	13.580	
6,100.0	6,073.0	6,246.6	6,171.4	22.5	24.6	131.08	13.4	304.2	585.4	540.5	44.85	13.053	
6,200.0	6,173.0	6,344.4	6,268.0	22.8	25.0	131.92	15.6	289.1	572.3	526.7	45.62	12.546	
6,300.0	6,273.0	6,441.7	6,364.2	23.1	25.5	132.76	17.9	274.4	559.5	513.1	46.39	12.062	
6,400.0	6,373.0	6,537.5	6,459.0	23.5	25.9	133.59	20.1	260.4	547.3	500.1	47.16	11.606	
6,500.0	6,473.0	6,633.9	6,554.3	23.8	26.3	134.43	22.0	247.0	535.8	487.9	47.93	11.179	
6,600.0	6,573.0	6,731.7	6,651.4	24.2	26.7	135.13	25.1	234.7	524.7	476.0	48.68	10.777	
6,700.0	6,673.0	6,824.9	6,743.9	24.5	27.1	135.54	29.5	225.2	514.1	464.7	49.41	10.406	
6,800.0	6,773.0	6,914.8	6,833.5	24.9	27.4	135.67	34.2	218.9	505.5	455.4	50.10	10.090	
6,900.0	6,873.0	7,001.6	6,920.2	25.2	27.7	135.62	38.9	215.1	498.6	447.9	50.73	9.829	
7,000.0	6,973.0	7,082.4	7,000.8	25.6	27.9	135.58	40.9	213.6	495.5	444.2	51.28	9.663	
7,076.4	7,049.4	7,151.9	7,070.4	25.8	28.2	135.59	41.2	213.2	495.0	443.2	51.73	9.569	CC
7,100.0	7,073.0	7,174.5	7,093.0	25.9	28.2	135.60	41.1	213.2	495.0	443.1	51.88	9.542	
7,200.0	7,173.0	7,273.0	7,191.5	26.3	28.5	135.66	40.5	213.0	495.4	442.8	52.53	9.429	
7,300.0	7,273.0	7,371.8	7,290.2	26.6	28.8	135.74	39.5	213.0	496.0	442.8	53.19	9.325	
7,400.0	7,373.0	7,471.4	7,389.8	26.9	29.1	135.81	38.6	213.1	496.8	442.9	53.86	9.224	
7,500.0	7,473.0	7,570.0	7,488.5	27.3	29.4	135.87	37.4	213.4	497.8	443.3	54.51	9.133	
7,600.0	7,573.0	7,670.6	7,589.1	27.6	29.7	135.91	36.4	213.9	498.9	443.7	55.18	9.041	
7,700.0	7,673.0	7,770.8	7,689.2	28.0	30.0	135.92	35.7	214.5	499.8	444.0	55.85	8.950	
7,800.0	7,773.0	7,869.8	7,788.2	28.3	30.3	135.89	35.1	215.4	500.9	444.4	56.50	8.866	
7,900.0	7,873.0	7,968.6	7,887.0	28.7	30.6	135.84	34.5	216.6	502.2	445.0	57.15	8.787	
8,000.0	7,973.0	8,068.4	7,986.8	29.0	30.8	135.79	33.8	217.9	503.6	445.8	57.80	8.713	
8,100.0	8,073.0	8,167.3	8,085.7	29.4	31.1	135.78	32.8	219.0	505.1	446.7	58.46	8.641	
8,200.0	8,173.0	8,266.5	8,184.9	29.7	31.4	135.82	31.3	220.0	506.9	447.8	59.12	8.574	
8,300.0	8,273.0	8,365.9	8,284.3	30.1	31.7	135.89	29.5	220.8	508.7	448.9	59.79	8.509	
8,400.0	8,373.0	8,466.9	8,385.3	30.4	32.0	135.98	27.6	221.6	510.6	450.1	60.48	8.443	
8,500.0	8,473.0	8,564.3	8,482.6	30.8	32.3	136.10	25.5	222.1	512.5	451.4	61.13	8.384	
8,600.0	8,573.0	8,664.3	8,582.5	31.1	32.6	136.45	21.8	221.4	514.8	452.9	61.83	8.326	
8,700.0	8,673.0	8,767.7	8,685.7	31.5	33.0	137.09	16.3	218.6	516.7	454.1	62.60	8.255	
8,800.0	8,773.0	8,877.2	8,795.1	31.8	33.3	137.76	11.7	214.6	517.3	453.9	63.44	8.155	
8,900.0	8,873.0	8,979.9	8,897.6	32.2	33.7	138.43	8.1	209.7	516.8	452.6	64.20	8.050	
9,000.0	8,973.0	9,080.8	8,998.4	32.5	34.1	139.02	5.1	205.3	516.1	451.2	64.94	7.947	
9,100.0	9,073.0	9,188.9	9,106.3	32.9	34.4	139.50	3.4	201.1	514.8	449.1	65.74	7.832	
9,200.0	9,173.0	9,300.0	9,217.4	33.2	34.8	139.68	5.4	197.2	511.1	444.6	66.51	7.685	
9,300.0	9,273.0	9,396.3	9,313.5	33.6	35.1	139.64	9.0	194.6	506.6	439.4	67.18	7.541	
9,400.0	9,373.0	9,494.1	9,411.4	33.9	35.5	139.63	11.6	192.5	503.2	435.3	67.87	7.414	
9,500.0	9,473.0	9,587.4	9,504.5	34.3	35.8	139.74	13.1	190.0	500.2	431.7	68.53	7.299	
9,600.0	9,573.0	9,680.5	9,597.6	34.6	36.1	140.06	12.3	187.1	498.9	429.7	69.19	7.210	
9,700.0	9,673.0	9,781.2	9,698.2	35.0	36.5	140.59	9.8	183.2	498.3	428.4	69.93	7.125	
9,800.0	9,773.0	9,881.9	9,798.8	35.3	36.8	141.19	7.2	178.5	497.3	426.7	70.67	7.037	
9,900.0	9,873.0	9,981.2	9,898.0	35.7	37.2	141.78	4.7	173.9	496.4	425.0	71.41	6.952	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #502H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 241-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,957.7	9,930.7	10,035.1	9,951.7	35.9	37.4	142.05	3.5	172.0	496.2	424.4	71.79	6.912	
10,000.0	9,973.0	10,074.0	9,990.6	36.0	37.5	142.21	2.5	170.9	496.3	424.3	72.06	6.888	ES
10,100.0	10,073.0	10,170.2	10,086.8	36.4	37.8	142.55	-0.1	169.3	497.5	424.7	72.73	6.840	
10,200.0	10,173.0	10,268.0	10,184.6	36.7	38.1	142.81	-2.7	168.4	499.0	425.6	73.41	6.797	
10,300.0	10,273.0	10,330.3	10,246.7	37.1	38.3	143.15	-7.1	167.9	504.4	430.9	73.48	6.864	
10,400.0	10,373.0	10,388.6	10,304.2	37.4	38.5	143.76	-16.5	168.3	517.7	444.6	73.12	7.081	
10,500.0	10,473.0	10,457.0	10,370.3	37.8	38.7	144.77	-33.9	169.6	539.2	466.4	72.82	7.405	
10,600.0	10,573.0	10,502.2	10,412.9	38.2	38.8	145.57	-48.9	171.0	567.6	496.2	71.39	7.950	
10,700.0	10,673.0	10,551.0	10,457.9	38.5	38.9	146.50	-67.7	172.9	602.7	532.8	69.93	8.620	
10,800.0	10,773.0	10,616.3	10,516.2	38.9	39.1	147.91	-96.9	175.1	643.3	574.1	69.25	9.290	
10,900.0	10,873.0	10,665.8	10,558.9	39.2	39.2	149.09	-121.9	176.1	689.1	621.3	67.81	10.163	
11,000.0	10,973.0	10,706.6	10,592.8	39.6	39.3	150.09	-144.8	177.2	740.6	674.6	65.98	11.225	
11,024.0	10,997.0	10,715.9	10,600.3	39.7	39.3	150.31	-150.3	177.5	753.7	688.2	65.53	11.502	
11,050.0	11,023.0	10,740.0	10,619.3	39.7	39.4	-20.83	-164.9	178.4	768.1	702.3	65.78	11.678	
11,100.0	11,072.8	10,740.0	10,619.3	39.9	39.4	-19.81	-164.9	178.4	793.4	729.7	63.72	12.451	
11,150.0	11,122.0	10,763.6	10,637.4	40.0	39.5	-18.54	-180.1	179.3	816.7	753.9	62.85	12.995	
11,200.0	11,170.3	10,782.2	10,651.2	40.2	39.5	-17.54	-192.5	179.9	837.8	776.2	61.63	13.594	
11,250.0	11,217.2	10,800.9	10,664.6	40.3	39.5	-16.70	-205.6	180.5	856.6	796.2	60.36	14.192	
11,300.0	11,262.5	10,835.0	10,687.8	40.4	39.6	-15.81	-230.6	181.2	873.3	813.5	59.85	14.591	
11,350.0	11,305.7	10,835.0	10,687.8	40.5	39.6	-15.42	-230.6	181.2	887.0	829.6	57.46	15.437	
11,400.0	11,346.6	10,835.0	10,687.8	40.6	39.6	-15.09	-230.6	181.2	899.3	844.3	55.00	16.349	
11,450.0	11,384.8	10,872.5	10,711.3	40.6	39.7	-14.52	-259.8	182.1	907.9	853.3	54.55	16.644	
11,500.0	11,420.1	10,889.7	10,721.2	40.7	39.7	-14.22	-273.8	182.5	914.7	861.7	52.96	17.272	
11,550.0	11,452.2	10,929.0	10,742.0	40.8	39.8	-13.85	-307.1	183.7	919.8	867.3	52.54	17.507	
11,600.0	11,480.8	10,929.0	10,742.0	40.9	39.8	-13.82	-307.1	183.7	921.1	871.1	50.01	18.418	
11,650.0	11,505.7	10,929.0	10,742.0	40.9	39.8	-13.83	-307.1	183.7	920.8	873.3	47.50	19.386	
11,700.0	11,526.7	10,957.4	10,755.3	41.0	39.8	-13.77	-332.1	184.8	917.6	871.1	46.51	19.732	
11,750.0	11,543.8	10,973.9	10,762.3	41.1	39.8	-13.85	-347.1	185.6	912.3	867.4	44.93	20.303	
11,800.0	11,556.6	10,990.4	10,768.7	41.2	39.9	-14.00	-362.2	186.5	904.6	861.2	43.43	20.830	
11,850.0	11,565.2	11,023.0	10,779.9	41.2	39.9	-14.23	-392.8	188.6	894.9	852.1	42.79	20.916	
11,900.0	11,569.5	11,023.0	10,779.9	41.3	39.9	-14.56	-392.8	188.6	882.0	841.3	40.68	21.684	
11,924.0	11,570.0	11,023.0	10,779.9	41.4	39.9	-14.74	-392.8	188.6	875.3	835.6	39.75	22.023	
12,000.0	11,570.0	11,057.8	10,789.2	41.5	40.0	-15.16	-426.3	190.5	855.0	816.5	38.45	22.235	
12,100.0	11,570.0	11,118.0	10,798.6	41.8	40.1	-15.42	-485.7	191.0	836.3	798.8	37.44	22.336	
12,200.0	11,570.0	11,141.3	10,800.4	42.1	40.2	-15.60	-508.9	190.6	823.7	787.7	36.01	22.878	
12,292.2	11,570.0	11,212.0	10,803.9	42.5	40.4	-15.57	-579.5	188.8	818.0	781.9	36.08	22.670	
12,300.0	11,570.0	11,212.0	10,803.9	42.5	40.4	-15.57	-579.5	188.8	817.6	781.6	36.05	22.682	
12,400.0	11,570.0	11,302.3	10,806.0	42.9	40.8	-15.36	-669.7	185.8	814.3	777.9	36.41	22.365	
12,500.0	11,570.0	11,394.9	10,806.9	43.4	41.2	-15.10	-762.2	182.2	812.3	775.4	36.84	22.047	
12,600.0	11,570.0	11,500.6	10,808.3	44.0	41.7	-14.82	-867.8	178.4	809.9	772.5	37.42	21.642	
12,700.0	11,570.0	11,609.9	10,810.1	44.6	42.4	-14.46	-977.0	173.3	807.0	768.9	38.07	21.196	
12,800.0	11,570.0	11,701.0	10,811.8	45.3	43.0	-13.99	-1,067.9	166.6	803.3	764.7	38.58	20.824	
12,900.0	11,570.0	11,804.5	10,812.4	46.0	43.7	-13.52	-1,171.1	160.2	801.2	761.9	39.24	20.415	
13,000.0	11,570.0	11,895.6	10,813.9	46.7	44.4	-13.16	-1,262.1	155.3	798.2	758.3	39.93	19.990	
13,100.0	11,570.0	12,001.3	10,815.1	47.6	45.2	-13.01	-1,367.8	153.4	796.5	755.7	40.88	19.484	
13,200.0	11,570.0	12,097.1	10,817.2	48.4	46.0	-12.88	-1,463.5	151.8	793.9	752.1	41.82	18.984	
13,300.0	11,570.0	12,196.9	10,818.9	49.3	46.9	-12.81	-1,563.3	150.9	791.9	749.1	42.85	18.480	
13,400.0	11,570.0	12,286.8	10,820.4	50.2	47.7	-12.85	-1,653.2	151.6	790.4	746.5	43.91	17.999	
13,500.0	11,570.0	12,400.0	10,823.0	51.2	48.8	-13.23	-1,766.2	157.1	789.1	743.8	45.35	17.399	
13,600.0	11,570.0	12,506.2	10,826.8	52.2	49.8	-13.49	-1,872.3	160.4	786.3	739.5	46.73	16.825	
13,700.0	11,570.0	12,598.8	10,829.2	53.2	50.8	-13.51	-1,964.8	160.8	783.7	735.8	47.91	16.358	
13,800.0	11,570.0	12,701.1	10,831.7	54.3	51.9	-13.54	-2,067.1	161.1	781.3	732.1	49.19	15.881	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #502H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 241-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,900.0	11,570.0	12,803.2	10,834.7	55.4	53.0	-13.60	-2,169.2	161.9	778.4	727.9	50.53	15.405	
14,000.0	11,570.0	12,897.3	10,837.2	56.5	54.0	-13.67	-2,263.2	162.8	775.9	724.0	51.82	14.971	
14,100.0	11,570.0	12,987.1	10,838.9	57.7	55.1	-13.74	-2,353.0	163.9	774.3	721.2	53.11	14.578	
14,133.5	11,570.0	13,014.4	10,839.1	58.1	55.4	-13.79	-2,380.3	164.6	774.1	720.6	53.55	14.456	
14,200.0	11,570.0	13,070.8	10,839.3	58.9	56.0	-13.96	-2,436.6	167.4	774.7	720.2	54.50	14.215	
14,300.0	11,570.0	13,173.7	10,838.9	60.1	57.2	-14.17	-2,539.5	170.9	775.7	719.7	56.01	13.848	
14,400.0	11,570.0	13,270.3	10,838.9	61.3	58.4	-14.52	-2,635.8	176.4	777.0	719.4	57.62	13.486	
14,500.0	11,570.0	13,377.9	10,839.4	62.5	59.7	-14.92	-2,743.3	182.5	777.8	718.5	59.36	13.104	
14,600.0	11,570.0	13,476.6	10,839.1	63.8	60.9	-14.93	-2,842.0	183.3	778.2	717.4	60.79	12.801	
14,700.0	11,570.0	13,569.5	10,838.1	65.0	62.1	-14.95	-2,934.9	184.4	779.3	717.1	62.21	12.527	
14,800.0	11,570.0	13,667.9	10,836.7	66.3	63.4	-15.01	-3,033.3	186.2	781.1	717.3	63.71	12.259	
14,900.0	11,570.0	13,767.3	10,835.1	67.6	64.7	-15.01	-3,132.7	187.2	782.6	717.5	65.19	12.006	
15,000.0	11,570.0	13,870.0	10,833.7	69.0	66.1	-15.13	-3,235.3	189.9	784.6	717.8	66.79	11.746	
15,100.0	11,570.0	13,978.8	10,833.8	70.3	67.5	-15.40	-3,344.0	194.3	785.4	716.8	68.58	11.451	
15,200.0	11,570.0	14,083.0	10,834.6	71.7	68.9	-15.62	-3,448.1	197.9	785.4	715.1	70.33	11.167	
15,300.0	11,570.0	14,190.0	10,835.8	73.0	70.4	-15.79	-3,555.1	200.6	784.8	712.7	72.08	10.888	
15,400.0	11,570.0	14,284.6	10,837.3	74.4	71.7	-16.01	-3,649.6	203.8	784.0	710.3	73.78	10.627	
15,500.0	11,570.0	14,381.0	10,838.1	75.8	73.0	-16.18	-3,746.0	206.6	783.9	708.4	75.48	10.386	
15,532.5	11,570.0	14,415.3	10,838.2	76.2	73.5	-16.21	-3,780.3	207.1	783.9	707.9	76.03	10.310	
15,600.0	11,570.0	14,486.9	10,838.4	77.2	74.5	-16.18	-3,851.9	207.2	783.6	706.5	77.11	10.163	
15,690.4	11,570.0	14,572.1	10,838.2	78.5	75.7	-16.07	-3,937.0	206.1	783.4	705.0	78.39	9.994	
15,700.0	11,570.0	14,581.3	10,838.2	78.6	75.8	-16.06	-3,946.3	206.0	783.4	704.9	78.52	9.977	
15,800.0	11,570.0	14,677.9	10,837.4	80.0	77.2	-15.90	-4,042.8	204.6	783.6	703.7	79.93	9.804	
15,900.0	11,570.0	14,773.0	10,836.0	81.4	78.6	-15.74	-4,138.0	203.2	784.4	703.1	81.32	9.647	
16,000.0	11,570.0	14,874.5	10,834.2	82.9	80.0	-15.56	-4,239.4	201.8	785.6	702.8	82.75	9.493	
16,100.0	11,570.0	14,985.2	10,833.3	84.3	81.6	-15.35	-4,350.1	199.6	785.7	701.5	84.22	9.329	
16,200.0	11,570.0	15,087.0	10,833.3	85.8	83.1	-15.16	-4,451.9	197.6	785.1	699.4	85.66	9.165	
16,300.0	11,570.0	15,202.2	10,834.1	87.2	84.8	-15.02	-4,567.0	196.1	784.0	696.7	87.24	8.987	
16,400.0	11,570.0	15,304.2	10,836.8	88.7	86.3	-14.94	-4,669.0	194.7	780.8	692.1	88.77	8.796	
16,500.0	11,570.0	15,407.5	10,839.3	90.2	87.8	-14.81	-4,772.2	192.9	777.9	687.6	90.28	8.616	
16,600.0	11,570.0	15,505.9	10,842.0	91.6	89.3	-14.70	-4,870.6	191.1	774.7	682.9	91.76	8.442	
16,700.0	11,570.0	15,596.5	10,843.8	93.1	90.7	-14.56	-4,961.2	189.4	772.1	679.0	93.16	8.288	
16,800.0	11,570.0	15,713.8	10,846.4	94.6	92.4	-14.41	-5,078.4	187.2	769.4	674.6	94.74	8.121	
16,900.0	11,570.0	15,796.2	10,848.2	96.1	93.7	-14.28	-5,160.8	185.5	766.6	670.6	96.09	7.978	
17,000.0	11,570.0	15,884.5	10,848.5	97.6	95.0	-14.12	-5,249.0	183.7	765.6	668.1	97.44	7.857	
17,100.0	11,570.0	15,983.4	10,848.1	99.1	96.5	-13.94	-5,347.9	181.9	765.4	666.6	98.86	7.742	
17,200.0	11,570.0	16,084.1	10,847.8	100.6	98.0	-13.78	-5,448.6	180.4	765.2	664.9	100.32	7.628	
17,204.5	11,570.0	16,088.7	10,847.8	100.7	98.1	-13.78	-5,453.2	180.4	765.2	664.8	100.38	7.623	
17,300.0	11,570.0	16,171.8	10,847.5	102.1	99.3	-13.84	-5,536.3	181.8	765.8	663.9	101.90	7.515	
17,400.0	11,570.0	16,274.1	10,846.8	103.7	100.9	-14.00	-5,638.6	184.8	767.1	663.3	103.73	7.394	
17,500.0	11,570.0	16,377.2	10,846.2	105.2	102.5	-14.13	-5,741.6	187.3	768.1	662.5	105.53	7.278	
17,600.0	11,570.0	16,489.9	10,847.1	106.7	104.2	-14.26	-5,854.3	189.6	767.6	660.2	107.44	7.145	
17,700.0	11,570.0	16,587.8	10,848.5	108.3	105.7	-14.42	-5,952.1	191.9	766.7	657.4	109.25	7.018	
17,800.0	11,570.0	16,685.3	10,849.5	109.8	107.2	-14.61	-6,049.6	194.9	766.3	655.2	111.12	6.896	
17,900.0	11,570.0	16,788.9	10,850.7	111.3	108.8	-14.81	-6,153.2	197.9	765.7	652.6	113.06	6.773	
18,000.0	11,570.0	16,888.9	10,852.2	112.9	110.3	-14.95	-6,253.1	200.1	764.8	649.8	114.92	6.655	
18,100.0	11,570.0	16,987.4	10,853.3	114.4	111.9	-15.09	-6,351.6	202.3	764.0	647.3	116.76	6.544	
18,200.0	11,570.0	17,086.2	10,854.4	116.0	113.4	-15.24	-6,450.4	204.6	763.5	644.8	118.62	6.436	
18,307.1	11,570.0	17,190.0	10,855.4	117.4	115.0	-15.34	-6,554.1	206.3	762.7	642.6	120.18	6.347	SF
18,307.5	11,570.0	17,190.0	10,855.4	117.4	115.0	-15.34	-6,554.1	206.3	762.7	642.6	120.18	6.347	
18,307.7	11,570.0	17,190.0	10,855.4	117.4	115.0	-15.34	-6,554.1	206.3	762.7	642.6	120.17	6.347	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	18.0	18.0	0.0	0.0	91.03	-33.7	1,875.5	1,875.8				
100.0	100.0	118.0	118.0	0.1	0.2	91.03	-33.7	1,875.5	1,875.8	1,875.5	0.32	5,846.713	
200.0	200.0	218.0	218.0	0.5	0.6	91.03	-33.7	1,875.5	1,875.8	1,874.8	1.04	1,807.534	
300.0	300.0	318.0	318.0	0.8	0.9	91.03	-33.7	1,875.5	1,875.8	1,874.1	1.75	1,069.012	
400.0	400.0	418.0	418.0	1.2	1.3	91.03	-33.7	1,875.5	1,875.8	1,873.3	2.47	758.929	
500.0	500.0	518.0	518.0	1.6	1.6	91.03	-33.7	1,875.5	1,875.8	1,872.6	3.19	588.287	
600.0	600.0	618.0	618.0	1.9	2.0	91.03	-33.7	1,875.5	1,875.8	1,871.9	3.91	480.295	
700.0	700.0	718.0	718.0	2.3	2.3	91.03	-33.7	1,875.5	1,875.8	1,871.2	4.62	405.802	
800.0	800.0	818.0	818.0	2.6	2.7	91.03	-33.7	1,875.5	1,875.8	1,870.5	5.34	351.313	
900.0	900.0	918.0	918.0	3.0	3.1	91.03	-33.7	1,875.5	1,875.8	1,869.8	6.06	309.726	
1,000.0	1,000.0	1,018.0	1,018.0	3.4	3.4	91.03	-33.7	1,875.5	1,875.8	1,869.0	6.77	276.942	
1,100.0	1,100.0	1,118.0	1,118.0	3.7	3.8	91.03	-33.7	1,875.5	1,875.8	1,868.3	7.49	250.434	
1,200.0	1,200.0	1,218.0	1,218.0	4.1	4.1	91.03	-33.7	1,875.5	1,875.8	1,867.6	8.21	228.557	
1,300.0	1,300.0	1,318.0	1,318.0	4.4	4.5	91.03	-33.7	1,875.5	1,875.8	1,866.9	8.92	210.195	
1,400.0	1,400.0	1,418.0	1,418.0	4.8	4.9	91.03	-33.7	1,875.5	1,875.8	1,866.2	9.64	194.565	
1,500.0	1,500.0	1,526.7	1,526.7	5.1	5.2	91.03	-33.7	1,875.4	1,875.8	1,865.4	10.39	180.592	
1,600.0	1,600.0	1,675.2	1,675.2	5.5	5.8	109.73	-33.8	1,872.8	1,874.3	1,863.1	11.25	166.549	
1,700.0	1,700.0	1,823.5	1,823.3	5.9	6.3	109.89	-34.1	1,866.4	1,870.8	1,858.7	12.11	154.488	
1,800.0	1,799.9	1,971.4	1,970.9	6.2	6.8	110.14	-34.5	1,856.1	1,865.4	1,852.5	12.96	143.932	
1,900.0	1,899.7	2,118.7	2,117.5	6.6	7.3	110.50	-35.1	1,842.2	1,858.0	1,844.2	13.80	134.602	
2,000.0	1,999.4	2,265.2	2,262.9	6.9	7.8	110.96	-35.8	1,824.5	1,848.8	1,834.1	14.64	126.280	
2,100.0	2,098.9	2,375.3	2,372.0	7.3	8.3	111.41	-36.4	1,809.3	1,838.3	1,823.0	15.38	119.550	
2,200.0	2,198.3	2,474.2	2,469.9	7.7	8.6	111.86	-37.0	1,795.6	1,828.6	1,812.5	16.09	113.651	
2,300.0	2,297.4	2,572.9	2,567.6	8.0	9.0	112.36	-37.6	1,781.9	1,819.5	1,802.7	16.81	108.258	
2,400.0	2,396.4	2,671.5	2,665.2	8.4	9.4	112.81	-38.1	1,768.1	1,810.9	1,793.4	17.53	103.297	
2,500.0	2,495.5	2,748.0	2,741.1	8.8	9.7	113.16	-38.5	1,757.8	1,802.8	1,784.6	18.20	99.047	
2,600.0	2,594.5	2,815.3	2,807.9	9.2	9.9	113.46	-38.9	1,749.8	1,796.5	1,777.7	18.85	95.315	
2,700.0	2,693.5	2,882.8	2,875.0	9.6	10.2	113.76	-39.1	1,743.0	1,792.0	1,772.5	19.49	91.933	
2,800.0	2,792.5	2,950.4	2,942.4	10.0	10.5	114.06	-39.4	1,737.4	1,789.4	1,769.3	20.13	88.874	
2,892.9	2,884.5	3,013.2	3,005.1	10.3	10.7	114.34	-39.5	1,733.3	1,788.6	1,767.9	20.73	86.295	
2,900.0	2,891.6	3,018.0	3,009.9	10.3	10.7	114.36	-39.6	1,733.0	1,788.6	1,767.8	20.77	86.108	
3,000.0	2,990.6	3,085.7	3,077.5	10.7	10.9	114.65	-39.7	1,729.8	1,789.6	1,768.2	21.40	83.614	
3,100.0	3,089.6	3,153.4	3,145.2	11.1	11.2	114.93	-39.8	1,727.7	1,792.5	1,770.5	22.03	81.370	
3,200.0	3,188.6	3,221.1	3,212.9	11.5	11.4	115.21	-39.8	1,726.9	1,797.3	1,774.6	22.65	79.354	
3,300.0	3,287.7	3,313.9	3,305.7	11.9	11.7	115.58	-39.8	1,726.9	1,803.2	1,779.9	23.36	77.188	
3,400.0	3,386.7	3,412.9	3,404.7	12.3	12.1	115.97	-39.8	1,726.9	1,809.3	1,785.2	24.10	75.077	
3,500.0	3,485.7	3,512.0	3,503.7	12.7	12.4	116.36	-39.8	1,726.9	1,815.5	1,790.7	24.84	73.091	
3,600.0	3,584.8	3,611.0	3,602.8	13.1	12.8	116.75	-39.8	1,726.9	1,821.8	1,796.2	25.58	71.221	
3,700.0	3,683.8	3,710.0	3,701.8	13.5	13.1	117.14	-39.8	1,726.9	1,828.1	1,801.8	26.32	69.458	
3,800.0	3,782.8	3,809.0	3,800.8	13.9	13.5	117.52	-39.8	1,726.9	1,834.6	1,807.5	27.06	67.792	
3,900.0	3,881.8	3,908.1	3,899.8	14.3	13.8	117.90	-39.8	1,726.9	1,841.1	1,813.3	27.80	66.217	
4,000.0	3,980.9	4,007.1	3,998.9	14.7	14.2	118.28	-39.8	1,726.9	1,847.7	1,819.2	28.55	64.726	
4,100.0	4,079.9	4,106.1	4,097.9	15.2	14.5	118.66	-39.8	1,726.9	1,854.4	1,825.1	29.29	63.313	
4,200.0	4,178.9	4,205.1	4,196.9	15.6	14.9	119.03	-39.8	1,726.9	1,861.2	1,831.1	30.03	61.971	
4,300.0	4,277.9	4,304.2	4,295.9	16.0	15.2	119.40	-39.8	1,726.9	1,868.0	1,837.2	30.78	60.696	
4,400.0	4,377.0	4,403.2	4,395.0	16.4	15.6	119.77	-39.8	1,726.9	1,874.9	1,843.4	31.52	59.484	
4,500.0	4,476.0	4,502.2	4,494.0	16.8	15.9	120.14	-39.8	1,726.9	1,881.9	1,849.7	32.26	58.329	
4,600.0	4,575.0	4,601.3	4,593.0	17.2	16.2	120.50	-39.8	1,726.9	1,889.0	1,856.0	33.01	57.229	
4,625.7	4,600.5	4,626.7	4,618.5	17.3	16.3	120.59	-39.8	1,726.9	1,890.8	1,857.6	33.20	56.955	
4,700.0	4,674.1	4,700.4	4,692.1	17.6	16.6	120.90	-39.8	1,726.9	1,895.8	1,862.0	33.75	56.173	
4,800.0	4,773.6	4,800.2	4,791.6	18.0	17.0	121.25	-39.8	1,726.9	1,901.3	1,866.8	34.48	55.136	
4,900.0	4,873.2	4,900.5	4,891.2	18.4	17.3	121.51	-39.8	1,726.9	1,905.5	1,870.3	35.21	54.118	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	5,000.7	4,991.1	18.7	17.7	121.69	-39.8	1,726.9	1,908.4	1,872.5	35.93	53.119	
5,100.0	5,073.0	5,100.7	5,091.0	19.1	18.0	121.78	-39.8	1,726.9	1,909.9	1,873.3	36.63	52.137	
5,159.0	5,132.1	5,158.3	5,150.1	19.3	18.2	103.15	-39.8	1,726.9	1,910.2	1,873.1	37.04	51.571	
5,200.0	5,173.0	5,200.7	5,191.0	19.4	18.4	103.15	-39.8	1,726.9	1,910.2	1,872.8	37.33	51.170	
5,300.0	5,273.0	5,300.7	5,291.0	19.8	18.7	103.15	-39.8	1,726.9	1,910.2	1,872.1	38.03	50.234	
5,400.0	5,373.0	5,400.7	5,391.0	20.1	19.1	103.15	-39.8	1,726.9	1,910.2	1,871.4	38.72	49.330	
5,500.0	5,473.0	5,500.7	5,491.0	20.4	19.4	103.15	-39.8	1,726.9	1,910.2	1,870.7	39.42	48.458	
5,600.0	5,573.0	5,600.7	5,591.0	20.8	19.8	103.15	-39.8	1,726.9	1,910.2	1,870.0	40.12	47.615	
5,700.0	5,673.0	5,700.7	5,691.0	21.1	20.1	103.15	-39.8	1,726.9	1,910.2	1,869.3	40.81	46.800	
5,800.0	5,773.0	5,800.7	5,791.0	21.4	20.5	103.15	-39.8	1,726.9	1,910.2	1,868.6	41.51	46.012	
5,900.0	5,873.0	5,900.7	5,891.0	21.8	20.8	103.15	-39.8	1,726.9	1,910.2	1,867.9	42.21	45.250	
6,000.0	5,973.0	6,000.7	5,991.0	22.1	21.2	103.15	-39.8	1,726.9	1,910.2	1,867.2	42.91	44.511	
6,100.0	6,073.0	6,100.7	6,091.0	22.5	21.6	103.15	-39.8	1,726.9	1,910.2	1,866.5	43.61	43.796	
6,200.0	6,173.0	6,200.7	6,191.0	22.8	21.9	103.15	-39.8	1,726.9	1,910.2	1,865.8	44.32	43.103	
6,300.0	6,273.0	6,300.7	6,291.0	23.1	22.3	103.15	-39.8	1,726.9	1,910.2	1,865.1	45.02	42.431	
6,400.0	6,373.0	6,400.7	6,391.0	23.5	22.6	103.15	-39.8	1,726.9	1,910.2	1,864.4	45.72	41.780	
6,500.0	6,473.0	6,500.7	6,491.0	23.8	23.0	103.15	-39.8	1,726.9	1,910.2	1,863.7	46.42	41.147	
6,600.0	6,573.0	6,600.7	6,591.0	24.2	23.3	103.15	-39.8	1,726.9	1,910.2	1,863.0	47.13	40.534	
6,700.0	6,673.0	6,700.7	6,691.0	24.5	23.7	103.15	-39.8	1,726.9	1,910.2	1,862.3	47.83	39.937	
6,800.0	6,773.0	6,800.7	6,791.0	24.9	24.0	103.15	-39.8	1,726.9	1,910.2	1,861.6	48.53	39.358	
6,900.0	6,873.0	6,900.7	6,891.0	25.2	24.4	103.15	-39.8	1,726.9	1,910.2	1,860.9	49.24	38.795	
7,000.0	6,973.0	7,000.7	6,991.0	25.6	24.8	103.15	-39.8	1,726.9	1,910.2	1,860.2	49.94	38.248	
7,100.0	7,073.0	7,100.7	7,091.0	25.9	25.1	103.15	-39.8	1,726.9	1,910.2	1,859.5	50.65	37.716	
7,200.0	7,173.0	7,200.7	7,191.0	26.3	25.5	103.15	-39.8	1,726.9	1,910.2	1,858.8	51.35	37.198	
7,300.0	7,273.0	7,300.7	7,291.0	26.6	25.8	103.15	-39.8	1,726.9	1,910.2	1,858.1	52.06	36.693	
7,400.0	7,373.0	7,400.7	7,391.0	26.9	26.2	103.15	-39.8	1,726.9	1,910.2	1,857.4	52.76	36.203	
7,500.0	7,473.0	7,500.7	7,491.0	27.3	26.5	103.15	-39.8	1,726.9	1,910.2	1,856.7	53.47	35.724	
7,600.0	7,573.0	7,600.7	7,591.0	27.6	26.9	103.15	-39.8	1,726.9	1,910.2	1,856.0	54.18	35.259	
7,700.0	7,673.0	7,700.7	7,691.0	28.0	27.2	103.15	-39.8	1,726.9	1,910.2	1,855.3	54.88	34.805	
7,800.0	7,773.0	7,800.7	7,791.0	28.3	27.6	103.15	-39.8	1,726.9	1,910.2	1,854.6	55.59	34.362	
7,900.0	7,873.0	7,900.7	7,891.0	28.7	28.0	103.15	-39.8	1,726.9	1,910.2	1,853.9	56.30	33.930	
8,000.0	7,973.0	8,000.7	7,991.0	29.0	28.3	103.15	-39.8	1,726.9	1,910.2	1,853.1	57.00	33.509	
8,100.0	8,073.0	8,100.7	8,091.0	29.4	28.7	103.15	-39.8	1,726.9	1,910.2	1,852.4	57.71	33.098	
8,200.0	8,173.0	8,200.7	8,191.0	29.7	29.0	103.15	-39.8	1,726.9	1,910.2	1,851.7	58.42	32.697	
8,300.0	8,273.0	8,300.7	8,291.0	30.1	29.4	103.15	-39.8	1,726.9	1,910.2	1,851.0	59.13	32.306	
8,400.0	8,373.0	8,400.7	8,391.0	30.4	29.7	103.15	-39.8	1,726.9	1,910.2	1,850.3	59.84	31.923	
8,500.0	8,473.0	8,500.7	8,491.0	30.8	30.1	103.15	-39.8	1,726.9	1,910.2	1,849.6	60.54	31.550	
8,600.0	8,573.0	8,600.7	8,591.0	31.1	30.5	103.15	-39.8	1,726.9	1,910.2	1,848.9	61.25	31.185	
8,700.0	8,673.0	8,700.7	8,691.0	31.5	30.8	103.15	-39.8	1,726.9	1,910.2	1,848.2	61.96	30.828	
8,800.0	8,773.0	8,800.7	8,791.0	31.8	31.2	103.15	-39.8	1,726.9	1,910.2	1,847.5	62.67	30.479	
8,900.0	8,873.0	8,900.7	8,891.0	32.2	31.5	103.15	-39.8	1,726.9	1,910.2	1,846.8	63.38	30.138	
9,000.0	8,973.0	9,000.7	8,991.0	32.5	31.9	103.15	-39.8	1,726.9	1,910.2	1,846.1	64.09	29.804	
9,100.0	9,073.0	9,100.7	9,091.0	32.9	32.2	103.15	-39.8	1,726.9	1,910.2	1,845.4	64.80	29.478	
9,200.0	9,173.0	9,200.7	9,191.0	33.2	32.6	103.15	-39.8	1,726.9	1,910.2	1,844.6	65.51	29.159	
9,300.0	9,273.0	9,300.7	9,291.0	33.6	32.9	103.15	-39.8	1,726.9	1,910.2	1,843.9	66.22	28.846	
9,400.0	9,373.0	9,400.7	9,391.0	33.9	33.3	103.15	-39.8	1,726.9	1,910.2	1,843.2	66.93	28.540	
9,500.0	9,473.0	9,500.7	9,491.0	34.3	33.7	103.15	-39.8	1,726.9	1,910.2	1,842.5	67.64	28.240	
9,600.0	9,573.0	9,600.7	9,591.0	34.6	34.0	103.15	-39.8	1,726.9	1,910.2	1,841.8	68.35	27.947	
9,700.0	9,673.0	9,700.7	9,691.0	35.0	34.4	103.15	-39.8	1,726.9	1,910.2	1,841.1	69.06	27.659	
9,800.0	9,773.0	9,800.7	9,791.0	35.3	34.7	103.15	-39.8	1,726.9	1,910.2	1,840.4	69.77	27.378	
9,900.0	9,873.0	9,900.7	9,891.0	35.7	35.1	103.15	-39.8	1,726.9	1,910.2	1,839.7	70.48	27.101	
10,000.0	9,973.0	10,000.7	9,991.0	36.0	35.4	103.15	-39.8	1,726.9	1,910.2	1,839.0	71.19	26.831	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	10,073.0	10,100.7	10,091.0	36.4	35.8	103.15	-39.8	1,726.9	1,910.2	1,838.2	71.90	26.566	
10,200.0	10,173.0	10,200.7	10,191.0	36.7	36.2	103.15	-39.8	1,726.9	1,910.2	1,837.5	72.61	26.305	
10,300.0	10,273.0	10,300.7	10,291.0	37.1	36.5	103.15	-39.8	1,726.9	1,910.2	1,836.8	73.33	26.050	
10,400.0	10,373.0	10,400.7	10,391.0	37.4	36.9	103.15	-39.8	1,726.9	1,910.2	1,836.1	74.04	25.800	
10,500.0	10,473.0	10,500.7	10,491.0	37.8	37.2	103.15	-39.8	1,726.9	1,910.2	1,835.4	74.75	25.554	
10,600.0	10,573.0	10,600.7	10,591.0	38.2	37.6	103.15	-39.8	1,726.9	1,910.2	1,834.7	75.46	25.313	
10,700.0	10,673.0	10,700.7	10,691.0	38.5	37.9	103.15	-39.8	1,726.9	1,910.2	1,834.0	76.17	25.077	
10,800.0	10,773.0	10,800.7	10,791.0	38.9	38.3	103.15	-39.8	1,726.9	1,910.2	1,833.3	76.88	24.845	
10,900.0	10,873.0	10,900.7	10,891.0	39.2	38.7	103.15	-39.8	1,726.9	1,910.2	1,832.6	77.60	24.617	
11,000.0	10,973.0	10,999.3	10,991.0	39.6	39.0	103.15	-39.8	1,726.9	1,910.2	1,831.8	78.30	24.395	
11,024.0	10,997.0	11,015.4	11,007.2	39.7	39.1	103.15	-39.9	1,726.9	1,910.2	1,831.8	78.44	24.353	
11,050.0	11,023.0	11,030.1	11,021.9	39.7	39.1	-69.15	-40.4	1,726.9	1,910.2	1,831.6	78.56	24.313	
11,100.0	11,072.8	11,058.4	11,050.0	39.9	39.2	-69.24	-42.3	1,726.9	1,909.4	1,830.6	78.79	24.235	
11,150.0	11,122.0	11,086.6	11,078.1	40.0	39.3	-69.44	-45.6	1,726.9	1,907.6	1,828.6	78.99	24.151	
11,200.0	11,170.3	11,114.9	11,106.0	40.2	39.4	-69.77	-50.3	1,726.9	1,904.9	1,825.7	79.17	24.061	
11,250.0	11,217.2	11,150.0	11,140.2	40.3	39.5	-70.25	-58.0	1,726.9	1,901.2	1,821.8	79.37	23.953	
11,300.0	11,262.5	11,171.5	11,160.9	40.4	39.6	-70.78	-63.8	1,727.0	1,896.6	1,817.1	79.49	23.860	
11,350.0	11,305.7	11,200.0	11,188.0	40.5	39.7	-71.46	-72.6	1,727.0	1,891.2	1,811.6	79.63	23.749	
11,400.0	11,346.6	11,228.3	11,214.5	40.6	39.7	-72.25	-82.7	1,727.0	1,885.0	1,805.2	79.77	23.631	
11,450.0	11,384.8	11,250.0	11,234.4	40.6	39.8	-73.09	-91.3	1,727.1	1,878.0	1,798.2	79.86	23.518	
11,500.0	11,420.1	11,285.4	11,266.2	40.7	39.9	-74.15	-107.0	1,727.1	1,870.3	1,790.3	80.03	23.370	
11,550.0	11,452.2	11,314.1	11,291.2	40.8	40.0	-75.24	-121.1	1,727.2	1,862.1	1,781.9	80.17	23.228	
11,600.0	11,480.8	11,343.0	11,315.5	40.9	40.1	-76.43	-136.5	1,727.2	1,853.4	1,773.1	80.31	23.077	
11,650.0	11,505.7	11,372.0	11,339.2	40.9	40.1	-77.70	-153.2	1,727.3	1,844.2	1,763.8	80.47	22.919	
11,700.0	11,526.7	11,400.0	11,361.3	41.0	40.2	-79.02	-170.5	1,727.3	1,834.8	1,754.1	80.63	22.755	
11,750.0	11,543.8	11,430.5	11,384.3	41.1	40.3	-80.44	-190.5	1,727.4	1,825.1	1,744.3	80.83	22.581	
11,800.0	11,556.6	11,460.1	11,405.6	41.2	40.4	-81.90	-211.1	1,727.5	1,815.3	1,734.3	81.03	22.404	
11,850.0	11,565.2	11,490.0	11,426.0	41.2	40.4	-83.39	-232.9	1,727.6	1,805.6	1,724.4	81.25	22.223	
11,900.0	11,569.5	11,520.2	11,445.4	41.3	40.5	-84.91	-256.1	1,727.6	1,796.1	1,714.6	81.48	22.042	
11,924.0	11,570.0	11,534.8	11,454.4	41.4	40.6	-85.65	-267.6	1,727.7	1,791.6	1,710.0	81.60	21.955	
12,000.0	11,570.0	11,584.4	11,482.5	41.5	40.7	-86.57	-308.5	1,727.8	1,779.2	1,697.2	82.00	21.697	
12,100.0	11,570.0	11,659.0	11,517.9	41.8	41.0	-87.72	-374.1	1,728.0	1,767.8	1,685.2	82.59	21.405	
12,200.0	11,570.0	11,743.9	11,547.4	42.1	41.2	-88.68	-453.5	1,728.3	1,761.5	1,678.2	83.25	21.159	
12,292.2	11,570.0	11,829.3	11,564.9	42.5	41.5	-89.25	-537.1	1,728.6	1,759.4	1,675.5	83.92	20.966	
12,300.0	11,570.0	11,836.7	11,565.9	42.5	41.6	-89.28	-544.4	1,728.6	1,759.4	1,675.4	83.98	20.951	
12,377.0	11,570.0	11,918.0	11,570.0	42.8	41.9	-89.41	-614.4	1,728.9	1,759.1	1,674.5	84.61	20.791	CC
12,400.0	11,570.0	11,929.8	11,570.0	42.9	41.9	-89.41	-637.4	1,729.0	1,759.1	1,674.4	84.76	20.755	
12,500.0	11,570.0	12,029.8	11,570.0	43.4	42.3	-89.41	-737.4	1,729.6	1,759.2	1,673.5	85.67	20.535	
12,600.0	11,570.0	12,129.8	11,570.0	44.0	42.8	-89.41	-837.4	1,730.2	1,759.2	1,672.5	86.69	20.292	
12,700.0	11,570.0	12,229.8	11,570.0	44.6	43.3	-89.41	-937.4	1,730.8	1,759.2	1,671.4	87.83	20.030	
12,800.0	11,570.0	12,329.8	11,570.0	45.3	43.9	-89.41	-1,037.4	1,731.4	1,759.2	1,670.1	89.08	19.750	
12,900.0	11,570.0	12,429.8	11,570.0	46.0	44.5	-89.41	-1,137.3	1,732.0	1,759.2	1,668.8	90.43	19.455	
13,000.0	11,570.0	12,529.8	11,570.0	46.7	45.2	-89.41	-1,237.3	1,732.6	1,759.2	1,667.4	91.88	19.148	
13,100.0	11,570.0	12,629.8	11,570.0	47.6	45.9	-89.41	-1,337.3	1,733.2	1,759.3	1,665.8	93.42	18.831	
13,200.0	11,570.0	12,729.8	11,570.0	48.4	46.7	-89.41	-1,437.3	1,733.8	1,759.3	1,664.2	95.06	18.507	
13,300.0	11,570.0	12,829.8	11,570.0	49.3	47.5	-89.41	-1,537.3	1,734.4	1,759.3	1,662.5	96.78	18.178	
13,400.0	11,570.0	12,929.8	11,570.0	50.2	48.4	-89.41	-1,637.3	1,735.0	1,759.3	1,660.7	98.59	17.845	
13,500.0	11,570.0	13,029.8	11,570.0	51.2	49.3	-89.41	-1,737.3	1,735.6	1,759.3	1,658.8	100.47	17.511	
13,600.0	11,570.0	13,129.8	11,570.0	52.2	50.3	-89.41	-1,837.3	1,736.2	1,759.3	1,656.9	102.42	17.177	
13,700.0	11,570.0	13,229.8	11,570.0	53.2	51.3	-89.41	-1,937.3	1,736.8	1,759.3	1,654.9	104.45	16.845	
13,800.0	11,570.0	13,329.8	11,570.0	54.3	52.3	-89.41	-2,037.3	1,737.4	1,759.4	1,652.8	106.53	16.515	
13,900.0	11,570.0	13,429.8	11,570.0	55.4	53.3	-89.41	-2,137.3	1,738.0	1,759.4	1,650.7	108.68	16.188	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bucks Fed Com #601H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.0	11,570.0	13,529.8	11,570.0	56.5	54.4	-89.41	-2,237.3	1,738.6	1,759.4	1,648.5	110.89	15.866	
14,100.0	11,570.0	13,629.8	11,570.0	57.7	55.5	-89.41	-2,337.3	1,739.2	1,759.4	1,646.3	113.15	15.549	
14,200.0	11,570.0	13,729.8	11,570.0	58.9	56.7	-89.41	-2,437.3	1,739.8	1,759.4	1,644.0	115.46	15.238	
14,300.0	11,570.0	13,829.8	11,570.0	60.1	57.8	-89.41	-2,537.3	1,740.4	1,759.4	1,641.6	117.82	14.933	
14,400.0	11,570.0	13,929.8	11,570.0	61.3	59.0	-89.41	-2,637.3	1,741.0	1,759.5	1,639.2	120.23	14.634	
14,500.0	11,570.0	14,029.8	11,570.0	62.5	60.2	-89.41	-2,737.3	1,741.6	1,759.5	1,636.8	122.68	14.342	
14,600.0	11,570.0	14,129.8	11,570.0	63.8	61.4	-89.41	-2,837.3	1,742.2	1,759.5	1,634.3	125.16	14.058	
14,700.0	11,570.0	14,229.8	11,570.0	65.0	62.7	-89.41	-2,937.3	1,742.8	1,759.5	1,631.8	127.69	13.780	
14,800.0	11,570.0	14,329.8	11,570.0	66.3	64.0	-89.41	-3,037.3	1,743.4	1,759.5	1,629.3	130.25	13.509	
14,900.0	11,570.0	14,429.8	11,570.0	67.6	65.3	-89.41	-3,137.3	1,744.0	1,759.5	1,626.7	132.84	13.245	
15,000.0	11,570.0	14,529.8	11,570.0	69.0	66.6	-89.41	-3,237.3	1,744.6	1,759.5	1,624.1	135.47	12.988	
15,100.0	11,570.0	14,629.8	11,570.0	70.3	67.9	-89.41	-3,337.3	1,745.2	1,759.6	1,621.4	138.13	12.739	
15,200.0	11,570.0	14,729.8	11,570.0	71.7	69.2	-89.41	-3,437.3	1,745.8	1,759.6	1,618.8	140.81	12.496	
15,300.0	11,570.0	14,829.8	11,570.0	73.0	70.5	-89.41	-3,537.3	1,746.4	1,759.6	1,616.1	143.52	12.260	
15,400.0	11,570.0	14,929.8	11,570.0	74.4	71.9	-89.41	-3,637.3	1,747.0	1,759.6	1,613.4	146.26	12.031	
15,500.0	11,570.0	15,029.8	11,570.0	75.8	73.3	-89.41	-3,737.3	1,747.6	1,759.6	1,610.6	149.01	11.808	
15,600.0	11,570.0	15,129.8	11,570.0	77.2	74.7	-89.41	-3,837.3	1,748.2	1,759.6	1,607.8	151.80	11.592	
15,700.0	11,570.0	15,229.8	11,570.0	78.6	76.1	-89.41	-3,937.3	1,748.8	1,759.7	1,605.1	154.60	11.382	
15,800.0	11,570.0	15,329.8	11,570.0	80.0	77.5	-89.41	-4,037.3	1,749.4	1,759.7	1,602.3	157.42	11.178	
15,900.0	11,570.0	15,429.8	11,570.0	81.4	78.9	-89.41	-4,137.3	1,750.0	1,759.7	1,599.4	160.26	10.980	
16,000.0	11,570.0	15,529.8	11,570.0	82.9	80.3	-89.41	-4,237.3	1,750.6	1,759.7	1,596.6	163.12	10.788	
16,100.0	11,570.0	15,629.8	11,570.0	84.3	81.7	-89.41	-4,337.3	1,751.2	1,759.7	1,593.7	166.00	10.601	
16,200.0	11,570.0	15,729.8	11,570.0	85.8	83.2	-89.41	-4,437.3	1,751.8	1,759.7	1,590.8	168.89	10.420	
16,300.0	11,570.0	15,829.8	11,570.0	87.2	84.6	-89.41	-4,537.3	1,752.5	1,759.8	1,588.0	171.80	10.243	
16,400.0	11,570.0	15,929.8	11,570.0	88.7	86.1	-89.41	-4,637.3	1,753.1	1,759.8	1,585.0	174.72	10.072	
16,500.0	11,570.0	16,029.8	11,570.0	90.2	87.5	-89.41	-4,737.3	1,753.7	1,759.8	1,582.1	177.65	9.906	
16,600.0	11,570.0	16,129.8	11,570.0	91.6	89.0	-89.41	-4,837.3	1,754.3	1,759.8	1,579.2	180.60	9.744	
16,700.0	11,570.0	16,229.8	11,570.0	93.1	90.5	-89.41	-4,937.3	1,754.9	1,759.8	1,576.2	183.57	9.587	
16,800.0	11,570.0	16,329.8	11,570.0	94.6	92.0	-89.41	-5,037.3	1,755.5	1,759.8	1,573.3	186.54	9.434	
16,900.0	11,570.0	16,429.8	11,570.0	96.1	93.5	-89.41	-5,137.3	1,756.1	1,759.8	1,570.3	189.52	9.286	
17,000.0	11,570.0	16,529.8	11,570.0	97.6	94.9	-89.41	-5,237.3	1,756.7	1,759.9	1,567.3	192.52	9.141	
17,100.0	11,570.0	16,629.8	11,570.0	99.1	96.4	-89.41	-5,337.3	1,757.3	1,759.9	1,564.3	195.53	9.001	
17,200.0	11,570.0	16,729.8	11,570.0	100.6	98.0	-89.41	-5,437.3	1,757.9	1,759.9	1,561.3	198.54	8.864	
17,300.0	11,570.0	16,829.8	11,570.0	102.1	99.5	-89.41	-5,537.3	1,758.5	1,759.9	1,558.3	201.57	8.731	
17,400.0	11,570.0	16,929.8	11,570.0	103.7	101.0	-89.41	-5,637.3	1,759.1	1,759.9	1,555.3	204.60	8.602	
17,500.0	11,570.0	17,029.8	11,570.0	105.2	102.5	-89.41	-5,737.3	1,759.7	1,759.9	1,552.3	207.65	8.476	
17,600.0	11,570.0	17,129.8	11,570.0	106.7	104.0	-89.41	-5,837.3	1,760.3	1,760.0	1,549.3	210.70	8.353	
17,700.0	11,570.0	17,229.8	11,570.0	108.3	105.5	-89.41	-5,937.3	1,760.9	1,760.0	1,546.2	213.76	8.233	
17,800.0	11,570.0	17,329.8	11,570.0	109.8	107.1	-89.41	-6,037.3	1,761.5	1,760.0	1,543.2	216.82	8.117	
17,900.0	11,570.0	17,429.8	11,570.0	111.3	108.6	-89.41	-6,137.3	1,762.1	1,760.0	1,540.1	219.90	8.004	
18,000.0	11,570.0	17,529.8	11,570.0	112.9	110.1	-89.41	-6,237.3	1,762.7	1,760.0	1,537.0	222.98	7.893	
18,100.0	11,570.0	17,629.8	11,570.0	114.4	111.7	-89.41	-6,337.3	1,763.3	1,760.0	1,534.0	226.07	7.785	
18,200.0	11,570.0	17,729.8	11,570.0	116.0	113.2	-89.41	-6,437.3	1,763.9	1,760.0	1,530.9	229.16	7.680	
18,307.1	11,570.0	17,837.0	11,570.0	117.4	114.9	-89.41	-6,544.4	1,764.5	1,760.1	1,527.8	232.29	7.577	ES, SF
18,307.7	11,570.0	17,834.0	11,570.0	117.4	114.8	-89.41	-6,541.5	1,764.5	1,760.1	1,527.8	232.24	7.579	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-83.64	97.2	-872.6	878.2				
100.0	100.0	83.0	83.0	0.1	0.1	-83.64	97.2	-872.6	878.0	877.8	0.23	3,743.814	
200.0	200.0	183.0	183.0	0.5	0.4	-83.64	97.2	-872.6	878.0	877.1	0.91	962.397	
300.0	300.0	283.0	283.0	0.8	0.8	-83.64	97.2	-872.6	878.0	876.4	1.63	538.900	
400.0	400.0	383.0	383.0	1.2	1.1	-83.64	97.2	-872.6	878.0	875.7	2.35	374.225	
500.0	500.0	483.0	483.0	1.6	1.5	-83.64	97.2	-872.6	878.0	874.9	3.06	286.635	
600.0	600.0	583.0	583.0	1.9	1.9	-83.64	97.2	-872.6	878.0	874.2	3.78	232.271	
700.0	700.0	683.0	683.0	2.3	2.2	-83.64	97.2	-872.6	878.0	873.5	4.50	195.241	
800.0	800.0	783.0	783.0	2.6	2.6	-83.64	97.2	-872.6	878.0	872.8	5.21	168.395	
900.0	900.0	883.0	883.0	3.0	2.9	-83.64	97.2	-872.6	878.0	872.1	5.93	148.039	
1,000.0	1,000.0	983.0	983.0	3.4	3.3	-83.64	97.2	-872.6	878.0	871.4	6.65	132.073	
1,100.0	1,100.0	1,083.0	1,083.0	3.7	3.7	-83.64	97.2	-872.6	878.0	870.6	7.36	119.216	
1,200.0	1,200.0	1,183.0	1,183.0	4.1	4.0	-83.64	97.2	-872.6	878.0	869.9	8.08	108.641	
1,300.0	1,300.0	1,283.0	1,283.0	4.4	4.4	-83.64	97.2	-872.6	878.0	869.2	8.80	99.788	
1,400.0	1,400.0	1,383.0	1,383.0	4.8	4.7	-83.64	97.2	-872.6	878.0	868.5	9.52	92.270	
1,500.0	1,500.0	1,483.0	1,483.0	5.1	5.1	-83.64	97.2	-872.6	878.0	867.8	10.23	85.805	
1,527.0	1,527.0	1,510.0	1,510.0	5.2	5.2	-65.00	97.2	-872.6	878.0	867.6	10.43	84.213	CC
1,600.0	1,600.0	1,572.5	1,572.5	5.5	5.4	-65.05	97.1	-873.1	878.1	867.2	10.90	80.543	ES
1,700.0	1,700.0	1,659.8	1,659.7	5.9	5.7	-65.22	96.7	-874.8	879.0	867.4	11.56	76.065	
1,800.0	1,799.9	1,746.9	1,746.9	6.2	6.0	-65.49	96.0	-877.8	880.5	868.3	12.20	72.148	
1,900.0	1,899.7	1,833.9	1,833.7	6.6	6.3	-65.88	95.1	-882.1	882.8	870.0	12.85	68.690	
2,000.0	1,999.4	1,920.7	1,920.3	6.9	6.6	-66.36	93.8	-887.7	885.9	872.4	13.50	65.628	
2,100.0	2,098.9	2,007.2	2,006.5	7.3	6.9	-66.95	92.3	-894.5	889.9	875.7	14.15	62.908	
2,200.0	2,198.3	2,093.3	2,092.2	7.7	7.2	-67.63	90.5	-902.6	894.8	880.0	14.79	60.486	
2,300.0	2,297.4	2,179.0	2,177.4	8.0	7.5	-68.41	88.5	-911.8	900.6	885.2	15.44	58.329	
2,400.0	2,396.4	2,264.4	2,262.1	8.4	7.8	-69.28	86.1	-922.3	907.9	891.8	16.09	56.429	
2,500.0	2,495.5	2,357.2	2,354.0	8.8	8.2	-70.24	83.3	-934.8	916.6	899.8	16.78	54.626	
2,600.0	2,594.5	2,455.4	2,451.3	9.2	8.5	-71.23	80.4	-948.1	925.7	908.2	17.50	52.885	
2,700.0	2,693.5	2,553.7	2,548.6	9.6	8.9	-72.21	77.4	-961.5	935.1	916.9	18.23	51.284	
2,800.0	2,792.5	2,652.0	2,646.0	10.0	9.3	-73.16	74.4	-974.8	944.8	925.8	18.97	49.811	
2,900.0	2,891.6	2,750.2	2,743.3	10.3	9.7	-74.10	71.4	-988.2	954.7	935.0	19.70	48.452	
3,000.0	2,990.6	2,848.5	2,840.6	10.7	10.1	-75.02	68.5	-1,001.5	964.9	944.4	20.44	47.197	
3,100.0	3,089.6	2,946.8	2,937.9	11.1	10.4	-75.92	65.5	-1,014.9	975.3	954.1	21.19	46.034	
3,200.0	3,188.6	3,045.0	3,035.2	11.5	10.8	-76.80	62.5	-1,028.2	986.0	964.0	21.93	44.957	
3,300.0	3,287.7	3,143.3	3,132.5	11.9	11.2	-77.66	59.5	-1,041.6	996.9	974.2	22.68	43.955	
3,400.0	3,386.7	3,241.6	3,229.8	12.3	11.6	-78.50	56.6	-1,054.9	1,008.0	984.6	23.43	43.023	
3,500.0	3,485.7	3,339.9	3,327.1	12.7	12.0	-79.32	53.6	-1,068.3	1,019.3	995.1	24.18	42.155	
3,600.0	3,584.8	3,438.1	3,424.4	13.1	12.4	-80.13	50.6	-1,081.6	1,030.9	1,005.9	24.93	41.344	
3,700.0	3,683.8	3,536.4	3,521.8	13.5	12.8	-80.92	47.6	-1,095.0	1,042.6	1,016.9	25.69	40.587	
3,800.0	3,782.8	3,634.7	3,619.1	13.9	13.2	-81.69	44.7	-1,108.3	1,054.5	1,028.1	26.44	39.877	
3,900.0	3,881.8	3,732.9	3,716.4	14.3	13.6	-82.45	41.7	-1,121.7	1,066.7	1,039.5	27.20	39.213	
4,000.0	3,980.9	3,831.2	3,813.7	14.7	14.0	-83.19	38.7	-1,135.0	1,079.0	1,051.0	27.96	38.588	
4,100.0	4,079.9	3,929.5	3,911.0	15.2	14.4	-83.91	35.7	-1,148.4	1,091.5	1,062.7	28.72	38.002	
4,200.0	4,178.9	4,027.7	4,008.3	15.6	14.8	-84.61	32.8	-1,161.7	1,104.1	1,074.6	29.48	37.450	
4,300.0	4,277.9	4,126.0	4,105.6	16.0	15.2	-85.30	29.8	-1,175.1	1,116.9	1,086.7	30.25	36.930	
4,400.0	4,377.0	4,224.3	4,202.9	16.4	15.6	-85.98	26.8	-1,188.4	1,129.9	1,098.9	31.01	36.439	
4,500.0	4,476.0	4,322.5	4,300.3	16.8	16.0	-86.64	23.8	-1,201.8	1,143.1	1,111.3	31.77	35.976	
4,600.0	4,575.0	4,420.8	4,397.6	17.2	16.4	-87.28	20.9	-1,215.1	1,156.3	1,123.8	32.54	35.538	
4,625.7	4,600.5	4,446.0	4,422.6	17.3	16.5	-87.44	20.1	-1,218.6	1,159.8	1,127.0	32.73	35.430	
4,700.0	4,674.1	4,519.2	4,495.0	17.6	16.8	-88.03	17.9	-1,228.5	1,169.8	1,136.5	33.30	35.129	
4,800.0	4,773.6	4,617.8	4,592.6	18.0	17.2	-88.69	14.9	-1,241.9	1,183.4	1,149.4	34.05	34.754	
4,900.0	4,873.2	4,716.6	4,690.5	18.4	17.6	-89.23	11.9	-1,255.3	1,197.2	1,162.4	34.79	34.412	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	4,815.5	4,788.5	18.7	18.1	-89.63	8.9	-1,268.7	1,211.0	1,175.5	35.51	34.099	
5,100.0	5,073.0	4,914.6	4,886.5	19.1	18.5	-89.91	5.9	-1,282.2	1,224.8	1,188.6	36.22	33.812	
5,159.0	5,132.1	4,973.0	4,944.4	19.3	18.7	-108.66	4.1	-1,290.1	1,233.0	1,196.3	36.64	33.653	
5,200.0	5,173.0	5,013.6	4,984.6	19.4	18.9	-108.63	2.9	-1,295.7	1,238.6	1,201.7	36.92	33.546	
5,300.0	5,273.0	5,112.6	5,082.7	19.8	19.3	-108.56	-0.1	-1,309.1	1,252.5	1,214.9	37.62	33.293	
5,400.0	5,373.0	5,211.7	5,180.7	20.1	19.7	-108.49	-3.1	-1,322.6	1,266.3	1,228.0	38.32	33.047	
5,500.0	5,473.0	5,310.7	5,278.8	20.4	20.1	-108.43	-6.1	-1,336.0	1,280.2	1,241.2	39.02	32.810	
5,600.0	5,573.0	5,409.7	5,376.9	20.8	20.5	-108.37	-9.1	-1,349.5	1,294.0	1,254.3	39.72	32.580	
5,700.0	5,673.0	5,508.7	5,474.9	21.1	20.9	-108.31	-12.1	-1,362.9	1,307.9	1,267.5	40.42	32.358	
5,800.0	5,773.0	5,607.8	5,573.0	21.4	21.4	-108.24	-15.1	-1,376.4	1,321.7	1,280.6	41.12	32.143	
5,900.0	5,873.0	5,706.8	5,671.0	21.8	21.8	-108.19	-18.1	-1,389.8	1,335.6	1,293.7	41.82	31.934	
6,000.0	5,973.0	5,805.8	5,769.1	22.1	22.2	-108.13	-21.1	-1,403.3	1,349.4	1,306.9	42.53	31.732	
6,100.0	6,073.0	5,904.8	5,867.2	22.5	22.6	-108.07	-24.1	-1,416.7	1,363.3	1,320.0	43.23	31.536	
6,200.0	6,173.0	6,003.9	5,965.2	22.8	23.0	-108.02	-27.1	-1,430.2	1,377.1	1,333.2	43.93	31.346	
6,300.0	6,273.0	6,102.9	6,063.3	23.1	23.4	-107.96	-30.1	-1,443.6	1,391.0	1,346.4	44.64	31.162	
6,400.0	6,373.0	6,201.9	6,161.4	23.5	23.8	-107.91	-33.1	-1,457.1	1,404.8	1,359.5	45.34	30.982	
6,500.0	6,473.0	6,301.0	6,259.4	23.8	24.3	-107.86	-36.1	-1,470.5	1,418.7	1,372.7	46.05	30.808	
6,600.0	6,573.0	6,400.0	6,357.5	24.2	24.7	-107.80	-39.0	-1,484.0	1,432.6	1,385.8	46.76	30.639	
6,700.0	6,673.0	6,499.0	6,455.5	24.5	25.1	-107.75	-42.0	-1,497.4	1,446.4	1,399.0	47.46	30.475	
6,800.0	6,773.0	6,602.0	6,553.6	24.9	25.5	-107.70	-45.0	-1,510.9	1,460.3	1,412.1	48.18	30.306	
6,900.0	6,873.0	6,702.9	6,651.7	25.2	25.9	-107.66	-48.0	-1,524.3	1,474.2	1,425.3	48.90	30.146	
7,000.0	6,973.0	6,803.9	6,749.7	25.6	26.4	-107.61	-51.0	-1,537.8	1,488.0	1,438.4	49.62	29.991	
7,100.0	7,073.0	6,904.9	6,847.8	25.9	26.8	-107.56	-54.0	-1,551.2	1,501.9	1,451.5	50.33	29.840	
7,200.0	7,173.0	7,005.9	6,945.9	26.3	27.2	-107.52	-57.0	-1,564.7	1,515.7	1,464.7	51.05	29.692	
7,300.0	7,273.0	7,093.2	7,043.9	26.6	27.6	-107.47	-60.0	-1,578.1	1,529.6	1,477.9	51.71	29.578	
7,400.0	7,373.0	7,229.8	7,179.4	26.9	28.1	-107.41	-63.9	-1,595.6	1,542.8	1,490.1	52.66	29.300	
7,500.0	7,473.0	7,396.8	7,345.6	27.3	28.8	-107.36	-67.3	-1,610.8	1,552.1	1,498.4	53.70	28.902	
7,600.0	7,573.0	7,564.8	7,513.4	27.6	29.4	-107.34	-69.1	-1,618.9	1,557.0	1,502.4	54.64	28.494	
7,700.0	7,673.0	7,707.4	7,656.0	28.0	29.9	-107.33	-69.4	-1,620.3	1,557.9	1,502.4	55.43	28.105	
7,800.0	7,773.0	7,807.4	7,756.0	28.3	30.2	-107.33	-69.4	-1,620.3	1,557.9	1,501.8	56.11	27.763	
7,900.0	7,873.0	7,907.4	7,856.0	28.7	30.5	-107.33	-69.4	-1,620.3	1,557.9	1,501.1	56.80	27.428	
8,000.0	7,973.0	8,007.4	7,956.0	29.0	30.8	-107.33	-69.4	-1,620.3	1,557.9	1,500.4	57.48	27.101	
8,100.0	8,073.0	8,107.4	8,056.0	29.4	31.1	-107.33	-69.4	-1,620.3	1,557.9	1,499.7	58.17	26.781	
8,200.0	8,173.0	8,207.4	8,156.0	29.7	31.4	-107.33	-69.4	-1,620.3	1,557.9	1,499.0	58.86	26.469	
8,300.0	8,273.0	8,307.4	8,256.0	30.1	31.7	-107.33	-69.4	-1,620.3	1,557.9	1,498.3	59.54	26.163	
8,400.0	8,373.0	8,407.4	8,356.0	30.4	32.1	-107.33	-69.4	-1,620.3	1,557.9	1,497.6	60.23	25.864	
8,500.0	8,473.0	8,507.4	8,456.0	30.8	32.4	-107.33	-69.4	-1,620.3	1,557.9	1,496.9	60.92	25.572	
8,600.0	8,573.0	8,607.4	8,556.0	31.1	32.7	-107.33	-69.4	-1,620.3	1,557.9	1,496.3	61.61	25.286	
8,700.0	8,673.0	8,707.4	8,656.0	31.5	33.0	-107.33	-69.4	-1,620.3	1,557.9	1,495.6	62.30	25.006	
8,800.0	8,773.0	8,807.4	8,756.0	31.8	33.3	-107.33	-69.4	-1,620.3	1,557.9	1,494.9	62.99	24.731	
8,900.0	8,873.0	8,907.4	8,856.0	32.2	33.7	-107.33	-69.4	-1,620.3	1,557.9	1,494.2	63.68	24.463	
9,000.0	8,973.0	9,007.4	8,956.0	32.5	34.0	-107.33	-69.4	-1,620.3	1,557.9	1,493.5	64.37	24.200	
9,100.0	9,073.0	9,107.4	9,056.0	32.9	34.3	-107.33	-69.4	-1,620.3	1,557.9	1,492.8	65.07	23.943	
9,200.0	9,173.0	9,207.4	9,156.0	33.2	34.6	-107.33	-69.4	-1,620.3	1,557.9	1,492.1	65.76	23.690	
9,300.0	9,273.0	9,307.4	9,256.0	33.6	35.0	-107.33	-69.4	-1,620.3	1,557.9	1,491.4	66.45	23.443	
9,400.0	9,373.0	9,407.4	9,356.0	33.9	35.3	-107.33	-69.4	-1,620.3	1,557.9	1,490.7	67.15	23.201	
9,500.0	9,473.0	9,507.4	9,456.0	34.3	35.6	-107.33	-69.4	-1,620.3	1,557.9	1,490.0	67.84	22.963	
9,600.0	9,573.0	9,607.4	9,556.0	34.6	35.9	-107.33	-69.4	-1,620.3	1,557.9	1,489.3	68.54	22.731	
9,700.0	9,673.0	9,707.4	9,656.0	35.0	36.3	-107.33	-69.4	-1,620.3	1,557.9	1,488.6	69.23	22.502	
9,800.0	9,773.0	9,807.4	9,756.0	35.3	36.6	-107.33	-69.4	-1,620.3	1,557.9	1,487.9	69.93	22.278	
9,900.0	9,873.0	9,907.4	9,856.0	35.7	36.9	-107.33	-69.4	-1,620.3	1,557.9	1,487.2	70.62	22.059	
10,000.0	9,973.0	10,007.4	9,956.0	36.0	37.3	-107.33	-69.4	-1,620.3	1,557.9	1,486.6	71.32	21.843	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	10,073.0	10,107.4	10,056.0	36.4	37.6	-107.33	-69.4	-1,620.3	1,557.9	1,485.9	72.02	21.632	
10,200.0	10,173.0	10,207.4	10,156.0	36.7	37.9	-107.33	-69.4	-1,620.3	1,557.9	1,485.2	72.71	21.424	
10,300.0	10,273.0	10,307.4	10,256.0	37.1	38.3	-107.33	-69.4	-1,620.3	1,557.9	1,484.5	73.41	21.221	
10,400.0	10,373.0	10,407.4	10,356.0	37.4	38.6	-107.33	-69.4	-1,620.3	1,557.9	1,483.8	74.11	21.021	
10,500.0	10,473.0	10,507.4	10,456.0	37.8	38.9	-107.33	-69.4	-1,620.3	1,557.9	1,483.1	74.81	20.825	
10,600.0	10,573.0	10,572.4	10,520.9	38.2	39.1	-107.39	-71.1	-1,620.3	1,558.8	1,483.3	75.42	20.668	
10,700.0	10,673.0	10,627.2	10,575.3	38.5	39.3	-107.63	-77.9	-1,620.2	1,562.5	1,486.5	75.95	20.571	
10,800.0	10,773.0	10,680.3	10,627.1	38.9	39.5	-108.04	-89.4	-1,620.2	1,569.1	1,492.7	76.42	20.533	
10,900.0	10,873.0	10,730.8	10,675.2	39.2	39.7	-108.57	-104.8	-1,620.1	1,579.0	1,502.2	76.80	20.559	
11,000.0	10,973.0	10,778.3	10,719.0	39.6	39.8	-109.20	-123.1	-1,620.0	1,592.1	1,515.0	77.08	20.656	
11,024.0	10,997.0	10,789.2	10,728.9	39.7	39.8	-109.36	-127.7	-1,619.9	1,595.8	1,518.6	77.13	20.690	
11,050.0	11,023.0	10,800.0	10,738.5	39.7	39.9	77.77	-132.6	-1,619.9	1,599.9	1,522.7	77.16	20.733	
11,100.0	11,072.8	10,823.5	10,759.2	39.9	40.0	76.68	-143.7	-1,619.8	1,607.7	1,530.5	77.22	20.820	
11,150.0	11,122.0	10,850.0	10,782.0	40.0	40.0	75.62	-157.3	-1,619.7	1,615.4	1,538.2	77.27	20.906	
11,200.0	11,170.3	10,868.8	10,797.7	40.2	40.1	74.71	-167.6	-1,619.7	1,622.9	1,545.7	77.23	21.015	
11,250.0	11,217.2	10,900.0	10,823.1	40.3	40.2	73.77	-185.8	-1,619.6	1,630.1	1,552.9	77.28	21.095	
11,300.0	11,262.5	10,914.3	10,834.4	40.4	40.2	73.03	-194.5	-1,619.5	1,636.9	1,559.8	77.15	21.218	
11,350.0	11,305.7	10,937.0	10,851.9	40.5	40.3	72.31	-209.1	-1,619.4	1,643.3	1,566.2	77.09	21.316	
11,400.0	11,346.6	10,950.0	10,861.6	40.6	40.4	71.70	-217.7	-1,619.4	1,649.2	1,572.3	76.93	21.438	
11,450.0	11,384.8	10,982.6	10,885.1	40.6	40.5	71.14	-240.2	-1,619.2	1,654.5	1,577.5	76.98	21.493	
11,500.0	11,420.1	11,000.0	10,897.1	40.7	40.5	70.69	-252.8	-1,619.2	1,659.2	1,582.4	76.88	21.583	
11,550.0	11,452.2	11,028.2	10,915.8	40.8	40.6	70.36	-273.9	-1,619.0	1,663.3	1,586.4	76.91	21.626	
11,600.0	11,480.8	11,050.0	10,929.5	40.9	40.7	70.11	-290.9	-1,618.9	1,666.8	1,589.9	76.91	21.673	
11,650.0	11,505.7	11,073.6	10,943.6	40.9	40.7	69.96	-309.8	-1,618.8	1,669.6	1,592.6	76.95	21.696	
11,700.0	11,526.7	11,100.0	10,958.4	41.0	40.8	69.94	-331.7	-1,618.7	1,671.7	1,594.7	77.06	21.693	
11,750.0	11,543.8	11,118.9	10,968.4	41.1	40.9	69.96	-347.7	-1,618.6	1,673.2	1,596.0	77.15	21.688	
11,800.0	11,556.6	11,150.0	10,983.6	41.2	41.0	70.19	-374.8	-1,618.4	1,674.0	1,596.6	77.39	21.631	
11,850.0	11,565.2	11,164.0	10,990.0	41.2	41.0	70.33	-387.3	-1,618.3	1,674.2	1,596.6	77.53	21.593	
11,900.0	11,569.5	11,186.4	10,999.6	41.3	41.1	70.66	-407.5	-1,618.2	1,673.7	1,595.9	77.80	21.514	
11,924.0	11,570.0	11,200.0	11,005.0	41.4	41.2	70.88	-420.0	-1,618.1	1,673.3	1,595.4	77.97	21.463	
12,000.0	11,570.0	11,232.0	11,016.6	41.5	41.3	71.29	-449.8	-1,617.9	1,671.9	1,593.5	78.44	21.315	
12,100.0	11,570.0	11,280.3	11,030.9	41.8	41.5	71.78	-496.0	-1,617.6	1,670.0	1,590.9	79.13	21.105	
12,200.0	11,570.0	11,331.1	11,041.7	42.1	41.7	72.15	-545.5	-1,617.3	1,667.9	1,588.1	79.86	20.886	
12,292.2	11,570.0	11,379.4	11,047.9	42.5	41.9	72.34	-593.4	-1,617.0	1,665.7	1,585.2	80.55	20.678	
12,300.0	11,570.0	11,383.5	11,048.2	42.5	41.9	72.35	-597.5	-1,617.0	1,665.5	1,584.9	80.61	20.661	
12,400.0	11,570.0	11,443.7	11,050.0	42.9	42.2	72.41	-657.7	-1,616.6	1,664.5	1,583.1	81.41	20.445	
12,500.0	11,570.0	11,543.7	11,050.0	43.4	42.7	72.41	-757.7	-1,616.0	1,664.4	1,582.0	82.42	20.194	
12,600.0	11,570.0	11,643.7	11,050.0	44.0	43.2	72.41	-857.7	-1,615.4	1,664.4	1,580.9	83.54	19.923	
12,700.0	11,570.0	11,743.7	11,050.0	44.6	43.8	72.41	-957.7	-1,614.8	1,664.4	1,579.6	84.76	19.636	
12,800.0	11,570.0	11,843.7	11,050.0	45.3	44.5	72.41	-1,057.7	-1,614.2	1,664.3	1,578.3	86.09	19.333	
12,900.0	11,570.0	11,943.7	11,050.0	46.0	45.2	72.41	-1,157.7	-1,613.5	1,664.3	1,576.8	87.51	19.019	
13,000.0	11,570.0	12,043.7	11,050.0	46.7	46.0	72.41	-1,257.7	-1,612.9	1,664.3	1,575.3	89.02	18.695	
13,100.0	11,570.0	12,143.7	11,050.0	47.6	46.8	72.41	-1,357.7	-1,612.3	1,664.3	1,573.6	90.62	18.365	
13,200.0	11,570.0	12,243.7	11,050.0	48.4	47.6	72.41	-1,457.7	-1,611.7	1,664.2	1,571.9	92.31	18.029	
13,300.0	11,570.0	12,343.7	11,050.0	49.3	48.5	72.41	-1,557.7	-1,611.1	1,664.2	1,570.1	94.07	17.691	
13,400.0	11,570.0	12,443.7	11,050.0	50.2	49.5	72.41	-1,657.7	-1,610.5	1,664.2	1,568.3	95.91	17.352	
13,500.0	11,570.0	12,543.7	11,050.0	51.2	50.4	72.41	-1,757.7	-1,609.8	1,664.1	1,566.3	97.81	17.014	
13,600.0	11,570.0	12,643.7	11,050.0	52.2	51.4	72.41	-1,857.7	-1,609.2	1,664.1	1,564.3	99.78	16.677	
13,700.0	11,570.0	12,743.7	11,050.0	53.2	52.5	72.41	-1,957.7	-1,608.6	1,664.1	1,562.3	101.82	16.344	
13,800.0	11,570.0	12,843.7	11,050.0	54.3	53.6	72.41	-2,057.7	-1,608.0	1,664.1	1,560.1	103.91	16.014	
13,900.0	11,570.0	12,943.7	11,050.0	55.4	54.7	72.41	-2,157.7	-1,607.4	1,664.0	1,558.0	106.06	15.689	
14,000.0	11,570.0	13,043.7	11,050.0	56.5	55.8	72.41	-2,257.7	-1,606.8	1,664.0	1,555.7	108.26	15.370	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #305H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	13,143.7	11,050.0	57.7	56.9	72.40	-2,357.7	-1,606.1	1,664.0	1,553.5	110.51	15.057	
14,200.0	11,570.0	13,243.7	11,050.0	58.9	58.1	72.40	-2,457.7	-1,605.5	1,663.9	1,551.1	112.80	14.751	
14,300.0	11,570.0	13,343.7	11,050.0	60.1	59.3	72.40	-2,557.7	-1,604.9	1,663.9	1,548.8	115.14	14.451	
14,400.0	11,570.0	13,443.7	11,050.0	61.3	60.5	72.40	-2,657.7	-1,604.3	1,663.9	1,546.4	117.52	14.159	
14,500.0	11,570.0	13,543.7	11,050.0	62.5	61.8	72.40	-2,757.7	-1,603.7	1,663.8	1,543.9	119.93	13.873	
14,600.0	11,570.0	13,643.7	11,050.0	63.8	63.0	72.40	-2,857.7	-1,603.1	1,663.8	1,541.4	122.38	13.595	
14,700.0	11,570.0	13,743.7	11,050.0	65.0	64.3	72.40	-2,957.7	-1,602.4	1,663.8	1,538.9	124.87	13.324	
14,800.0	11,570.0	13,843.7	11,050.0	66.3	65.6	72.40	-3,057.7	-1,601.8	1,663.8	1,536.4	127.39	13.061	
14,900.0	11,570.0	13,943.7	11,050.0	67.6	66.9	72.40	-3,157.7	-1,601.2	1,663.7	1,533.8	129.93	12.804	
15,000.0	11,570.0	14,043.7	11,050.0	69.0	68.3	72.40	-3,257.7	-1,600.6	1,663.7	1,531.2	132.51	12.555	
15,100.0	11,570.0	14,143.7	11,050.0	70.3	69.6	72.40	-3,357.7	-1,600.0	1,663.7	1,528.6	135.11	12.313	
15,200.0	11,570.0	14,243.7	11,050.0	71.7	71.0	72.40	-3,457.7	-1,599.4	1,663.6	1,525.9	137.74	12.078	
15,300.0	11,570.0	14,343.7	11,050.0	73.0	72.3	72.40	-3,557.7	-1,598.7	1,663.6	1,523.2	140.39	11.850	
15,400.0	11,570.0	14,443.7	11,050.0	74.4	73.7	72.40	-3,657.7	-1,598.1	1,663.6	1,520.5	143.06	11.629	
15,500.0	11,570.0	14,543.7	11,050.0	75.8	75.1	72.40	-3,757.7	-1,597.5	1,663.5	1,517.8	145.75	11.414	
15,600.0	11,570.0	14,643.7	11,050.0	77.2	76.5	72.40	-3,857.7	-1,596.9	1,663.5	1,515.1	148.46	11.205	
15,700.0	11,570.0	14,743.7	11,050.0	78.6	77.9	72.40	-3,957.6	-1,596.3	1,663.5	1,512.3	151.20	11.002	
15,800.0	11,570.0	14,843.7	11,050.0	80.0	79.3	72.40	-4,057.6	-1,595.7	1,663.5	1,509.5	153.95	10.805	
15,900.0	11,570.0	14,943.7	11,050.0	81.4	80.8	72.40	-4,157.6	-1,595.0	1,663.4	1,506.7	156.71	10.614	
16,000.0	11,570.0	15,043.7	11,050.0	82.9	82.2	72.40	-4,257.6	-1,594.4	1,663.4	1,503.9	159.50	10.429	
16,100.0	11,570.0	15,143.7	11,050.0	84.3	83.7	72.40	-4,357.6	-1,593.8	1,663.4	1,501.1	162.30	10.249	
16,200.0	11,570.0	15,243.7	11,050.0	85.8	85.1	72.40	-4,457.6	-1,593.2	1,663.3	1,498.2	165.11	10.074	
16,300.0	11,570.0	15,343.7	11,050.0	87.2	86.6	72.40	-4,557.6	-1,592.6	1,663.3	1,495.4	167.93	9.905	
16,400.0	11,570.0	15,443.7	11,050.0	88.7	88.1	72.40	-4,657.6	-1,592.0	1,663.3	1,492.5	170.77	9.740	
16,500.0	11,570.0	15,543.7	11,050.0	90.2	89.5	72.40	-4,757.6	-1,591.3	1,663.2	1,489.6	173.63	9.580	
16,600.0	11,570.0	15,643.7	11,050.0	91.6	91.0	72.40	-4,857.6	-1,590.7	1,663.2	1,486.7	176.49	9.424	
16,700.0	11,570.0	15,743.7	11,050.0	93.1	92.5	72.40	-4,957.6	-1,590.1	1,663.2	1,483.8	179.36	9.273	
16,800.0	11,570.0	15,843.7	11,050.0	94.6	94.0	72.40	-5,057.6	-1,589.5	1,663.2	1,480.9	182.25	9.126	
16,900.0	11,570.0	15,943.7	11,050.0	96.1	95.5	72.40	-5,157.6	-1,588.9	1,663.1	1,478.0	185.14	8.983	
17,000.0	11,570.0	16,043.7	11,050.0	97.6	97.0	72.40	-5,257.6	-1,588.3	1,663.1	1,475.1	188.05	8.844	
17,100.0	11,570.0	16,143.7	11,050.0	99.1	98.5	72.40	-5,357.6	-1,587.6	1,663.1	1,472.1	190.97	8.709	
17,200.0	11,570.0	16,243.7	11,050.0	100.6	100.0	72.39	-5,457.6	-1,587.0	1,663.0	1,469.2	193.89	8.577	
17,300.0	11,570.0	16,343.7	11,050.0	102.1	101.5	72.39	-5,557.6	-1,586.4	1,663.0	1,466.2	196.82	8.449	
17,400.0	11,570.0	16,443.7	11,050.0	103.7	103.1	72.39	-5,657.6	-1,585.8	1,663.0	1,463.2	199.76	8.325	
17,500.0	11,570.0	16,543.7	11,050.0	105.2	104.6	72.39	-5,757.6	-1,585.2	1,663.0	1,460.2	202.71	8.204	
17,600.0	11,570.0	16,643.7	11,050.0	106.7	106.1	72.39	-5,857.6	-1,584.6	1,662.9	1,457.3	205.66	8.086	
17,700.0	11,570.0	16,743.7	11,050.0	108.3	107.7	72.39	-5,957.6	-1,583.9	1,662.9	1,454.3	208.63	7.971	
17,800.0	11,570.0	16,843.7	11,050.0	109.8	109.2	72.39	-6,057.6	-1,583.3	1,662.9	1,451.3	211.60	7.859	
17,900.0	11,570.0	16,943.7	11,050.0	111.3	110.7	72.39	-6,157.6	-1,582.7	1,662.8	1,448.3	214.57	7.750	
18,000.0	11,570.0	17,043.7	11,050.0	112.9	112.3	72.39	-6,257.6	-1,582.1	1,662.8	1,445.3	217.55	7.643	
18,100.0	11,570.0	17,143.7	11,050.0	114.4	113.8	72.39	-6,357.6	-1,581.5	1,662.8	1,442.2	220.54	7.540	
18,200.0	11,570.0	17,243.7	11,050.0	116.0	115.4	72.39	-6,457.6	-1,580.9	1,662.7	1,439.2	223.53	7.438	
18,307.1	11,570.0	17,350.9	11,050.0	117.4	117.0	72.39	-6,564.7	-1,580.2	1,662.7	1,436.2	226.54	7.339	
18,307.7	11,570.0	17,351.4	11,050.0	117.4	117.1	72.39	-6,565.3	-1,580.2	1,662.7	1,436.2	226.56	7.339	SF

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-83.41	97.4	-842.4	848.2				
100.0	100.0	83.0	83.0	0.1	0.1	-83.41	97.4	-842.4	848.0	847.8	0.23	3,615.894	
200.0	200.0	183.0	183.0	0.5	0.4	-83.41	97.4	-842.4	848.0	847.1	0.91	929.513	
300.0	300.0	283.0	283.0	0.8	0.8	-83.41	97.4	-842.4	848.0	846.4	1.63	520.486	
400.0	400.0	383.0	383.0	1.2	1.1	-83.41	97.4	-842.4	848.0	845.7	2.35	361.438	
500.0	500.0	483.0	483.0	1.6	1.5	-83.41	97.4	-842.4	848.0	844.9	3.06	276.842	
600.0	600.0	583.0	583.0	1.9	1.9	-83.41	97.4	-842.4	848.0	844.2	3.78	224.335	
700.0	700.0	683.0	683.0	2.3	2.2	-83.41	97.4	-842.4	848.0	843.5	4.50	188.570	
800.0	800.0	783.0	783.0	2.6	2.6	-83.41	97.4	-842.4	848.0	842.8	5.21	162.641	
900.0	900.0	883.0	883.0	3.0	2.9	-83.41	97.4	-842.4	848.0	842.1	5.93	142.980	
1,000.0	1,000.0	983.0	983.0	3.4	3.3	-83.41	97.4	-842.4	848.0	841.4	6.65	127.561	
1,100.0	1,100.0	1,083.0	1,083.0	3.7	3.7	-83.41	97.4	-842.4	848.0	840.6	7.36	115.143	
1,200.0	1,200.0	1,183.0	1,183.0	4.1	4.0	-83.41	97.4	-842.4	848.0	839.9	8.08	104.928	
1,300.0	1,300.0	1,283.0	1,283.0	4.4	4.4	-83.41	97.4	-842.4	848.0	839.2	8.80	96.379	
1,400.0	1,400.0	1,383.0	1,383.0	4.8	4.7	-83.41	97.4	-842.4	848.0	838.5	9.52	89.117	
1,500.0	1,500.0	1,483.0	1,483.0	5.1	5.1	-83.41	97.4	-842.4	848.0	837.8	10.23	82.873	
1,537.8	1,537.8	1,518.4	1,518.4	5.3	5.2	-64.77	97.4	-842.4	848.0	837.5	10.49	80.819	CC
1,600.0	1,600.0	1,573.5	1,573.5	5.5	5.4	-64.82	97.2	-842.8	848.1	837.2	10.91	77.771	ES
1,700.0	1,700.0	1,661.9	1,661.9	5.9	5.7	-65.02	96.5	-844.5	848.8	837.2	11.56	73.426	
1,800.0	1,799.9	1,750.2	1,750.2	6.2	6.0	-65.34	95.3	-847.4	850.1	837.9	12.21	69.621	
1,900.0	1,899.7	1,838.3	1,838.2	6.6	6.3	-65.80	93.6	-851.6	852.1	839.3	12.86	66.255	
2,000.0	1,999.4	1,926.2	1,925.8	6.9	6.6	-66.38	91.4	-857.0	854.9	841.4	13.51	63.271	
2,100.0	2,098.9	2,013.6	2,012.9	7.3	6.9	-67.07	88.7	-863.7	858.4	844.3	14.16	60.616	
2,200.0	2,198.3	2,100.7	2,099.6	7.7	7.2	-67.89	85.4	-871.5	862.9	848.1	14.81	58.254	
2,300.0	2,297.4	2,187.2	2,185.6	8.0	7.5	-68.80	81.8	-880.5	868.3	852.9	15.46	56.151	
2,400.0	2,396.4	2,273.3	2,271.0	8.4	7.8	-69.83	77.6	-890.6	875.1	859.0	16.12	54.301	
2,500.0	2,495.5	2,367.5	2,364.2	8.8	8.2	-70.97	72.6	-902.7	883.4	866.6	16.82	52.534	
2,600.0	2,594.5	2,465.4	2,461.2	9.2	8.6	-72.13	67.5	-915.3	892.1	874.5	17.54	50.860	
2,700.0	2,693.5	2,563.4	2,558.2	9.6	8.9	-73.27	62.3	-927.9	901.1	882.8	18.27	49.327	
2,800.0	2,792.5	2,661.3	2,655.2	10.0	9.3	-74.39	57.1	-940.5	910.5	891.5	19.00	47.921	
2,900.0	2,891.6	2,759.2	2,752.2	10.3	9.7	-75.48	51.9	-953.1	920.3	900.5	19.74	46.629	
3,000.0	2,990.6	2,857.2	2,849.2	10.7	10.1	-76.55	46.7	-965.7	930.4	909.9	20.47	45.439	
3,100.0	3,089.6	2,955.1	2,946.1	11.1	10.5	-77.60	41.6	-978.3	940.8	919.6	21.22	44.342	
3,200.0	3,188.6	3,053.1	3,043.1	11.5	10.8	-78.63	36.4	-990.9	951.5	929.5	21.96	43.329	
3,300.0	3,287.7	3,151.0	3,140.1	11.9	11.2	-79.63	31.2	-1,003.5	962.5	939.8	22.71	42.392	
3,400.0	3,386.7	3,248.9	3,237.1	12.3	11.6	-80.62	26.0	-1,016.1	973.9	950.4	23.45	41.524	
3,500.0	3,485.7	3,346.9	3,334.1	12.7	12.0	-81.58	20.8	-1,028.7	985.5	961.3	24.20	40.719	
3,600.0	3,584.8	3,444.8	3,431.1	13.1	12.4	-82.51	15.7	-1,041.4	997.4	972.4	24.95	39.970	
3,700.0	3,683.8	3,542.7	3,528.1	13.5	12.8	-83.43	10.5	-1,054.0	1,009.5	983.8	25.70	39.274	
3,800.0	3,782.8	3,640.7	3,625.0	13.9	13.2	-84.32	5.3	-1,066.6	1,021.9	995.5	26.46	38.625	
3,900.0	3,881.8	3,738.6	3,722.0	14.3	13.6	-85.20	0.1	-1,079.2	1,034.6	1,007.4	27.21	38.019	
4,000.0	3,980.9	3,836.6	3,819.0	14.7	14.0	-86.05	-5.0	-1,091.8	1,047.5	1,019.5	27.97	37.454	
4,100.0	4,079.9	3,934.5	3,916.0	15.2	14.4	-86.88	-10.2	-1,104.4	1,060.6	1,031.9	28.72	36.925	
4,200.0	4,178.9	4,032.4	4,013.0	15.6	14.8	-87.69	-15.4	-1,117.0	1,073.9	1,044.4	29.48	36.429	
4,300.0	4,277.9	4,130.4	4,110.0	16.0	15.2	-88.49	-20.6	-1,129.6	1,087.5	1,057.2	30.24	35.965	
4,400.0	4,377.0	4,228.3	4,207.0	16.4	15.6	-89.26	-25.8	-1,142.2	1,101.2	1,070.2	31.00	35.528	
4,500.0	4,476.0	4,326.3	4,303.9	16.8	16.0	-90.01	-30.9	-1,154.8	1,115.2	1,083.4	31.75	35.119	
4,600.0	4,575.0	4,424.2	4,400.9	17.2	16.4	-90.75	-36.1	-1,167.4	1,129.3	1,096.8	32.51	34.733	
4,625.7	4,600.5	4,449.4	4,425.8	17.3	16.5	-90.94	-37.4	-1,170.7	1,133.0	1,100.3	32.71	34.638	
4,700.0	4,674.1	4,522.2	4,498.0	17.6	16.8	-91.59	-41.3	-1,180.1	1,143.6	1,110.3	33.27	34.373	
4,800.0	4,773.6	4,620.6	4,595.4	18.0	17.2	-92.36	-46.5	-1,192.7	1,158.0	1,123.9	34.02	34.041	
4,900.0	4,873.2	4,719.2	4,693.1	18.4	17.6	-92.98	-51.7	-1,205.4	1,172.3	1,137.5	34.75	33.735	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	4,860.9	4,833.7	18.7	18.2	-93.55	-58.3	-1,221.4	1,184.8	1,149.1	35.73	33.158	
5,100.0	5,073.0	5,005.6	4,977.8	19.1	18.8	-93.87	-62.9	-1,232.7	1,193.4	1,156.8	36.66	32.551	
5,159.0	5,132.1	5,091.3	5,063.5	19.3	19.1	-112.60	-64.7	-1,237.0	1,196.7	1,159.5	37.18	32.183	
5,200.0	5,173.0	5,151.0	5,123.1	19.4	19.3	-112.60	-65.5	-1,238.9	1,198.1	1,160.6	37.53	31.924	
5,300.0	5,273.0	5,283.9	5,256.0	19.8	19.7	-112.60	-66.0	-1,240.2	1,199.1	1,160.8	38.30	31.305	
5,400.0	5,373.0	5,383.9	5,356.0	20.1	20.0	-112.60	-66.0	-1,240.2	1,199.1	1,160.1	38.98	30.762	
5,500.0	5,473.0	5,483.9	5,456.0	20.4	20.4	-112.60	-66.0	-1,240.2	1,199.1	1,159.5	39.66	30.235	
5,600.0	5,573.0	5,583.9	5,556.0	20.8	20.7	-112.60	-66.0	-1,240.2	1,199.1	1,158.8	40.34	29.726	
5,700.0	5,673.0	5,683.9	5,656.0	21.1	21.0	-112.60	-66.0	-1,240.2	1,199.1	1,158.1	41.02	29.232	
5,800.0	5,773.0	5,783.9	5,756.0	21.4	21.4	-112.60	-66.0	-1,240.2	1,199.1	1,157.4	41.70	28.754	
5,900.0	5,873.0	5,883.9	5,856.0	21.8	21.7	-112.60	-66.0	-1,240.2	1,199.1	1,156.7	42.39	28.291	
6,000.0	5,973.0	5,983.9	5,956.0	22.1	22.0	-112.60	-66.0	-1,240.2	1,199.1	1,156.1	43.07	27.841	
6,100.0	6,073.0	6,083.9	6,056.0	22.5	22.3	-112.60	-66.0	-1,240.2	1,199.1	1,155.4	43.76	27.405	
6,200.0	6,173.0	6,183.9	6,156.0	22.8	22.7	-112.60	-66.0	-1,240.2	1,199.1	1,154.7	44.44	26.981	
6,300.0	6,273.0	6,283.9	6,256.0	23.1	23.0	-112.60	-66.0	-1,240.2	1,199.1	1,154.0	45.13	26.570	
6,400.0	6,373.0	6,383.9	6,356.0	23.5	23.3	-112.60	-66.0	-1,240.2	1,199.1	1,153.3	45.82	26.171	
6,500.0	6,473.0	6,483.9	6,456.0	23.8	23.7	-112.60	-66.0	-1,240.2	1,199.1	1,152.6	46.51	25.783	
6,600.0	6,573.0	6,583.9	6,556.0	24.2	24.0	-112.60	-66.0	-1,240.2	1,199.1	1,151.9	47.20	25.406	
6,700.0	6,673.0	6,683.9	6,656.0	24.5	24.3	-112.60	-66.0	-1,240.2	1,199.1	1,151.2	47.89	25.040	
6,800.0	6,773.0	6,783.9	6,756.0	24.9	24.7	-112.60	-66.0	-1,240.2	1,199.1	1,150.5	48.58	24.683	
6,900.0	6,873.0	6,883.9	6,856.0	25.2	25.0	-112.60	-66.0	-1,240.2	1,199.1	1,149.9	49.27	24.337	
7,000.0	6,973.0	6,983.9	6,956.0	25.6	25.3	-112.60	-66.0	-1,240.2	1,199.1	1,149.2	49.97	23.999	
7,100.0	7,073.0	7,083.9	7,056.0	25.9	25.7	-112.60	-66.0	-1,240.2	1,199.1	1,148.5	50.66	23.670	
7,200.0	7,173.0	7,183.9	7,156.0	26.3	26.0	-112.60	-66.0	-1,240.2	1,199.1	1,147.8	51.35	23.350	
7,300.0	7,273.0	7,283.9	7,256.0	26.6	26.4	-112.60	-66.0	-1,240.2	1,199.1	1,147.1	52.05	23.039	
7,400.0	7,373.0	7,383.9	7,356.0	26.9	26.7	-112.60	-66.0	-1,240.2	1,199.1	1,146.4	52.74	22.735	
7,500.0	7,473.0	7,483.9	7,456.0	27.3	27.0	-112.60	-66.0	-1,240.2	1,199.1	1,145.7	53.44	22.439	
7,600.0	7,573.0	7,583.9	7,556.0	27.6	27.4	-112.60	-66.0	-1,240.2	1,199.1	1,145.0	54.14	22.150	
7,700.0	7,673.0	7,683.9	7,656.0	28.0	27.7	-112.60	-66.0	-1,240.2	1,199.1	1,144.3	54.83	21.868	
7,800.0	7,773.0	7,783.9	7,756.0	28.3	28.1	-112.60	-66.0	-1,240.2	1,199.1	1,143.6	55.53	21.594	
7,900.0	7,873.0	7,883.9	7,856.0	28.7	28.4	-112.60	-66.0	-1,240.2	1,199.1	1,142.9	56.23	21.326	
8,000.0	7,973.0	7,983.9	7,956.0	29.0	28.7	-112.60	-66.0	-1,240.2	1,199.1	1,142.2	56.93	21.064	
8,100.0	8,073.0	8,083.9	8,056.0	29.4	29.1	-112.60	-66.0	-1,240.2	1,199.1	1,141.5	57.63	20.808	
8,200.0	8,173.0	8,183.9	8,156.0	29.7	29.4	-112.60	-66.0	-1,240.2	1,199.1	1,140.8	58.33	20.559	
8,300.0	8,273.0	8,283.9	8,256.0	30.1	29.8	-112.60	-66.0	-1,240.2	1,199.1	1,140.1	59.03	20.315	
8,400.0	8,373.0	8,383.9	8,356.0	30.4	30.1	-112.60	-66.0	-1,240.2	1,199.1	1,139.4	59.73	20.077	
8,500.0	8,473.0	8,483.9	8,456.0	30.8	30.5	-112.60	-66.0	-1,240.2	1,199.1	1,138.7	60.43	19.844	
8,600.0	8,573.0	8,583.9	8,556.0	31.1	30.8	-112.60	-66.0	-1,240.2	1,199.1	1,138.0	61.13	19.616	
8,700.0	8,673.0	8,683.9	8,656.0	31.5	31.2	-112.60	-66.0	-1,240.2	1,199.1	1,137.3	61.83	19.394	
8,800.0	8,773.0	8,783.9	8,756.0	31.8	31.5	-112.60	-66.0	-1,240.2	1,199.1	1,136.6	62.53	19.176	
8,900.0	8,873.0	8,883.9	8,856.0	32.2	31.8	-112.60	-66.0	-1,240.2	1,199.1	1,135.9	63.23	18.963	
9,000.0	8,973.0	8,983.9	8,956.0	32.5	32.2	-112.60	-66.0	-1,240.2	1,199.1	1,135.2	63.94	18.755	
9,100.0	9,073.0	9,083.9	9,056.0	32.9	32.5	-112.60	-66.0	-1,240.2	1,199.1	1,134.5	64.64	18.551	
9,200.0	9,173.0	9,183.9	9,156.0	33.2	32.9	-112.60	-66.0	-1,240.2	1,199.1	1,133.8	65.34	18.351	
9,300.0	9,273.0	9,283.9	9,256.0	33.6	33.2	-112.60	-66.0	-1,240.2	1,199.1	1,133.1	66.05	18.156	
9,400.0	9,373.0	9,383.9	9,356.0	33.9	33.6	-112.60	-66.0	-1,240.2	1,199.1	1,132.4	66.75	17.965	
9,500.0	9,473.0	9,483.9	9,456.0	34.3	33.9	-112.60	-66.0	-1,240.2	1,199.1	1,131.7	67.45	17.777	
9,600.0	9,573.0	9,583.9	9,556.0	34.6	34.3	-112.60	-66.0	-1,240.2	1,199.1	1,131.0	68.16	17.593	
9,700.0	9,673.0	9,683.9	9,656.0	35.0	34.6	-112.60	-66.0	-1,240.2	1,199.1	1,130.3	68.86	17.413	
9,800.0	9,773.0	9,783.9	9,756.0	35.3	35.0	-112.60	-66.0	-1,240.2	1,199.1	1,129.6	69.57	17.237	
9,900.0	9,873.0	9,883.9	9,856.0	35.7	35.3	-112.60	-66.0	-1,240.2	1,199.1	1,128.9	70.27	17.064	
10,000.0	9,973.0	9,983.9	9,956.0	36.0	35.7	-112.60	-66.0	-1,240.2	1,199.1	1,128.1	70.98	16.895	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	10,073.0	10,083.9	10,056.0	36.4	36.0	-112.60	-66.0	-1,240.2	1,199.1	1,127.4	71.68	16.728	
10,200.0	10,173.0	10,183.9	10,156.0	36.7	36.4	-112.60	-66.0	-1,240.2	1,199.1	1,126.7	72.39	16.565	
10,300.0	10,273.0	10,283.9	10,256.0	37.1	36.7	-112.60	-66.0	-1,240.2	1,199.1	1,126.0	73.09	16.405	
10,400.0	10,373.0	10,383.9	10,356.0	37.4	37.1	-112.60	-66.0	-1,240.2	1,199.1	1,125.3	73.80	16.248	
10,500.0	10,473.0	10,483.9	10,456.0	37.8	37.4	-112.60	-66.0	-1,240.2	1,199.1	1,124.6	74.51	16.094	
10,600.0	10,573.0	10,583.9	10,556.0	38.2	37.7	-112.60	-66.0	-1,240.2	1,199.1	1,123.9	75.21	15.943	
10,700.0	10,673.0	10,683.9	10,656.0	38.5	38.1	-112.60	-66.0	-1,240.2	1,199.1	1,123.2	75.92	15.795	
10,800.0	10,773.0	10,783.9	10,756.0	38.9	38.4	-112.60	-66.0	-1,240.2	1,199.1	1,122.5	76.63	15.649	
10,900.0	10,873.0	10,883.9	10,856.0	39.2	38.8	-112.60	-66.0	-1,240.2	1,199.1	1,121.8	77.33	15.506	
11,000.0	10,973.0	10,983.9	10,956.0	39.6	39.1	-112.60	-66.0	-1,240.2	1,199.1	1,121.1	78.04	15.365	
11,024.0	10,997.0	11,007.9	10,980.0	39.7	39.2	-112.60	-66.0	-1,240.2	1,199.1	1,120.9	78.21	15.332	
11,050.0	11,023.0	11,029.9	11,002.0	39.7	39.3	75.14	-66.0	-1,240.2	1,199.0	1,120.6	78.38	15.298	
11,100.0	11,072.8	11,050.0	11,022.1	39.9	39.4	75.23	-66.6	-1,240.2	1,198.5	1,119.9	78.60	15.248	
11,150.0	11,122.0	11,085.8	11,057.7	40.0	39.5	75.45	-69.3	-1,240.2	1,197.8	1,118.9	78.85	15.191	
11,200.0	11,170.3	11,113.7	11,085.5	40.2	39.6	75.72	-72.9	-1,240.2	1,196.9	1,117.9	79.03	15.145	
11,250.0	11,217.2	11,141.7	11,113.0	40.3	39.7	76.04	-77.9	-1,240.2	1,195.9	1,116.7	79.19	15.101	
11,300.0	11,262.5	11,169.7	11,140.3	40.4	39.8	76.44	-84.2	-1,240.1	1,194.8	1,115.5	79.33	15.061	
11,350.0	11,305.7	11,200.0	11,169.4	40.5	39.9	76.92	-92.6	-1,240.1	1,193.6	1,114.1	79.47	15.020	
11,400.0	11,346.6	11,225.9	11,193.9	40.6	40.0	77.39	-100.9	-1,240.0	1,192.4	1,112.8	79.56	14.986	
11,450.0	11,384.8	11,250.0	11,216.3	40.6	40.0	77.88	-109.7	-1,240.0	1,191.2	1,111.5	79.64	14.958	
11,500.0	11,420.1	11,282.5	11,246.0	40.7	40.2	78.55	-123.0	-1,239.9	1,190.0	1,110.2	79.79	14.915	
11,550.0	11,452.2	11,310.9	11,271.3	40.8	40.3	79.19	-135.9	-1,239.8	1,189.0	1,109.1	79.92	14.878	
11,600.0	11,480.8	11,339.5	11,296.0	40.9	40.3	79.86	-150.2	-1,239.7	1,188.2	1,108.2	80.07	14.840	
11,650.0	11,505.7	11,368.2	11,320.1	40.9	40.4	80.56	-165.8	-1,239.6	1,187.7	1,107.4	80.24	14.802	
11,700.0	11,526.7	11,400.0	11,345.9	41.0	40.5	81.35	-184.5	-1,239.5	1,187.5	1,107.0	80.46	14.758	
11,704.8	11,528.6	11,400.0	11,345.9	41.0	40.5	81.35	-184.5	-1,239.5	1,187.5	1,107.0	80.46	14.759	
11,750.0	11,543.8	11,426.2	11,366.3	41.1	40.6	82.00	-200.9	-1,239.4	1,187.6	1,107.0	80.66	14.723	
11,800.0	11,556.6	11,455.6	11,388.2	41.2	40.7	82.73	-220.4	-1,239.3	1,188.3	1,107.4	80.92	14.685	
11,850.0	11,565.2	11,485.2	11,409.4	41.2	40.8	83.46	-241.2	-1,239.2	1,189.5	1,108.3	81.19	14.650	
11,900.0	11,569.5	11,515.2	11,429.6	41.3	40.9	84.17	-263.3	-1,239.0	1,191.2	1,109.8	81.49	14.619	
11,924.0	11,570.0	11,529.8	11,439.0	41.4	41.0	84.51	-274.4	-1,238.9	1,192.3	1,110.7	81.63	14.607	
12,000.0	11,570.0	11,579.3	11,468.8	41.5	41.1	85.96	-313.9	-1,238.7	1,196.2	1,114.1	82.10	14.571	
12,100.0	11,570.0	11,654.8	11,507.5	41.8	41.4	87.83	-378.8	-1,238.3	1,201.3	1,118.6	82.75	14.518	
12,200.0	11,570.0	11,742.3	11,541.1	42.1	41.7	89.44	-459.4	-1,237.8	1,205.2	1,121.8	83.45	14.444	
12,292.2	11,570.0	11,831.6	11,562.4	42.5	42.1	90.45	-546.1	-1,237.2	1,206.7	1,122.5	84.16	14.338	
12,300.0	11,570.0	11,839.5	11,563.6	42.5	42.2	90.51	-553.9	-1,237.2	1,206.7	1,122.4	84.22	14.327	
12,400.0	11,570.0	11,941.4	11,570.0	42.9	42.6	90.81	-655.4	-1,236.6	1,206.7	1,121.6	85.11	14.179	
12,500.0	11,570.0	12,041.4	11,570.0	43.4	43.1	90.81	-755.5	-1,235.9	1,206.7	1,120.6	86.10	14.014	
12,600.0	11,570.0	12,141.4	11,570.0	44.0	43.6	90.81	-855.5	-1,235.3	1,206.6	1,119.4	87.21	13.836	
12,700.0	11,570.0	12,241.4	11,570.0	44.6	44.3	90.81	-955.5	-1,234.7	1,206.6	1,118.2	88.43	13.645	
12,800.0	11,570.0	12,341.4	11,570.0	45.3	44.9	90.81	-1,055.5	-1,234.1	1,206.5	1,116.8	89.75	13.443	
12,900.0	11,570.0	12,441.4	11,570.0	46.0	45.6	90.81	-1,155.5	-1,233.4	1,206.5	1,115.3	91.18	13.232	
13,000.0	11,570.0	12,541.4	11,570.0	46.7	46.4	90.81	-1,255.5	-1,232.8	1,206.5	1,113.8	92.70	13.014	
13,100.0	11,570.0	12,641.4	11,570.0	47.6	47.2	90.81	-1,355.5	-1,232.2	1,206.4	1,112.1	94.32	12.791	
13,200.0	11,570.0	12,741.4	11,570.0	48.4	48.0	90.81	-1,455.5	-1,231.6	1,206.4	1,110.4	96.02	12.564	
13,300.0	11,570.0	12,841.4	11,570.0	49.3	48.9	90.81	-1,555.5	-1,230.9	1,206.3	1,108.5	97.80	12.334	
13,400.0	11,570.0	12,941.4	11,570.0	50.2	49.8	90.81	-1,655.5	-1,230.3	1,206.3	1,106.6	99.67	12.103	
13,500.0	11,570.0	13,041.4	11,570.0	51.2	50.8	90.81	-1,755.5	-1,229.7	1,206.3	1,104.7	101.61	11.872	
13,600.0	11,570.0	13,141.4	11,570.0	52.2	51.8	90.81	-1,855.5	-1,229.1	1,206.2	1,102.6	103.61	11.642	
13,700.0	11,570.0	13,241.4	11,570.0	53.2	52.8	90.81	-1,955.5	-1,228.4	1,206.2	1,100.5	105.69	11.413	
13,800.0	11,570.0	13,341.4	11,570.0	54.3	53.9	90.81	-2,055.5	-1,227.8	1,206.1	1,098.3	107.82	11.186	
13,900.0	11,570.0	13,441.4	11,570.0	55.4	55.0	90.81	-2,155.4	-1,227.2	1,206.1	1,096.1	110.02	10.963	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Bull Fed Com #602H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.0	11,570.0	13,541.4	11,570.0	56.5	56.1	90.81	-2,255.4	-1,226.5	1,206.1	1,093.8	112.27	10.743	
14,100.0	11,570.0	13,641.4	11,570.0	57.7	57.2	90.81	-2,355.4	-1,225.9	1,206.0	1,091.4	114.57	10.527	
14,200.0	11,570.0	13,741.4	11,570.0	58.9	58.4	90.81	-2,455.4	-1,225.3	1,206.0	1,089.1	116.92	10.315	
14,300.0	11,570.0	13,841.4	11,570.0	60.1	59.6	90.81	-2,555.4	-1,224.7	1,205.9	1,086.6	119.31	10.107	
14,400.0	11,570.0	13,941.4	11,570.0	61.3	60.8	90.81	-2,655.4	-1,224.0	1,205.9	1,084.1	121.75	9.905	
14,500.0	11,570.0	14,041.4	11,570.0	62.5	62.0	90.81	-2,755.4	-1,223.4	1,205.8	1,081.6	124.23	9.707	
14,600.0	11,570.0	14,141.4	11,570.0	63.8	63.3	90.81	-2,855.4	-1,222.8	1,205.8	1,079.1	126.75	9.513	
14,700.0	11,570.0	14,241.4	11,570.0	65.0	64.6	90.81	-2,955.4	-1,222.2	1,205.8	1,076.5	129.30	9.325	
14,800.0	11,570.0	14,341.4	11,570.0	66.3	65.9	90.81	-3,055.4	-1,221.5	1,205.7	1,073.8	131.89	9.142	
14,900.0	11,570.0	14,441.4	11,570.0	67.6	67.2	90.81	-3,155.4	-1,220.9	1,205.7	1,071.2	134.51	8.964	
15,000.0	11,570.0	14,541.4	11,570.0	69.0	68.5	90.81	-3,255.4	-1,220.3	1,205.6	1,068.5	137.16	8.790	
15,100.0	11,570.0	14,641.4	11,570.0	70.3	69.8	90.81	-3,355.4	-1,219.7	1,205.6	1,065.8	139.84	8.621	
15,200.0	11,570.0	14,741.4	11,570.0	71.7	71.2	90.81	-3,455.4	-1,219.0	1,205.6	1,063.0	142.54	8.457	
15,300.0	11,570.0	14,841.4	11,570.0	73.0	72.5	90.81	-3,555.4	-1,218.4	1,205.5	1,060.3	145.27	8.298	
15,400.0	11,570.0	14,941.4	11,570.0	74.4	73.9	90.81	-3,655.4	-1,217.8	1,205.5	1,057.5	148.03	8.144	
15,500.0	11,570.0	15,041.4	11,570.0	75.8	75.3	90.81	-3,755.4	-1,217.2	1,205.4	1,054.6	150.81	7.993	
15,600.0	11,570.0	15,141.4	11,570.0	77.2	76.7	90.81	-3,855.4	-1,216.5	1,205.4	1,051.8	153.61	7.847	
15,700.0	11,570.0	15,241.4	11,570.0	78.6	78.1	90.81	-3,955.4	-1,215.9	1,205.4	1,048.9	156.42	7.706	
15,800.0	11,570.0	15,341.4	11,570.0	80.0	79.5	90.81	-4,055.4	-1,215.3	1,205.3	1,046.1	159.26	7.568	
15,900.0	11,570.0	15,441.4	11,570.0	81.4	80.9	90.81	-4,155.4	-1,214.7	1,205.3	1,043.2	162.12	7.435	
16,000.0	11,570.0	15,541.4	11,570.0	82.9	82.4	90.81	-4,255.4	-1,214.0	1,205.2	1,040.2	164.99	7.305	
16,100.0	11,570.0	15,641.4	11,570.0	84.3	83.8	90.81	-4,355.4	-1,213.4	1,205.2	1,037.3	167.88	7.179	
16,200.0	11,570.0	15,741.4	11,570.0	85.8	85.3	90.81	-4,455.4	-1,212.8	1,205.2	1,034.4	170.79	7.057	
16,300.0	11,570.0	15,841.4	11,570.0	87.2	86.7	90.81	-4,555.4	-1,212.2	1,205.1	1,031.4	173.71	6.938	
16,400.0	11,570.0	15,941.4	11,570.0	88.7	88.2	90.81	-4,655.4	-1,211.5	1,205.1	1,028.4	176.64	6.822	
16,500.0	11,570.0	16,041.4	11,570.0	90.2	89.7	90.81	-4,755.4	-1,210.9	1,205.0	1,025.5	179.59	6.710	
16,600.0	11,570.0	16,141.4	11,570.0	91.6	91.1	90.81	-4,855.4	-1,210.3	1,205.0	1,022.5	182.55	6.601	
16,700.0	11,570.0	16,241.4	11,570.0	93.1	92.6	90.81	-4,955.4	-1,209.7	1,205.0	1,019.4	185.52	6.495	
16,800.0	11,570.0	16,341.4	11,570.0	94.6	94.1	90.81	-5,055.4	-1,209.0	1,204.9	1,016.4	188.50	6.392	
16,900.0	11,570.0	16,441.4	11,570.0	96.1	95.6	90.81	-5,155.4	-1,208.4	1,204.9	1,013.4	191.50	6.292	
17,000.0	11,570.0	16,541.4	11,570.0	97.6	97.1	90.81	-5,255.4	-1,207.8	1,204.8	1,010.3	194.50	6.194	
17,100.0	11,570.0	16,641.4	11,570.0	99.1	98.6	90.81	-5,355.4	-1,207.1	1,204.8	1,007.3	197.52	6.100	
17,200.0	11,570.0	16,741.4	11,570.0	100.6	100.1	90.81	-5,455.4	-1,206.5	1,204.8	1,004.2	200.54	6.008	
17,300.0	11,570.0	16,841.4	11,570.0	102.1	101.6	90.81	-5,555.4	-1,205.9	1,204.7	1,001.1	203.57	5.918	
17,400.0	11,570.0	16,941.4	11,570.0	103.7	103.2	90.81	-5,655.4	-1,205.3	1,204.7	998.1	206.62	5.830	
17,500.0	11,570.0	17,041.4	11,570.0	105.2	104.7	90.81	-5,755.4	-1,204.6	1,204.6	995.0	209.67	5.745	
17,600.0	11,570.0	17,141.4	11,570.0	106.7	106.2	90.81	-5,855.4	-1,204.0	1,204.6	991.9	212.73	5.663	
17,700.0	11,570.0	17,241.4	11,570.0	108.3	107.7	90.81	-5,955.4	-1,203.4	1,204.6	988.8	215.79	5.582	
17,800.0	11,570.0	17,341.4	11,570.0	109.8	109.3	90.81	-6,055.4	-1,202.8	1,204.5	985.6	218.87	5.503	
17,900.0	11,570.0	17,441.4	11,570.0	111.3	110.8	90.81	-6,155.4	-1,202.1	1,204.5	982.5	221.95	5.427	
18,000.0	11,570.0	17,541.4	11,570.0	112.9	112.4	90.81	-6,255.4	-1,201.5	1,204.4	979.4	225.03	5.352	
18,100.0	11,570.0	17,641.4	11,570.0	114.4	113.9	90.81	-6,355.4	-1,200.9	1,204.4	976.3	228.13	5.279	
18,200.0	11,570.0	17,741.4	11,570.0	116.0	115.5	90.81	-6,455.4	-1,200.3	1,204.3	973.1	231.23	5.209	
18,265.7	11,570.0	17,807.1	11,570.0	116.9	116.5	90.81	-6,521.1	-1,199.9	1,204.3	971.2	233.15	5.166	
18,307.1	11,570.0	17,840.2	11,570.0	117.4	117.0	90.81	-6,554.1	-1,199.9	1,204.6	970.4	234.26	5.142	
18,307.7	11,570.0	17,840.7	11,570.0	117.4	117.0	90.81	-6,554.7	-1,199.9	1,204.6	970.3	234.27	5.142	SF

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	89.62	0.2	29.9	29.9				
100.0	100.0	100.0	100.0	0.1	0.1	89.62	0.2	29.9	29.9	29.7	0.26	116.687	
200.0	200.0	200.0	200.0	0.5	0.5	89.62	0.2	29.9	29.9	28.9	0.97	30.730	
300.0	300.0	300.0	300.0	0.8	0.8	89.62	0.2	29.9	29.9	28.2	1.69	17.695	
400.0	400.0	400.0	400.0	1.2	1.2	89.62	0.2	29.9	29.9	27.5	2.41	12.425	
500.0	500.0	500.0	500.0	1.6	1.6	89.62	0.2	29.9	29.9	26.8	3.12	9.573	CC, ES
600.0	600.0	599.5	599.5	1.9	1.9	88.78	0.7	30.6	30.7	26.8	3.84	7.989	
700.0	700.0	699.0	699.0	2.3	2.3	86.49	2.0	32.8	32.9	28.4	4.55	7.238	
800.0	800.0	798.4	798.3	2.6	2.6	83.30	4.3	36.5	36.8	31.5	5.26	6.994	
900.0	900.0	897.6	897.3	3.0	3.0	79.85	7.5	41.6	42.4	36.4	5.98	7.092	
1,000.0	1,000.0	996.5	995.9	3.4	3.3	76.56	11.5	48.2	49.7	43.0	6.69	7.434	
1,100.0	1,100.0	1,095.2	1,094.1	3.7	3.7	73.68	16.5	56.2	58.8	51.4	7.40	7.953	
1,200.0	1,200.0	1,193.5	1,191.8	4.1	4.1	71.25	22.3	65.6	69.7	61.6	8.10	8.604	
1,300.0	1,300.0	1,308.7	1,288.7	4.4	4.5	69.25	28.9	76.3	82.4	73.5	8.87	9.289	
1,400.0	1,400.0	1,409.7	1,386.8	4.8	4.9	67.67	36.2	88.0	96.1	86.5	9.58	10.024	
1,500.0	1,500.0	1,489.3	1,484.9	5.1	5.2	66.48	43.4	99.7	109.8	99.6	10.22	10.741	
1,600.0	1,600.0	1,588.4	1,583.0	5.5	5.6	84.47	50.7	111.4	123.5	112.6	10.94	11.294	
1,700.0	1,700.0	1,687.4	1,681.1	5.9	6.0	84.65	57.9	123.2	137.1	125.4	11.65	11.765	
1,800.0	1,799.9	1,786.5	1,779.2	6.2	6.4	85.45	65.2	134.9	150.5	138.1	12.37	12.168	
1,900.0	1,899.7	1,885.5	1,877.2	6.6	6.8	86.70	72.4	146.6	163.8	150.7	13.08	12.519	
2,000.0	1,999.4	1,984.5	1,975.2	6.9	7.2	88.31	79.7	158.3	177.2	163.4	13.81	12.831	
2,100.0	2,098.9	2,083.4	2,073.2	7.3	7.6	90.21	86.9	170.0	190.7	176.1	14.54	13.118	
2,200.0	2,198.3	2,182.1	2,170.9	7.7	8.1	92.32	94.1	181.7	204.4	189.2	15.27	13.389	
2,300.0	2,297.4	2,280.7	2,268.6	8.0	8.5	94.59	101.4	193.4	218.6	202.6	16.01	13.654	
2,400.0	2,396.4	2,379.2	2,366.1	8.4	8.9	96.92	108.6	205.0	233.2	216.5	16.76	13.916	
2,500.0	2,495.5	2,477.7	2,463.7	8.8	9.3	98.98	115.8	216.7	248.2	230.7	17.52	14.170	
2,600.0	2,594.5	2,576.2	2,561.2	9.2	9.7	100.81	123.0	228.4	263.4	245.2	18.27	14.416	
2,700.0	2,693.5	2,674.7	2,658.7	9.6	10.1	102.43	130.2	240.0	278.9	259.9	19.04	14.652	
2,800.0	2,792.5	2,773.2	2,756.3	10.0	10.5	103.88	137.4	251.7	294.6	274.8	19.80	14.877	
2,900.0	2,891.6	2,871.7	2,853.8	10.3	10.9	105.19	144.7	263.3	310.4	289.8	20.57	15.091	
3,000.0	2,990.6	2,970.2	2,951.4	10.7	11.3	106.37	151.9	275.0	326.4	305.0	21.34	15.296	
3,100.0	3,089.6	3,068.7	3,048.9	11.1	11.7	107.44	159.1	286.6	342.5	320.4	22.11	15.490	
3,200.0	3,188.6	3,167.2	3,146.5	11.5	12.1	108.41	166.3	298.3	358.7	335.8	22.88	15.675	
3,300.0	3,287.7	3,265.7	3,244.0	11.9	12.5	109.30	173.5	310.0	375.0	351.3	23.66	15.851	
3,400.0	3,386.7	3,364.2	3,341.6	12.3	13.0	110.12	180.7	321.6	391.4	366.9	24.43	16.018	
3,500.0	3,485.7	3,462.7	3,439.1	12.7	13.4	110.87	187.9	333.3	407.8	382.6	25.21	16.177	
3,600.0	3,584.8	3,561.2	3,536.6	13.1	13.8	111.56	195.2	344.9	424.3	398.3	25.99	16.328	
3,700.0	3,683.8	3,659.7	3,634.2	13.5	14.2	112.20	202.4	356.6	440.9	414.1	26.77	16.472	
3,800.0	3,782.8	3,758.2	3,731.7	13.9	14.6	112.79	209.6	368.2	457.5	430.0	27.55	16.610	
3,900.0	3,881.8	3,856.8	3,829.3	14.3	15.0	113.34	216.8	379.9	474.2	445.9	28.33	16.740	
4,000.0	3,980.9	3,955.3	3,926.8	14.7	15.4	113.86	224.0	391.6	490.9	461.8	29.11	16.865	
4,100.0	4,079.9	4,053.8	4,024.4	15.2	15.8	114.34	231.2	403.2	507.6	477.7	29.89	16.985	
4,200.0	4,178.9	4,152.3	4,121.9	15.6	16.2	114.79	238.4	414.9	524.4	493.7	30.67	17.099	
4,300.0	4,277.9	4,250.8	4,219.4	16.0	16.6	115.21	245.6	426.5	541.2	509.8	31.45	17.208	
4,400.0	4,377.0	4,349.3	4,317.0	16.4	17.1	115.61	252.9	438.2	558.0	525.8	32.23	17.312	
4,500.0	4,476.0	4,447.8	4,414.5	16.8	17.5	115.98	260.1	449.8	574.9	541.9	33.02	17.412	
4,600.0	4,575.0	4,546.3	4,512.1	17.2	17.9	116.33	267.3	461.5	591.8	558.0	33.80	17.508	
4,625.7	4,600.5	4,571.6	4,537.1	17.3	18.0	116.42	269.1	464.5	596.1	562.1	34.00	17.532	
4,700.0	4,674.1	4,644.8	4,609.7	17.6	18.3	116.77	274.5	473.2	608.3	573.8	34.58	17.592	
4,800.0	4,773.6	4,743.6	4,707.5	18.0	18.7	117.03	281.7	484.9	623.8	588.4	35.35	17.648	
4,900.0	4,873.2	4,842.6	4,805.5	18.4	19.1	117.05	289.0	496.6	638.1	602.0	36.10	17.675	
5,000.0	4,973.1	4,941.6	4,903.6	18.7	19.5	116.87	296.2	508.3	651.2	614.4	36.84	17.676	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	5,040.7	5,001.7	19.1	20.0	116.47	303.5	520.0	663.2	625.6	37.56	17.654	
5,159.0	5,132.1	5,100.8	5,059.6	19.3	20.2	97.50	307.8	526.9	669.8	631.8	37.99	17.629	
5,200.0	5,173.0	5,139.8	5,099.8	19.4	20.4	97.20	310.8	531.7	674.2	635.9	38.27	17.615	
5,300.0	5,273.0	5,238.8	5,197.9	19.8	20.8	96.47	318.0	543.5	685.1	646.1	38.98	17.575	
5,400.0	5,373.0	5,337.8	5,295.9	20.1	21.2	95.76	325.3	555.2	696.1	656.5	39.69	17.540	
5,500.0	5,473.0	5,436.8	5,394.0	20.4	21.6	95.08	332.5	566.9	707.3	666.9	40.40	17.508	
5,600.0	5,573.0	5,535.9	5,492.0	20.8	22.0	94.42	339.8	578.6	718.5	677.4	41.10	17.480	
5,700.0	5,673.0	5,634.9	5,590.1	21.1	22.4	93.77	347.0	590.3	729.8	688.0	41.81	17.455	
5,800.0	5,773.0	5,733.9	5,688.2	21.4	22.9	93.15	354.3	602.0	741.2	698.7	42.52	17.433	
5,900.0	5,873.0	5,832.9	5,786.2	21.8	23.3	92.55	361.5	613.8	752.7	709.5	43.22	17.414	
6,000.0	5,973.0	5,932.0	5,884.3	22.1	23.7	91.96	368.8	625.5	764.3	720.4	43.93	17.397	
6,100.0	6,073.0	6,031.0	5,982.4	22.5	24.1	91.39	376.0	637.2	775.9	731.3	44.64	17.383	
6,200.0	6,173.0	6,136.7	6,087.0	22.8	24.5	90.81	383.7	649.6	787.5	742.1	45.40	17.348	
6,300.0	6,273.0	6,257.2	6,206.8	23.1	25.0	90.28	390.9	661.2	797.2	750.9	46.25	17.237	
6,400.0	6,373.0	6,378.5	6,327.6	23.5	25.5	89.90	396.1	669.7	804.1	757.1	47.06	17.087	
6,500.0	6,473.0	6,500.3	6,449.3	23.8	25.9	89.67	399.3	674.9	808.4	760.6	47.84	16.900	
6,600.0	6,573.0	6,622.3	6,571.3	24.2	26.3	89.59	400.5	676.8	810.0	761.4	48.57	16.677	
6,700.0	6,673.0	6,724.1	6,673.0	24.5	26.6	89.59	400.5	676.8	810.0	760.8	49.25	16.448	
6,800.0	6,773.0	6,824.1	6,773.0	24.9	26.9	89.59	400.5	676.8	810.0	760.1	49.93	16.225	
6,900.0	6,873.0	6,924.1	6,873.0	25.2	27.3	89.59	400.5	676.8	810.0	759.4	50.60	16.007	
7,000.0	6,973.0	7,024.1	6,973.0	25.6	27.6	89.59	400.5	676.8	810.0	758.7	51.28	15.795	
7,100.0	7,073.0	7,124.1	7,073.0	25.9	27.9	89.59	400.5	676.8	810.0	758.1	51.96	15.588	
7,200.0	7,173.0	7,224.1	7,173.0	26.3	28.2	89.59	400.5	676.8	810.0	757.4	52.65	15.386	
7,300.0	7,273.0	7,324.1	7,273.0	26.6	28.5	89.59	400.5	676.8	810.0	756.7	53.33	15.189	
7,400.0	7,373.0	7,424.1	7,373.0	26.9	28.8	89.59	400.5	676.8	810.0	756.0	54.01	14.997	
7,500.0	7,473.0	7,524.1	7,473.0	27.3	29.2	89.59	400.5	676.8	810.0	755.3	54.70	14.810	
7,600.0	7,573.0	7,624.1	7,573.0	27.6	29.5	89.59	400.5	676.8	810.0	754.6	55.38	14.626	
7,700.0	7,673.0	7,724.1	7,673.0	28.0	29.8	89.59	400.5	676.8	810.0	754.0	56.07	14.448	
7,800.0	7,773.0	7,824.1	7,773.0	28.3	30.1	89.59	400.5	676.8	810.0	753.3	56.75	14.273	
7,900.0	7,873.0	7,924.1	7,873.0	28.7	30.5	89.59	400.5	676.8	810.0	752.6	57.44	14.102	
8,000.0	7,973.0	8,024.1	7,973.0	29.0	30.8	89.59	400.5	676.8	810.0	751.9	58.13	13.935	
8,100.0	8,073.0	8,124.1	8,073.0	29.4	31.1	89.59	400.5	676.8	810.0	751.2	58.82	13.772	
8,200.0	8,173.0	8,224.1	8,173.0	29.7	31.4	89.59	400.5	676.8	810.0	750.5	59.51	13.612	
8,300.0	8,273.0	8,324.1	8,273.0	30.1	31.8	89.59	400.5	676.8	810.0	749.8	60.20	13.456	
8,400.0	8,373.0	8,424.1	8,373.0	30.4	32.1	89.59	400.5	676.8	810.0	749.1	60.89	13.304	
8,500.0	8,473.0	8,524.1	8,473.0	30.8	32.4	89.59	400.5	676.8	810.0	748.4	61.58	13.154	
8,600.0	8,573.0	8,624.1	8,573.0	31.1	32.7	89.59	400.5	676.8	810.0	747.7	62.27	13.008	
8,700.0	8,673.0	8,724.1	8,673.0	31.5	33.1	89.59	400.5	676.8	810.0	747.1	62.96	12.865	
8,800.0	8,773.0	8,824.1	8,773.0	31.8	33.4	89.59	400.5	676.8	810.0	746.4	63.66	12.725	
8,900.0	8,873.0	8,924.1	8,873.0	32.2	33.7	89.59	400.5	676.8	810.0	745.7	64.35	12.588	
9,000.0	8,973.0	9,024.1	8,973.0	32.5	34.1	89.59	400.5	676.8	810.0	745.0	65.04	12.454	
9,100.0	9,073.0	9,124.1	9,073.0	32.9	34.4	89.59	400.5	676.8	810.0	744.3	65.74	12.322	
9,200.0	9,173.0	9,224.1	9,173.0	33.2	34.7	89.59	400.5	676.8	810.0	743.6	66.43	12.193	
9,300.0	9,273.0	9,324.1	9,273.0	33.6	35.1	89.59	400.5	676.8	810.0	742.9	67.13	12.067	
9,400.0	9,373.0	9,424.1	9,373.0	33.9	35.4	89.59	400.5	676.8	810.0	742.2	67.82	11.943	
9,500.0	9,473.0	9,524.1	9,473.0	34.3	35.7	89.59	400.5	676.8	810.0	741.5	68.52	11.822	
9,600.0	9,573.0	9,624.1	9,573.0	34.6	36.1	89.59	400.5	676.8	810.0	740.8	69.22	11.703	
9,700.0	9,673.0	9,724.1	9,673.0	35.0	36.4	89.59	400.5	676.8	810.0	740.1	69.91	11.586	
9,800.0	9,773.0	9,824.1	9,773.0	35.3	36.7	89.59	400.5	676.8	810.0	739.4	70.61	11.472	
9,900.0	9,873.0	9,924.1	9,873.0	35.7	37.1	89.59	400.5	676.8	810.0	738.7	71.31	11.359	
10,000.0	9,973.0	10,024.1	9,973.0	36.0	37.4	89.59	400.5	676.8	810.0	738.0	72.01	11.249	
10,100.0	10,073.0	10,124.1	10,073.0	36.4	37.7	89.59	400.5	676.8	810.0	737.3	72.71	11.141	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	10,224.1	10,173.0	36.7	38.1	89.59	400.5	676.8	810.0	736.6	73.40	11.035	
10,300.0	10,273.0	10,324.1	10,273.0	37.1	38.4	89.59	400.5	676.8	810.0	735.9	74.10	10.931	
10,400.0	10,373.0	10,424.1	10,373.0	37.4	38.8	89.59	400.5	676.8	810.0	735.2	74.80	10.829	
10,500.0	10,473.0	10,524.1	10,473.0	37.8	39.1	89.59	400.5	676.8	810.0	734.5	75.50	10.728	
10,600.0	10,573.0	10,624.1	10,573.0	38.2	39.4	89.59	400.5	676.8	810.0	733.8	76.20	10.630	
10,700.0	10,673.0	10,724.1	10,673.0	38.5	39.8	89.59	400.5	676.8	810.0	733.1	76.90	10.533	
10,800.0	10,773.0	10,824.1	10,773.0	38.9	40.1	89.59	400.5	676.8	810.0	732.4	77.60	10.438	
10,900.0	10,873.0	10,924.1	10,873.0	39.2	40.4	89.59	400.5	676.8	810.0	731.7	78.31	10.344	
11,000.0	10,973.0	11,024.1	10,973.0	39.6	40.8	89.59	400.5	676.8	810.0	731.0	79.01	10.252	
11,024.0	10,997.0	11,048.0	10,997.0	39.7	40.9	89.59	400.5	676.8	810.0	730.8	79.18	10.231	
11,050.0	11,023.0	11,074.1	11,023.0	39.7	41.0	-82.76	400.5	676.8	809.9	730.6	79.35	10.207	
11,100.0	11,072.8	11,123.8	11,072.8	39.9	41.1	-83.12	400.5	676.8	809.4	729.7	79.67	10.159	
11,150.0	11,122.0	11,177.0	11,125.9	40.0	41.3	-83.84	399.8	676.8	808.3	728.4	79.96	10.109	
11,200.0	11,170.3	11,234.4	11,183.1	40.2	41.5	-84.69	394.1	676.3	806.5	726.2	80.23	10.052	
11,250.0	11,217.2	11,292.8	11,240.3	40.3	41.6	-85.58	382.4	675.5	803.7	723.3	80.46	9.990	
11,300.0	11,262.5	11,352.1	11,296.8	40.4	41.8	-86.51	364.7	674.2	800.1	719.5	80.65	9.922	
11,350.0	11,305.7	11,412.2	11,351.9	40.5	41.9	-87.47	340.9	672.5	795.7	714.9	80.80	9.848	
11,400.0	11,346.6	11,472.9	11,404.7	40.6	42.0	-88.46	311.2	670.3	790.5	709.5	80.91	9.770	
11,450.0	11,384.8	11,534.1	11,454.5	40.6	42.0	-89.46	275.7	667.8	784.4	703.4	80.99	9.684	
11,500.0	11,420.1	11,595.6	11,500.4	40.7	42.1	-90.47	234.9	664.8	777.5	696.5	81.06	9.593	
11,550.0	11,452.2	11,657.3	11,541.8	40.8	42.2	-91.47	189.3	661.5	770.0	688.9	81.11	9.493	
11,600.0	11,480.8	11,719.1	11,578.1	40.9	42.2	-92.47	139.5	657.9	761.7	680.6	81.16	9.386	
11,650.0	11,505.7	11,780.7	11,608.8	40.9	42.2	-93.45	86.1	654.0	752.8	671.6	81.22	9.269	
11,700.0	11,526.7	11,842.1	11,633.4	41.0	42.2	-94.41	30.1	649.9	743.4	662.1	81.30	9.144	
11,750.0	11,543.8	11,903.1	11,651.8	41.1	42.1	-95.33	-27.9	645.7	733.5	652.1	81.42	9.009	
11,800.0	11,556.6	11,963.7	11,663.8	41.2	42.1	-96.21	-87.0	641.4	723.2	641.7	81.56	8.867	
11,850.0	11,565.2	12,023.6	11,669.5	41.2	42.1	-97.04	-146.5	637.1	712.6	630.9	81.75	8.717	
11,900.0	11,569.5	12,071.2	11,670.0	41.3	42.1	-97.92	-194.0	633.8	702.1	620.1	81.94	8.568	
11,924.0	11,570.0	12,090.1	11,670.0	41.4	42.2	-98.40	-212.9	632.6	697.4	615.4	82.01	8.504	
12,000.0	11,570.0	12,150.6	11,670.0	41.5	42.2	-98.49	-273.3	629.8	684.8	602.5	82.26	8.325	
12,100.0	11,570.0	12,231.1	11,670.0	41.8	42.4	-98.57	-353.8	627.9	673.6	590.9	82.69	8.146	
12,200.0	11,570.0	12,321.4	11,670.0	42.1	42.7	-98.61	-444.0	628.2	668.4	585.1	83.28	8.026	
12,291.9	11,570.0	12,413.3	11,670.0	42.5	43.0	-98.63	-535.9	628.7	666.9	583.0	83.95	7.944	
12,292.2	11,570.0	12,413.5	11,670.0	42.5	43.0	-98.63	-536.2	628.7	666.9	583.0	83.95	7.944	
12,300.0	11,570.0	12,421.3	11,670.0	42.5	43.1	-98.63	-544.0	628.8	666.9	582.9	84.01	7.938	
12,400.0	11,570.0	12,521.3	11,670.0	42.9	43.5	-98.63	-644.0	629.4	666.9	582.1	84.87	7.858	
12,500.0	11,570.0	12,621.3	11,670.0	43.4	44.0	-98.63	-744.0	630.0	666.9	581.1	85.84	7.769	
12,600.0	11,570.0	12,721.3	11,670.0	44.0	44.6	-98.63	-844.0	630.6	666.9	580.0	86.93	7.672	
12,700.0	11,570.0	12,821.3	11,670.0	44.6	45.2	-98.63	-944.0	631.2	667.0	578.8	88.13	7.568	
12,800.0	11,570.0	12,921.3	11,670.0	45.3	45.8	-98.63	-1,044.0	631.7	667.0	577.5	89.43	7.458	
12,900.0	11,570.0	13,021.3	11,670.0	46.0	46.5	-98.63	-1,144.0	632.3	667.0	576.1	90.83	7.343	
13,000.0	11,570.0	13,121.3	11,670.0	46.7	47.3	-98.63	-1,244.0	632.9	667.0	574.7	92.33	7.224	
13,100.0	11,570.0	13,221.3	11,670.0	47.6	48.1	-98.63	-1,344.0	633.5	667.0	573.1	93.92	7.102	
13,200.0	11,570.0	13,321.3	11,670.0	48.4	48.9	-98.63	-1,444.0	634.1	667.0	571.4	95.59	6.978	
13,300.0	11,570.0	13,421.3	11,670.0	49.3	49.8	-98.63	-1,544.0	634.7	667.0	569.7	97.35	6.852	
13,400.0	11,570.0	13,521.3	11,670.0	50.2	50.7	-98.63	-1,644.0	635.3	667.0	567.8	99.19	6.725	
13,500.0	11,570.0	13,621.3	11,670.0	51.2	51.7	-98.63	-1,744.0	635.9	667.0	565.9	101.10	6.598	
13,600.0	11,570.0	13,721.3	11,670.0	52.2	52.6	-98.62	-1,844.0	636.5	667.0	564.0	103.07	6.471	
13,700.0	11,570.0	13,821.3	11,670.0	53.2	53.7	-98.62	-1,944.0	637.1	667.0	561.9	105.12	6.346	
13,800.0	11,570.0	13,921.3	11,670.0	54.3	54.7	-98.62	-2,044.0	637.7	667.1	559.8	107.22	6.221	
13,900.0	11,570.0	14,021.3	11,670.0	55.4	55.8	-98.62	-2,144.0	638.3	667.1	557.7	109.39	6.098	
14,000.0	11,570.0	14,121.3	11,670.0	56.5	56.9	-98.62	-2,244.0	638.9	667.1	555.5	111.61	5.977	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #303H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	14,221.3	11,670.0	57.7	58.0	-98.62	-2,344.0	639.5	667.1	553.2	113.88	5.858	
14,200.0	11,570.0	14,321.3	11,670.0	58.9	59.2	-98.62	-2,444.0	640.1	667.1	550.9	116.20	5.741	
14,300.0	11,570.0	14,421.3	11,670.0	60.1	60.4	-98.62	-2,544.0	640.7	667.1	548.5	118.56	5.627	
14,400.0	11,570.0	14,521.3	11,670.0	61.3	61.6	-98.62	-2,644.0	641.3	667.1	546.1	120.97	5.515	
14,500.0	11,570.0	14,621.3	11,670.0	62.5	62.8	-98.62	-2,744.0	641.9	667.1	543.7	123.42	5.405	
14,600.0	11,570.0	14,721.3	11,670.0	63.8	64.1	-98.62	-2,844.0	642.5	667.1	541.2	125.91	5.299	
14,700.0	11,570.0	14,821.3	11,670.0	65.0	65.3	-98.62	-2,944.0	643.0	667.1	538.7	128.43	5.195	
14,800.0	11,570.0	14,921.3	11,670.0	66.3	66.6	-98.62	-3,044.0	643.6	667.2	536.2	130.99	5.093	
14,900.0	11,570.0	15,021.3	11,670.0	67.6	67.9	-98.62	-3,144.0	644.2	667.2	533.6	133.58	4.995	
15,000.0	11,570.0	15,121.3	11,670.0	69.0	69.2	-98.62	-3,244.0	644.8	667.2	531.0	136.20	4.899	
15,100.0	11,570.0	15,221.3	11,670.0	70.3	70.5	-98.62	-3,344.0	645.4	667.2	528.3	138.84	4.805	
15,200.0	11,570.0	15,321.3	11,670.0	71.7	71.9	-98.62	-3,444.0	646.0	667.2	525.7	141.52	4.714	
15,300.0	11,570.0	15,421.3	11,670.0	73.0	73.2	-98.62	-3,544.0	646.6	667.2	523.0	144.22	4.626	
15,400.0	11,570.0	15,521.3	11,670.0	74.4	74.6	-98.62	-3,644.0	647.2	667.2	520.3	146.94	4.541	
15,500.0	11,570.0	15,621.3	11,670.0	75.8	76.0	-98.62	-3,744.0	647.8	667.2	517.5	149.69	4.457	
15,600.0	11,570.0	15,721.3	11,670.0	77.2	77.4	-98.62	-3,843.9	648.4	667.2	514.8	152.46	4.376	
15,700.0	11,570.0	15,821.3	11,670.0	78.6	78.8	-98.62	-3,943.9	649.0	667.2	512.0	155.24	4.298	
15,800.0	11,570.0	15,921.3	11,670.0	80.0	80.2	-98.62	-4,043.9	649.6	667.2	509.2	158.05	4.222	
15,900.0	11,570.0	16,021.3	11,670.0	81.4	81.6	-98.62	-4,143.9	650.2	667.3	506.4	160.88	4.148	
16,000.0	11,570.0	16,121.3	11,670.0	82.9	83.0	-98.62	-4,243.9	650.8	667.3	503.5	163.72	4.076	
16,100.0	11,570.0	16,221.3	11,670.0	84.3	84.4	-98.62	-4,343.9	651.4	667.3	500.7	166.58	4.006	
16,200.0	11,570.0	16,321.3	11,670.0	85.8	85.9	-98.62	-4,443.9	652.0	667.3	497.8	169.45	3.938	
16,300.0	11,570.0	16,421.3	11,670.0	87.2	87.3	-98.62	-4,543.9	652.6	667.3	494.9	172.34	3.872	
16,400.0	11,570.0	16,521.3	11,670.0	88.7	88.8	-98.62	-4,643.9	653.2	667.3	492.1	175.25	3.808	
16,500.0	11,570.0	16,621.3	11,670.0	90.2	90.3	-98.62	-4,743.9	653.8	667.3	489.1	178.16	3.746	
16,600.0	11,570.0	16,721.3	11,670.0	91.6	91.7	-98.62	-4,843.9	654.3	667.3	486.2	181.09	3.685	
16,700.0	11,570.0	16,821.3	11,670.0	93.1	93.2	-98.62	-4,943.9	654.9	667.3	483.3	184.03	3.626	
16,800.0	11,570.0	16,921.3	11,670.0	94.6	94.7	-98.62	-5,043.9	655.5	667.3	480.4	186.99	3.569	
16,900.0	11,570.0	17,021.3	11,670.0	96.1	96.2	-98.62	-5,143.9	656.1	667.3	477.4	189.95	3.513	
17,000.0	11,570.0	17,121.3	11,670.0	97.6	97.7	-98.62	-5,243.9	656.7	667.4	474.4	192.93	3.459	
17,100.0	11,570.0	17,221.3	11,670.0	99.1	99.2	-98.62	-5,343.9	657.3	667.4	471.5	195.91	3.406	
17,200.0	11,570.0	17,321.3	11,670.0	100.6	100.7	-98.62	-5,443.9	657.9	667.4	468.5	198.90	3.355	
17,300.0	11,570.0	17,421.3	11,670.0	102.1	102.2	-98.62	-5,543.9	658.5	667.4	465.5	201.91	3.305	
17,400.0	11,570.0	17,521.3	11,670.0	103.7	103.7	-98.62	-5,643.9	659.1	667.4	462.5	204.92	3.257	
17,500.0	11,570.0	17,621.3	11,670.0	105.2	105.2	-98.62	-5,743.9	659.7	667.4	459.5	207.94	3.210	
17,600.0	11,570.0	17,721.3	11,670.0	106.7	106.7	-98.62	-5,843.9	660.3	667.4	456.4	210.97	3.164	
17,700.0	11,570.0	17,821.3	11,670.0	108.3	108.3	-98.62	-5,943.9	660.9	667.4	453.4	214.00	3.119	
17,800.0	11,570.0	17,921.3	11,670.0	109.8	109.8	-98.62	-6,043.9	661.5	667.4	450.4	217.05	3.075	
17,900.0	11,570.0	18,021.3	11,670.0	111.3	111.3	-98.62	-6,143.9	662.1	667.4	447.3	220.10	3.032	
18,000.0	11,570.0	18,121.3	11,670.0	112.9	112.9	-98.62	-6,243.9	662.7	667.4	444.3	223.15	2.991	
18,100.0	11,570.0	18,221.3	11,670.0	114.4	114.4	-98.62	-6,343.9	663.3	667.5	441.2	226.22	2.951	
18,200.0	11,570.0	18,321.3	11,670.0	116.0	115.9	-98.62	-6,443.9	663.9	667.5	438.2	229.29	2.911	
18,307.1	11,570.0	18,428.5	11,670.0	117.4	117.6	-98.62	-6,551.0	664.5	667.5	435.1	232.38	2.872	
18,307.7	11,570.0	18,429.0	11,670.0	117.4	117.6	-98.62	-6,551.6	664.5	667.5	435.1	232.40	2.872	SF

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #503H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 333-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	1.1	1.1	0.0	0.0	47.95	23.6	26.2	35.3				
100.0	100.0	101.2	101.2	0.1	0.2	48.03	23.5	26.2	35.2	34.9	0.29	119.622	
200.0	200.0	201.2	201.2	0.5	0.3	48.29	23.3	26.1	35.0	34.1	0.82	42.802	
300.0	300.0	301.3	301.3	0.8	0.5	48.72	22.8	26.0	34.6	33.2	1.34	25.798	
400.0	400.0	401.3	401.3	1.2	0.8	49.42	22.1	25.8	34.0	32.0	1.99	17.044	
500.0	500.0	501.3	501.3	1.6	1.1	50.36	21.3	25.7	33.4	30.7	2.71	12.316	
600.0	600.0	601.3	601.3	1.9	1.5	51.16	20.6	25.6	32.8	29.4	3.43	9.577	
700.0	700.0	701.3	701.3	2.3	1.9	52.02	19.9	25.4	32.3	28.1	4.15	7.787	
800.0	800.0	801.4	801.3	2.6	2.2	52.61	19.2	25.1	31.6	26.7	4.86	6.501	
900.0	900.0	901.3	901.3	3.0	2.6	53.04	18.6	24.7	30.9	25.4	5.58	5.548	
1,000.0	1,000.0	1,001.3	1,001.3	3.4	2.9	53.48	18.0	24.3	30.3	24.0	6.29	4.811	
1,100.0	1,100.0	1,101.2	1,101.2	3.7	3.3	54.20	17.4	24.2	29.8	22.8	7.01	4.249	
1,200.0	1,200.0	1,201.2	1,201.1	4.1	3.7	54.64	17.1	24.1	29.5	21.8	7.72	3.823	
1,300.0	1,300.0	1,301.1	1,301.1	4.4	4.0	54.52	17.1	24.0	29.5	21.1	8.42	3.500	
1,400.0	1,400.0	1,401.2	1,401.1	4.8	4.3	54.21	17.2	23.8	29.3	20.2	9.12	3.217	
1,500.0	1,500.0	1,501.2	1,501.2	5.1	4.7	54.16	17.1	23.6	29.1	19.3	9.83	2.962	
1,600.0	1,600.0	1,601.0	1,601.0	5.5	5.0	74.34	17.1	23.6	28.9	18.4	10.53	2.747	
1,700.0	1,700.0	1,700.9	1,700.9	5.9	5.4	78.83	17.6	23.8	28.7	17.5	11.22	2.561	
1,709.9	1,709.8	1,710.8	1,710.8	5.9	5.4	79.44	17.7	23.8	28.7	17.4	11.29	2.544	CC
1,800.0	1,799.9	1,800.6	1,800.5	6.2	5.7	87.05	18.2	24.7	29.2	17.3	11.91	2.452	ES, SF
1,900.0	1,899.7	1,900.1	1,900.0	6.6	6.0	98.46	18.7	26.5	31.5	18.9	12.61	2.496	
2,000.0	1,999.4	1,999.5	1,999.4	6.9	6.4	110.83	19.2	29.1	36.1	22.8	13.31	2.714	
2,100.0	2,098.9	2,098.9	2,098.8	7.3	6.7	121.93	19.6	32.0	43.3	29.3	14.01	3.090	
2,200.0	2,198.3	2,198.1	2,197.9	7.7	7.1	131.09	19.9	35.2	53.0	38.3	14.71	3.603	
2,300.0	2,297.4	2,297.4	2,297.2	8.0	7.4	138.93	19.9	37.7	64.5	49.1	15.42	4.185	
2,400.0	2,396.4	2,396.2	2,395.9	8.4	7.8	145.17	19.5	39.8	77.6	61.4	16.12	4.811	
2,500.0	2,495.5	2,494.8	2,494.5	8.8	8.1	149.62	18.8	42.0	91.5	74.7	16.83	5.437	
2,600.0	2,594.5	2,593.2	2,592.9	9.2	8.4	153.08	17.8	44.1	106.0	88.5	17.53	6.049	
2,700.0	2,693.5	2,692.5	2,692.1	9.6	8.8	155.76	16.5	46.3	121.1	102.8	18.24	6.637	
2,800.0	2,792.5	2,792.9	2,792.6	10.0	9.2	157.86	16.0	47.9	135.3	116.3	18.96	7.135	
2,900.0	2,891.6	2,892.4	2,892.1	10.3	9.5	159.51	16.3	48.9	148.7	129.0	19.68	7.557	
3,000.0	2,990.6	2,991.5	2,991.1	10.7	9.9	160.76	16.8	50.2	162.2	141.8	20.38	7.957	
3,100.0	3,089.6	3,089.8	3,089.4	11.1	10.2	161.69	17.4	51.8	175.9	154.8	21.09	8.339	
3,200.0	3,188.6	3,188.4	3,188.0	11.5	10.5	162.28	18.2	54.3	190.0	168.2	21.80	8.716	
3,300.0	3,287.7	3,287.2	3,286.8	11.9	10.9	162.73	18.9	56.9	204.2	181.7	22.51	9.072	
3,400.0	3,386.7	3,385.5	3,385.0	12.3	11.2	163.18	19.4	59.5	218.6	195.4	23.22	9.416	
3,500.0	3,485.7	3,482.1	3,481.6	12.7	11.6	163.74	19.0	61.8	233.7	209.8	23.92	9.771	
3,600.0	3,584.8	3,579.7	3,579.2	13.1	11.9	164.36	17.7	64.1	249.5	224.9	24.62	10.135	
3,700.0	3,683.8	3,678.6	3,678.0	13.5	12.3	164.97	16.0	66.3	265.6	240.3	25.34	10.482	
3,800.0	3,782.8	3,777.5	3,776.9	13.9	12.6	165.48	14.5	68.7	281.6	255.5	26.05	10.808	
3,900.0	3,881.8	3,876.4	3,875.8	14.3	13.0	165.90	13.1	71.1	297.6	270.8	26.77	11.115	
4,000.0	3,980.9	3,979.7	3,979.1	14.7	13.4	166.38	12.2	72.8	312.7	285.2	27.51	11.367	
4,100.0	4,079.9	4,082.4	4,081.7	15.2	13.7	166.93	12.1	73.1	326.5	298.3	28.24	11.560	
4,200.0	4,178.9	4,182.2	4,181.5	15.6	14.1	167.44	12.5	73.1	339.7	310.8	28.95	11.734	
4,300.0	4,277.9	4,281.3	4,280.6	16.0	14.4	167.92	12.9	72.9	352.9	323.2	29.66	11.899	
4,400.0	4,377.0	4,380.7	4,380.0	16.4	14.7	168.38	13.3	72.6	366.0	335.7	30.36	12.055	
4,500.0	4,476.0	4,480.3	4,479.6	16.8	15.1	168.84	13.7	72.1	379.1	348.0	31.07	12.201	
4,600.0	4,575.0	4,579.9	4,579.2	17.2	15.4	169.29	14.1	71.5	392.0	360.3	31.78	12.337	
4,625.7	4,600.5	4,605.5	4,604.8	17.3	15.5	169.41	14.3	71.3	395.3	363.4	31.96	12.370	
4,700.0	4,674.1	4,679.7	4,679.0	17.6	15.8	169.73	14.7	70.6	404.2	371.7	32.49	12.441	
4,800.0	4,773.6	4,779.7	4,779.0	18.0	16.1	170.09	15.3	69.7	413.7	380.5	33.19	12.464	
4,900.0	4,873.2	4,879.8	4,879.1	18.4	16.4	170.34	16.1	68.9	420.6	386.7	33.90	12.407	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #503H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 333-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	4,980.8	4,980.1	18.7	16.8	170.51	17.1	68.1	424.7	390.1	34.61	12.272	
5,100.0	5,073.0	5,081.1	5,080.4	19.1	17.1	170.64	18.1	67.0	426.1	390.8	35.31	12.067	
5,159.0	5,132.1	5,141.1	5,140.3	19.3	17.3	152.05	18.8	66.3	425.6	389.9	35.73	11.912	
5,200.0	5,173.0	5,182.8	5,182.1	19.4	17.5	152.07	19.4	65.8	424.9	388.9	36.02	11.796	
5,300.0	5,273.0	5,281.3	5,280.6	19.8	17.8	152.13	20.7	64.6	423.2	386.5	36.71	11.528	
5,400.0	5,373.0	5,382.6	5,381.8	20.1	18.2	152.23	21.9	63.2	421.5	384.1	37.42	11.266	
5,500.0	5,473.0	5,482.6	5,481.8	20.4	18.5	152.31	23.2	61.8	419.7	381.6	38.11	11.012	
5,600.0	5,573.0	5,582.3	5,581.5	20.8	18.9	152.38	24.5	60.5	417.9	379.1	38.81	10.766	
5,700.0	5,673.0	5,680.3	5,679.5	21.1	19.2	152.46	25.6	59.4	416.4	376.9	39.50	10.541	
5,800.0	5,773.0	5,780.3	5,779.5	21.4	19.6	152.54	26.4	58.2	415.1	374.9	40.20	10.325	
5,900.0	5,873.0	5,880.2	5,879.3	21.8	19.9	152.58	27.4	57.4	413.8	372.9	40.91	10.117	
6,000.0	5,973.0	5,980.4	5,979.5	22.1	20.3	152.63	28.4	56.5	412.6	371.0	41.61	9.916	
6,100.0	6,073.0	6,081.0	6,080.1	22.5	20.6	152.69	29.4	55.5	411.2	368.9	42.32	9.718	
6,200.0	6,173.0	6,196.8	6,195.9	22.8	21.0	152.76	32.2	53.4	408.3	365.2	43.08	9.479	
6,300.0	6,273.0	6,316.9	6,315.5	23.1	21.4	152.81	40.7	48.7	400.2	356.4	43.75	9.146	
6,400.0	6,373.0	6,420.2	6,418.2	23.5	21.8	153.04	50.1	42.1	389.1	344.7	44.43	8.757	
6,500.0	6,473.0	6,522.4	6,519.7	23.8	22.2	153.35	59.5	35.0	377.8	332.7	45.12	8.374	
6,600.0	6,573.0	6,628.6	6,625.0	24.2	22.5	153.32	72.2	28.9	364.5	318.7	45.76	7.966	
6,700.0	6,673.0	6,720.7	6,716.2	24.5	22.9	152.94	84.5	25.3	351.0	304.4	46.52	7.544	
6,800.0	6,773.0	6,807.6	6,802.6	24.9	23.2	152.37	93.7	24.4	341.0	293.7	47.29	7.211	
6,900.0	6,873.0	6,896.6	6,891.3	25.2	23.5	151.80	100.7	24.5	334.1	286.1	48.00	6.959	
7,000.0	6,973.0	6,985.4	6,980.1	25.6	23.8	151.26	104.7	25.9	330.8	282.2	48.67	6.797	
7,100.0	7,073.0	7,080.0	7,074.6	25.9	24.1	150.76	106.9	28.0	329.9	280.5	49.34	6.686	
7,108.6	7,081.6	7,088.1	7,082.7	25.9	24.2	150.72	107.0	28.2	329.9	280.5	49.40	6.678	
7,200.0	7,173.0	7,175.4	7,170.0	26.3	24.5	150.43	107.3	29.9	330.5	280.5	50.01	6.610	
7,300.0	7,273.0	7,273.5	7,268.1	26.6	24.8	150.22	106.5	31.7	332.2	281.5	50.69	6.553	
7,400.0	7,373.0	7,373.5	7,368.0	26.9	25.1	150.04	105.5	33.6	334.0	282.6	51.39	6.499	
7,500.0	7,473.0	7,473.4	7,467.9	27.3	25.5	149.88	104.3	35.3	335.8	283.7	52.09	6.447	
7,600.0	7,573.0	7,573.1	7,567.6	27.6	25.8	149.72	103.2	37.1	337.7	284.9	52.79	6.397	
7,700.0	7,673.0	7,672.9	7,667.3	28.0	26.2	149.56	101.9	38.9	339.7	286.2	53.49	6.351	
7,800.0	7,773.0	7,773.1	7,767.5	28.3	26.5	149.39	100.7	40.8	341.7	287.5	54.20	6.304	
7,900.0	7,873.0	7,872.9	7,867.3	28.7	26.9	149.21	99.6	42.7	343.6	288.7	54.90	6.259	
8,000.0	7,973.0	7,976.5	7,970.8	29.0	27.2	149.05	98.6	44.3	345.3	289.6	55.64	6.205	
8,100.0	8,073.0	8,078.9	8,073.3	29.4	27.6	149.01	98.3	44.9	345.8	289.4	56.37	6.134	
8,200.0	8,173.0	8,178.9	8,173.3	29.7	27.9	149.03	98.1	44.8	346.0	288.9	57.07	6.063	
8,300.0	8,273.0	8,278.5	8,272.9	30.1	28.3	149.05	97.8	44.9	346.3	288.5	57.77	5.995	
8,400.0	8,373.0	8,378.3	8,372.6	30.4	28.6	149.07	97.4	45.0	346.7	288.2	58.47	5.930	
8,500.0	8,473.0	8,478.2	8,472.5	30.8	29.0	149.10	96.9	45.1	347.1	288.0	59.17	5.867	
8,600.0	8,573.0	8,577.0	8,571.4	31.1	29.3	149.12	96.2	45.3	347.8	288.0	59.86	5.810	
8,700.0	8,673.0	8,677.3	8,671.7	31.5	29.7	149.16	95.5	45.5	348.5	288.0	60.57	5.755	
8,800.0	8,773.0	8,777.3	8,771.7	31.8	30.0	149.24	94.6	45.4	349.3	288.0	61.27	5.700	
8,900.0	8,873.0	8,877.3	8,871.7	32.2	30.4	149.38	93.6	45.1	349.9	288.0	61.97	5.647	
9,000.0	8,973.0	8,976.3	8,970.7	32.5	30.7	149.67	92.0	43.9	350.7	288.1	62.67	5.597	
9,100.0	9,073.0	9,077.5	9,071.7	32.9	31.1	150.19	89.5	41.7	351.8	288.5	63.38	5.551	
9,200.0	9,173.0	9,179.4	9,173.6	33.2	31.4	150.57	88.2	39.7	352.0	287.9	64.10	5.491	
9,300.0	9,273.0	9,276.6	9,270.8	33.6	31.8	150.90	86.8	38.2	352.5	287.7	64.78	5.441	
9,400.0	9,373.0	9,377.2	9,371.4	33.9	32.1	151.18	85.0	37.2	353.6	288.1	65.48	5.399	
9,500.0	9,473.0	9,478.4	9,472.6	34.3	32.5	151.21	84.5	37.3	354.1	287.9	66.20	5.348	
9,600.0	9,573.0	9,580.5	9,574.7	34.6	32.8	151.14	84.5	37.8	354.3	287.4	66.92	5.294	
9,699.3	9,672.3	9,679.2	9,673.4	35.0	33.2	150.88	85.4	39.2	354.1	286.5	67.62	5.237	
9,700.0	9,673.0	9,679.9	9,674.1	35.0	33.2	150.87	85.4	39.2	354.1	286.5	67.63	5.236	
9,800.0	9,773.0	9,779.9	9,774.0	35.3	33.5	150.49	86.5	41.3	354.2	285.8	68.33	5.183	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #503H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 333-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.0	9,873.0	9,881.3	9,875.5	35.7	33.9	150.09	87.9	43.3	354.0	285.0	69.05	5.127	
10,000.0	9,973.0	9,981.7	9,975.8	36.0	34.2	149.71	89.4	45.2	353.6	283.8	69.76	5.068	
10,090.7	10,063.8	10,072.2	10,066.3	36.4	34.5	149.40	90.8	46.6	353.2	282.8	70.40	5.016	
10,100.0	10,073.0	10,076.8	10,070.8	36.4	34.6	149.39	90.7	46.7	353.2	282.8	70.43	5.015	
10,200.0	10,173.0	10,145.8	10,139.8	36.7	34.8	149.54	87.2	47.7	358.5	287.9	70.62	5.077	
10,300.0	10,273.0	10,216.2	10,209.4	37.1	35.0	150.19	76.8	49.0	372.1	301.7	70.43	5.283	
10,400.0	10,373.0	10,282.0	10,273.4	37.4	35.3	151.14	61.7	50.3	393.4	323.7	69.74	5.641	
10,500.0	10,473.0	10,350.0	10,337.4	37.8	35.5	152.55	38.9	51.6	423.6	354.7	68.94	6.145	
10,600.0	10,573.0	10,390.3	10,373.8	38.2	35.6	153.53	21.8	52.5	462.3	395.9	66.41	6.962	
10,700.0	10,673.0	10,444.0	10,420.0	38.5	35.8	154.90	-5.6	54.3	510.0	445.3	64.66	7.887	
10,800.0	10,773.0	10,478.1	10,447.7	38.9	35.9	155.81	-25.4	55.5	564.5	502.7	61.78	9.137	
10,900.0	10,873.0	10,517.7	10,478.3	39.2	36.0	156.93	-50.5	56.5	625.2	565.6	59.55	10.498	
11,000.0	10,973.0	10,538.0	10,493.3	39.6	36.1	157.51	-64.1	56.8	691.2	634.8	56.45	12.244	
11,024.0	10,997.0	10,538.0	10,493.3	39.7	36.1	157.51	-64.1	56.8	708.1	652.6	55.47	12.766	
11,050.0	11,023.0	10,566.3	10,513.3	39.7	36.2	-13.40	-84.2	57.1	725.2	669.0	56.13	12.919	
11,100.0	11,072.8	10,581.3	10,523.4	39.9	36.2	-12.08	-95.2	57.1	757.8	702.9	54.91	13.799	
11,150.0	11,122.0	10,596.5	10,533.3	40.0	36.3	-11.00	-106.8	57.2	788.3	734.7	53.65	14.695	
11,200.0	11,170.3	10,633.0	10,555.5	40.2	36.4	-9.72	-135.7	57.2	817.4	763.9	53.51	15.276	
11,250.0	11,217.2	10,633.0	10,555.5	40.3	36.4	-9.24	-135.7	57.2	842.9	791.6	51.26	16.441	
11,300.0	11,262.5	10,633.0	10,555.5	40.4	36.4	-8.81	-135.7	57.2	866.8	817.8	49.00	17.689	
11,350.0	11,305.7	10,633.0	10,555.5	40.5	36.4	-8.43	-135.7	57.2	889.3	842.5	46.74	19.025	
11,400.0	11,346.6	10,674.6	10,578.0	40.6	36.5	-7.64	-170.8	56.9	907.3	860.7	46.63	19.457	
11,450.0	11,384.8	10,690.4	10,585.6	40.6	36.6	-7.23	-184.6	56.7	924.0	878.8	45.14	20.468	
11,500.0	11,420.1	10,727.0	10,601.6	40.7	36.7	-6.66	-217.5	56.3	938.9	894.2	44.66	21.020	
11,550.0	11,452.2	10,727.0	10,601.6	40.8	36.7	-6.53	-217.5	56.3	949.9	907.5	42.40	22.403	
11,600.0	11,480.8	10,727.0	10,601.6	40.9	36.7	-6.42	-217.5	56.3	959.3	919.0	40.22	23.852	
11,650.0	11,505.7	10,756.3	10,612.4	40.9	36.8	-6.06	-244.6	55.6	965.6	926.2	39.38	24.519	
11,700.0	11,526.7	10,773.5	10,618.1	41.0	36.8	-5.84	-260.9	54.9	969.5	931.5	38.06	25.476	
11,750.0	11,543.8	10,790.6	10,623.1	41.1	36.9	-5.65	-277.2	54.1	970.8	934.0	36.79	26.385	
11,800.0	11,556.6	10,821.0	10,630.7	41.2	37.0	-5.33	-306.6	52.4	969.7	933.6	36.08	26.876	
11,850.0	11,565.2	10,821.0	10,630.7	41.2	37.0	-5.37	-306.6	52.4	965.5	931.1	34.42	28.053	
11,900.0	11,569.5	10,821.0	10,630.7	41.3	37.0	-5.43	-306.6	52.4	959.5	926.5	33.04	29.046	
11,924.0	11,570.0	10,850.0	10,636.2	41.4	37.1	-5.16	-335.0	50.7	954.8	921.6	33.18	28.779	
12,000.0	11,570.0	10,876.3	10,639.9	41.5	37.2	-5.17	-361.1	49.7	942.9	910.8	32.14	29.334	
12,100.0	11,570.0	10,915.0	10,643.1	41.8	37.3	-5.13	-399.6	49.1	933.5	902.0	31.50	29.638	
12,200.0	11,570.0	11,008.5	10,647.7	42.1	37.7	-4.95	-493.0	49.0	928.1	896.3	31.81	29.172	
12,292.2	11,570.0	11,091.9	10,651.4	42.5	38.0	-4.94	-576.4	49.0	923.8	891.6	32.20	28.691	
12,300.0	11,570.0	11,099.0	10,651.6	42.5	38.1	-4.94	-583.4	49.0	923.5	891.3	32.24	28.648	
12,400.0	11,570.0	11,193.1	10,654.9	42.9	38.6	-4.97	-677.5	49.9	920.1	887.3	32.80	28.053	
12,500.0	11,570.0	11,293.9	10,658.4	43.4	39.1	-5.06	-778.2	51.5	916.7	883.2	33.48	27.382	
12,600.0	11,570.0	11,390.3	10,661.8	44.0	39.7	-5.31	-874.5	55.9	913.6	879.4	34.24	26.682	
12,700.0	11,570.0	11,494.1	10,665.5	44.6	40.5	-5.69	-978.0	62.2	910.6	875.4	35.14	25.916	
12,800.0	11,570.0	11,596.5	10,669.5	45.3	41.2	-5.84	-1,080.3	64.7	906.9	870.9	36.02	25.177	
12,900.0	11,570.0	11,693.0	10,672.5	46.0	42.0	-5.69	-1,176.6	62.6	903.5	866.6	36.84	24.526	
13,000.0	11,570.0	11,788.4	10,674.8	46.7	42.8	-5.31	-1,271.8	56.9	900.5	862.8	37.64	23.925	
13,100.0	11,570.0	11,882.9	10,676.2	47.6	43.6	-4.69	-1,365.9	47.7	898.1	859.7	38.43	23.371	
13,200.0	11,570.0	11,972.2	10,676.8	48.4	44.4	-4.07	-1,454.7	38.3	896.6	857.3	39.27	22.832	
13,252.4	11,570.0	12,017.6	10,676.7	48.9	44.8	-3.80	-1,500.0	34.4	896.4	856.6	39.75	22.552	
13,300.0	11,570.0	12,061.0	10,676.4	49.3	45.2	-3.63	-1,543.3	32.0	896.5	856.3	40.21	22.294	
13,400.0	11,570.0	12,157.0	10,675.6	50.2	46.2	-3.63	-1,639.2	32.7	897.3	856.0	41.29	21.734	
13,500.0	11,570.0	12,258.4	10,675.2	51.2	47.2	-4.08	-1,740.3	40.3	898.2	855.7	42.48	21.142	
13,600.0	11,570.0	12,360.6	10,675.2	52.2	48.3	-4.68	-1,842.0	50.4	898.9	855.2	43.77	20.539	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #503H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 333-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,700.0	11,570.0	12,457.1	10,675.0	53.2	49.4	-5.03	-1,938.4	56.4	899.6	854.6	45.03	19.980	
13,800.0	11,570.0	12,593.9	10,675.9	54.3	50.9	-5.22	-2,075.1	60.1	899.3	853.0	46.34	19.408	
13,900.0	11,570.0	12,689.5	10,678.6	55.4	52.0	-5.36	-2,170.6	62.6	896.7	849.1	47.59	18.844	
14,000.0	11,570.0	12,788.3	10,681.2	56.5	53.2	-5.48	-2,269.3	64.8	894.2	845.3	48.87	18.299	
14,100.0	11,570.0	12,888.2	10,683.7	57.7	54.5	-5.57	-2,369.2	66.6	891.8	841.6	50.16	17.781	
14,200.0	11,570.0	12,989.9	10,686.5	58.9	55.7	-5.66	-2,470.9	68.4	889.2	837.7	51.47	17.275	
14,300.0	11,570.0	13,089.4	10,689.3	60.1	57.0	-5.77	-2,570.3	70.3	886.6	833.8	52.81	16.789	
14,400.0	11,570.0	13,186.8	10,691.8	61.3	58.2	-5.83	-2,667.6	71.6	884.1	829.9	54.14	16.330	
14,500.0	11,570.0	13,284.3	10,694.0	62.5	59.5	-5.95	-2,765.1	73.8	882.0	826.5	55.51	15.890	
14,600.0	11,570.0	13,380.1	10,696.0	63.8	60.8	-6.06	-2,860.8	75.8	880.1	823.2	56.89	15.471	
14,700.0	11,570.0	13,479.3	10,697.8	65.0	62.1	-6.42	-2,959.8	81.8	878.9	820.5	58.39	15.051	
14,800.0	11,570.0	13,581.9	10,699.7	66.3	63.5	-6.52	-3,062.4	83.7	877.2	817.4	59.81	14.665	
14,900.0	11,570.0	13,673.6	10,701.2	67.6	64.7	-6.65	-3,154.0	86.1	875.8	814.6	61.25	14.300	
15,000.0	11,570.0	13,772.7	10,702.3	69.0	66.1	-7.03	-3,253.0	92.4	875.4	812.5	62.82	13.935	
15,100.0	11,570.0	13,876.4	10,703.4	70.3	67.5	-7.12	-3,356.6	94.3	874.4	810.2	64.28	13.604	
15,200.0	11,570.0	13,976.2	10,704.2	71.7	68.9	-6.93	-3,456.4	91.9	873.4	807.8	65.60	13.313	
15,300.0	11,570.0	14,068.5	10,704.4	73.0	70.2	-6.73	-3,548.6	89.3	872.7	805.8	66.92	13.041	
15,313.8	11,570.0	14,081.0	10,704.4	73.2	70.4	-6.70	-3,561.1	88.8	872.7	805.6	67.10	13.005	
15,400.0	11,570.0	14,159.3	10,703.6	74.4	71.5	-6.49	-3,639.3	86.2	873.1	804.8	68.23	12.796	
15,500.0	11,570.0	14,259.3	10,702.3	75.8	72.9	-6.30	-3,739.4	84.1	874.1	804.5	69.58	12.563	
15,600.0	11,570.0	14,379.2	10,702.2	77.2	74.6	-6.17	-3,859.2	82.8	874.1	803.1	70.98	12.315	
15,700.0	11,570.0	14,476.5	10,703.1	78.6	76.0	-6.06	-3,956.6	81.5	872.9	800.5	72.37	12.062	
15,800.0	11,570.0	14,574.5	10,703.8	80.0	77.5	-6.01	-4,054.5	81.3	872.1	798.3	73.80	11.818	
15,900.0	11,570.0	14,685.5	10,705.6	81.4	79.1	-5.89	-4,165.5	79.8	870.2	795.0	75.21	11.570	
16,000.0	11,570.0	14,781.5	10,706.8	82.9	80.5	-5.72	-4,261.4	77.7	868.7	792.1	76.59	11.341	
16,100.0	11,570.0	14,894.6	10,709.3	84.3	82.2	-5.47	-4,374.5	74.4	866.2	788.2	77.96	11.111	
16,200.0	11,570.0	14,996.8	10,712.3	85.8	83.7	-5.16	-4,476.5	69.9	862.8	783.5	79.30	10.881	
16,300.0	11,570.0	15,093.3	10,714.9	87.2	85.1	-4.80	-4,572.9	64.9	859.6	779.0	80.62	10.663	
16,400.0	11,570.0	15,185.9	10,716.8	88.7	86.5	-4.43	-4,665.3	59.7	857.0	775.1	81.94	10.459	
16,500.0	11,570.0	15,277.1	10,717.9	90.2	87.8	-4.11	-4,756.4	55.4	855.5	772.2	83.29	10.271	
16,600.0	11,570.0	15,370.5	10,718.2	91.6	89.2	-3.88	-4,849.7	52.4	854.9	770.2	84.68	10.095	
16,700.0	11,570.0	15,468.6	10,718.2	93.1	90.7	-3.81	-4,947.9	52.0	854.8	768.6	86.14	9.923	
16,800.0	11,570.0	15,568.7	10,718.3	94.6	92.3	-3.89	-5,047.9	53.7	854.7	767.1	87.65	9.751	
16,835.9	11,570.0	15,604.5	10,718.4	95.2	92.8	-3.94	-5,083.7	54.7	854.7	766.5	88.21	9.690	
16,900.0	11,570.0	15,662.6	10,718.3	96.1	93.7	-4.06	-5,141.8	56.9	854.9	765.7	89.20	9.584	
17,000.0	11,570.0	15,759.4	10,717.7	97.6	95.2	-4.35	-5,238.5	61.8	855.9	765.1	90.81	9.426	
17,100.0	11,570.0	15,857.5	10,717.1	99.1	96.7	-4.80	-5,336.2	69.2	857.1	764.6	92.50	9.265	
17,200.0	11,570.0	15,955.0	10,716.5	100.6	98.2	-5.42	-5,433.2	79.1	858.5	764.2	94.31	9.103	
17,300.0	11,570.0	16,065.1	10,716.1	102.1	99.9	-6.04	-5,542.9	89.1	859.8	763.6	96.19	8.939	
17,400.0	11,570.0	16,165.6	10,716.1	103.7	101.5	-6.33	-5,643.3	94.0	860.2	762.4	97.89	8.788	
17,500.0	11,570.0	16,268.2	10,716.2	105.2	103.1	-6.57	-5,745.8	98.3	860.6	761.0	99.57	8.642	
17,600.0	11,570.0	16,369.8	10,716.4	106.7	104.6	-6.79	-5,847.3	102.1	860.7	759.4	101.25	8.501	
17,700.0	11,570.0	16,474.7	10,717.1	108.3	106.3	-6.96	-5,952.1	105.3	860.3	757.4	102.91	8.360	
17,800.0	11,570.0	16,574.4	10,717.6	109.8	107.8	-6.93	-6,051.8	105.4	859.8	755.4	104.43	8.233	
17,900.0	11,570.0	16,674.4	10,717.9	111.3	109.4	-6.80	-6,151.8	103.9	859.2	753.4	105.87	8.116	
18,000.0	11,570.0	16,774.5	10,718.2	112.9	110.9	-6.66	-6,251.9	102.4	858.7	751.4	107.31	8.002	
18,100.0	11,570.0	16,874.5	10,718.5	114.4	112.5	-6.54	-6,351.9	101.1	858.2	749.4	108.76	7.891	
18,200.0	11,570.0	16,977.0	10,718.9	116.0	114.1	-6.39	-6,454.4	99.4	857.6	747.4	110.19	7.782	
18,234.9	11,570.0	17,013.6	10,719.1	116.4	114.7	-6.33	-6,491.0	98.7	857.2	746.7	110.57	7.753	
18,307.1	11,570.0	17,003.0	10,719.1	117.4	114.5	-6.35	-6,480.4	98.9	860.5	749.5	110.98	7.754	
18,307.7	11,570.0	17,003.0	10,719.1	117.4	114.5	-6.35	-6,480.4	98.9	860.5	749.6	110.98	7.754	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #504H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 364-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	2.0	2.0	0.0	0.0	89.62	0.4	59.8	59.8				
100.0	100.0	102.0	102.0	0.1	0.2	89.81	0.2	59.8	59.8	59.5	0.30	201.098	
200.0	200.0	202.1	202.1	0.5	0.3	90.36	-0.4	59.7	59.7	58.9	0.82	72.681	
300.0	300.0	302.1	302.1	0.8	0.5	91.29	-1.3	59.6	59.6	58.3	1.35	44.286	
400.0	400.0	402.1	402.1	1.2	0.7	92.56	-2.7	59.4	59.5	57.5	1.94	30.599	
500.0	500.0	502.0	502.0	1.6	1.1	93.97	-4.1	59.3	59.4	56.8	2.66	22.334	
600.0	600.0	602.1	602.1	1.9	1.5	95.22	-5.4	59.2	59.4	56.0	3.38	17.575	
700.0	700.0	702.1	702.0	2.3	1.8	96.36	-6.6	58.9	59.3	55.2	4.10	14.473	
800.0	800.0	802.2	802.1	2.6	2.2	97.65	-7.9	58.6	59.2	54.3	4.82	12.285	
900.0	900.0	902.1	902.1	3.0	2.5	98.75	-9.0	58.3	59.0	53.5	5.53	10.663	
942.8	942.8	944.8	944.8	3.1	2.7	99.13	-9.4	58.2	59.0	53.1	5.84	10.100	
1,000.0	1,000.0	1,002.1	1,002.0	3.4	2.9	99.60	-9.8	58.2	59.0	52.7	6.25	9.439	
1,100.0	1,100.0	1,102.2	1,102.1	3.7	3.3	100.40	-10.6	57.9	58.9	51.9	6.97	8.447	
1,200.0	1,200.0	1,202.2	1,202.1	4.1	3.6	100.98	-11.2	57.5	58.6	50.9	7.68	7.621	
1,300.0	1,300.0	1,302.1	1,302.0	4.4	4.0	101.59	-11.7	57.2	58.4	50.0	8.40	6.955	
1,400.0	1,400.0	1,402.2	1,402.1	4.8	4.3	102.01	-12.1	57.0	58.3	49.2	9.11	6.398	
1,500.0	1,500.0	1,502.2	1,502.2	5.1	4.7	102.31	-12.4	56.7	58.0	48.2	9.83	5.902	
1,526.6	1,526.6	1,528.8	1,528.7	5.2	4.8	121.09	-12.4	56.6	58.0	47.9	10.02	5.786	CC
1,600.0	1,600.0	1,602.2	1,602.1	5.5	5.0	121.87	-12.5	56.4	58.3	47.7	10.53	5.532	ES
1,700.0	1,700.0	1,702.1	1,702.1	5.9	5.4	123.91	-12.4	56.3	59.5	48.3	11.23	5.300	
1,800.0	1,799.9	1,801.5	1,801.5	6.2	5.7	126.78	-12.0	56.7	62.4	50.4	11.92	5.233	SF
1,900.0	1,899.7	1,901.4	1,901.3	6.6	6.0	130.27	-11.5	57.6	66.8	54.2	12.61	5.296	
2,000.0	1,999.4	2,001.1	2,001.0	6.9	6.4	134.19	-10.8	58.5	72.6	59.3	13.30	5.458	
2,100.0	2,098.9	2,100.7	2,100.6	7.3	6.7	138.28	-10.0	59.3	80.0	66.0	13.99	5.714	
2,200.0	2,198.3	2,200.2	2,200.1	7.7	7.0	142.19	-9.0	60.4	89.0	74.3	14.69	6.060	
2,300.0	2,297.4	2,299.5	2,299.4	8.0	7.4	145.68	-7.6	61.5	99.7	84.3	15.39	6.478	
2,400.0	2,396.4	2,398.7	2,398.5	8.4	7.7	148.62	-5.9	62.8	111.4	95.3	16.09	6.925	
2,500.0	2,495.5	2,497.9	2,497.7	8.8	8.1	150.92	-4.1	64.2	123.3	106.5	16.79	7.345	
2,600.0	2,594.5	2,597.1	2,596.9	9.2	8.4	152.68	-2.1	65.8	135.3	117.8	17.49	7.737	
2,700.0	2,693.5	2,695.9	2,695.7	9.6	8.7	154.04	0.1	67.6	147.6	129.4	18.20	8.110	
2,800.0	2,792.5	2,794.4	2,794.1	10.0	9.1	155.03	2.3	70.0	160.2	141.3	18.90	8.477	
2,900.0	2,891.6	2,893.2	2,892.8	10.3	9.4	155.69	4.7	73.1	173.3	153.7	19.61	8.837	
3,000.0	2,990.6	2,992.0	2,991.5	10.7	9.8	156.10	7.3	76.6	186.5	166.2	20.32	9.179	
3,100.0	3,089.6	3,090.5	3,089.9	11.1	10.1	156.31	10.0	80.6	200.0	178.9	21.03	9.509	
3,200.0	3,188.6	3,189.6	3,188.9	11.5	10.5	156.39	12.8	85.1	213.6	191.9	21.74	9.824	
3,300.0	3,287.7	3,289.4	3,288.5	11.9	10.8	156.45	15.9	89.5	227.0	204.6	22.47	10.106	
3,400.0	3,386.7	3,388.0	3,387.0	12.3	11.2	156.69	18.5	93.2	240.4	217.2	23.18	10.370	
3,500.0	3,485.7	3,490.8	3,489.8	12.7	11.5	157.54	19.8	94.7	253.2	229.3	23.92	10.589	
3,600.0	3,584.8	3,597.1	3,596.1	13.1	11.9	158.88	21.1	92.8	264.1	239.4	24.65	10.713	
3,700.0	3,683.8	3,706.5	3,705.2	13.5	12.3	160.94	23.1	85.7	271.7	246.4	25.37	10.712	
3,800.0	3,782.8	3,813.9	3,811.9	13.9	12.6	163.75	25.1	73.1	276.5	250.5	26.06	10.611	
3,900.0	3,881.8	3,920.7	3,917.2	14.3	13.0	167.20	27.7	55.9	279.1	252.4	26.75	10.436	
4,000.0	3,980.9	4,022.7	4,017.0	14.7	13.4	171.17	30.2	35.2	280.4	253.0	27.46	10.215	
4,100.0	4,079.9	4,122.4	4,114.2	15.2	13.7	175.34	32.5	13.2	282.5	254.3	28.19	10.021	
4,200.0	4,178.9	4,221.2	4,210.6	15.6	14.1	179.33	35.5	-8.5	285.4	256.5	28.94	9.863	
4,300.0	4,277.9	4,318.5	4,305.5	16.0	14.5	-176.84	38.5	-29.8	289.7	260.0	29.70	9.753	
4,400.0	4,377.0	4,415.2	4,399.8	16.4	14.8	-173.12	41.0	-51.2	295.6	265.2	30.47	9.701	
4,500.0	4,476.0	4,511.7	4,493.8	16.8	15.2	-169.50	43.1	-72.7	303.3	272.1	31.25	9.705	
4,600.0	4,575.0	4,609.4	4,589.1	17.2	15.6	-166.08	45.0	-94.2	312.5	280.4	32.04	9.752	
4,625.7	4,600.5	4,634.8	4,613.9	17.3	15.7	-165.25	45.5	-99.6	315.0	282.7	32.24	9.769	
4,700.0	4,674.1	4,709.4	4,686.8	17.6	16.0	-162.94	47.3	-115.2	321.7	288.8	32.84	9.794	
4,800.0	4,773.6	4,820.1	4,795.0	18.0	16.5	-159.62	52.2	-137.9	327.3	293.6	33.70	9.712	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #504H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 364-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.0	4,873.2	4,923.7	4,896.2	18.4	16.9	-156.39	59.6	-159.1	328.7	294.2	34.53	9.520	
5,000.0	4,973.1	5,026.3	4,996.2	18.7	17.3	-152.93	68.8	-180.3	327.1	291.7	35.37	9.249	
5,100.0	5,073.0	5,124.2	5,091.5	19.1	17.7	-149.34	78.0	-200.5	323.8	287.6	36.19	8.947	
5,159.0	5,132.1	5,181.8	5,147.6	19.3	18.0	-165.74	83.5	-212.3	321.5	284.8	36.68	8.764	
5,200.0	5,173.0	5,222.1	5,186.9	19.4	18.2	-164.14	87.3	-220.5	319.8	282.8	37.02	8.640	
5,300.0	5,273.0	5,320.3	5,282.5	19.8	18.6	-160.15	96.9	-240.7	316.8	278.9	37.84	8.371	
5,400.0	5,373.0	5,417.9	5,377.5	20.1	19.0	-156.11	106.6	-260.8	315.2	276.5	38.66	8.153	
5,447.4	5,420.5	5,464.1	5,422.5	20.2	19.2	-154.18	111.2	-270.4	315.0	275.9	39.04	8.069	
5,500.0	5,473.0	5,515.1	5,472.1	20.4	19.5	-152.05	116.3	-280.9	315.2	275.8	39.46	7.989	
5,600.0	5,573.0	5,612.7	5,567.1	20.8	19.9	-148.00	126.0	-301.1	317.0	276.8	40.24	7.877	
5,700.0	5,673.0	5,710.7	5,662.4	21.1	20.3	-143.99	136.0	-321.3	320.2	279.2	41.02	7.806	
5,800.0	5,773.0	5,807.5	5,756.7	21.4	20.8	-140.15	145.7	-341.1	325.0	283.2	41.76	7.782	
5,900.0	5,873.0	5,903.9	5,850.7	21.8	21.2	-136.54	154.8	-360.6	331.5	289.0	42.48	7.804	
6,000.0	5,973.0	6,000.4	5,945.0	22.1	21.6	-133.26	162.9	-379.5	339.6	296.4	43.18	7.865	
6,100.0	6,073.0	6,097.4	6,039.9	22.5	22.1	-130.24	170.4	-398.3	349.1	305.2	43.87	7.957	
6,200.0	6,173.0	6,195.4	6,135.7	22.8	22.5	-127.38	177.8	-417.2	359.6	315.0	44.56	8.069	
6,300.0	6,273.0	6,293.6	6,231.8	23.1	23.0	-124.67	185.2	-436.1	370.9	325.6	45.25	8.196	
6,400.0	6,373.0	6,387.4	6,323.6	23.5	23.4	-122.32	191.6	-454.3	383.4	337.6	45.87	8.360	
6,500.0	6,473.0	6,479.1	6,413.4	23.8	23.8	-120.33	196.2	-472.5	397.9	351.5	46.43	8.569	
6,600.0	6,573.0	6,574.2	6,506.6	24.2	24.2	-118.72	198.6	-491.2	414.0	366.9	47.06	8.797	
6,700.0	6,673.0	6,669.2	6,599.8	24.5	24.7	-117.57	198.3	-509.4	431.0	383.3	47.68	9.039	
6,800.0	6,773.0	6,769.3	6,698.1	24.9	25.1	-116.60	197.0	-528.1	448.3	399.9	48.40	9.263	
6,900.0	6,873.0	6,856.3	6,783.4	25.2	25.5	-115.83	195.3	-545.1	466.7	417.8	48.87	9.551	
7,000.0	6,973.0	6,952.4	6,877.4	25.6	25.9	-115.06	192.8	-565.0	486.7	437.1	49.52	9.828	
7,100.0	7,073.0	7,053.4	6,976.3	25.9	26.4	-114.38	189.7	-585.7	506.5	456.2	50.27	10.075	
7,200.0	7,173.0	7,152.3	7,073.2	26.3	26.8	-113.82	186.4	-605.2	525.9	474.9	50.98	10.317	
7,300.0	7,273.0	7,242.5	7,161.4	26.6	27.2	-113.33	183.2	-623.6	546.1	494.5	51.52	10.599	
7,400.0	7,373.0	7,339.4	7,256.0	26.9	27.6	-112.80	180.0	-644.2	567.0	514.8	52.20	10.863	
7,500.0	7,473.0	7,439.2	7,353.5	27.3	28.1	-112.32	176.3	-665.2	587.8	534.9	52.93	11.106	
7,600.0	7,573.0	7,541.9	7,454.0	27.6	28.6	-111.94	172.1	-686.0	608.2	554.5	53.71	11.324	
7,700.0	7,673.0	7,643.5	7,553.6	28.0	29.0	-111.63	167.8	-705.5	627.5	573.0	54.46	11.522	
7,800.0	7,773.0	7,734.1	7,642.3	28.3	29.4	-111.32	164.3	-723.6	647.5	592.5	55.03	11.766	
7,900.0	7,873.0	7,830.9	7,737.0	28.7	29.9	-110.98	160.7	-743.6	668.1	612.4	55.71	11.992	
8,000.0	7,973.0	7,941.2	7,844.9	29.0	30.4	-110.60	156.8	-766.1	688.5	631.9	56.61	12.163	
8,100.0	8,073.0	8,084.3	7,986.0	29.4	31.0	-110.04	155.3	-789.6	704.3	646.5	57.86	12.173	
8,200.0	8,173.0	8,229.9	8,130.8	29.7	31.5	-109.48	157.2	-804.7	713.7	654.8	58.89	12.118	
8,300.0	8,273.0	8,366.0	8,266.7	30.1	32.0	-109.23	158.5	-810.3	717.2	657.5	59.69	12.016	
8,400.0	8,373.0	8,472.2	8,372.9	30.4	32.4	-109.20	158.7	-811.1	717.8	657.4	60.38	11.889	
8,500.0	8,473.0	8,572.3	8,473.0	30.8	32.7	-109.20	158.6	-811.3	718.1	657.0	61.06	11.760	
8,600.0	8,573.0	8,670.7	8,571.4	31.1	33.0	-109.21	158.3	-811.7	718.5	656.8	61.75	11.636	
8,700.0	8,673.0	8,770.0	8,670.7	31.5	33.3	-109.24	157.9	-812.1	719.0	656.6	62.43	11.517	
8,800.0	8,773.0	8,869.0	8,769.8	31.8	33.6	-109.29	157.0	-812.5	719.7	656.6	63.12	11.403	
8,900.0	8,873.0	8,967.4	8,868.2	32.2	33.9	-109.34	156.1	-813.1	720.6	656.8	63.80	11.294	
9,000.0	8,973.0	9,068.2	8,968.9	32.5	34.2	-109.37	155.4	-813.8	721.5	657.0	64.49	11.188	
9,100.0	9,073.0	9,169.5	9,070.2	32.9	34.6	-109.41	154.8	-814.3	722.2	657.0	65.18	11.080	
9,200.0	9,173.0	9,264.3	9,165.0	33.2	34.9	-109.45	154.0	-815.0	723.1	657.2	65.86	10.979	
9,300.0	9,273.0	9,357.0	9,257.6	33.6	35.2	-109.49	152.9	-816.5	725.1	658.5	66.54	10.897	
9,400.0	9,373.0	9,456.7	9,357.3	33.9	35.5	-109.58	151.0	-818.6	727.7	660.4	67.23	10.823	
9,500.0	9,473.0	9,555.9	9,456.5	34.3	35.8	-109.60	150.0	-820.6	730.0	662.0	67.93	10.746	
9,600.0	9,573.0	9,669.4	9,569.9	34.6	36.2	-109.49	150.5	-823.4	732.2	663.6	68.64	10.667	
9,700.0	9,673.0	9,779.3	9,679.8	35.0	36.6	-109.34	152.3	-823.8	731.9	662.6	69.33	10.558	
9,746.7	9,719.7	9,821.2	9,721.7	35.1	36.7	-109.30	152.9	-823.8	731.7	662.1	69.65	10.506	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #504H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 364-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,800.0	9,773.0	9,867.0	9,767.6	35.3	36.9	-109.26	153.3	-824.2	732.0	662.0	70.01	10.456	
9,900.0	9,873.0	9,957.4	9,857.9	35.7	37.2	-109.21	153.4	-825.9	733.7	663.1	70.69	10.379	
10,000.0	9,973.0	10,083.9	9,984.4	36.0	37.6	-109.17	153.5	-827.2	734.8	663.4	71.40	10.292	
10,100.0	10,073.0	10,193.8	10,094.3	36.4	37.9	-109.09	155.1	-825.5	732.8	660.8	72.06	10.170	
10,200.0	10,173.0	10,294.5	10,194.9	36.7	38.2	-109.13	155.6	-822.6	730.0	657.3	72.73	10.037	
10,300.0	10,273.0	10,381.2	10,280.6	37.1	38.4	-110.10	144.6	-816.8	727.9	654.5	73.44	9.912	
10,320.6	10,293.7	10,396.6	10,295.7	37.2	38.5	-110.38	141.3	-815.5	727.8	654.3	73.58	9.891	
10,400.0	10,373.0	10,454.3	10,350.8	37.4	38.6	-111.68	125.5	-810.3	729.1	655.0	74.10	9.839	
10,500.0	10,473.0	10,522.0	10,413.3	37.8	38.8	-113.71	100.3	-803.7	734.9	660.3	74.60	9.851	
10,600.0	10,573.0	10,577.8	10,462.5	38.2	38.9	-115.71	74.6	-798.1	746.5	671.7	74.76	9.985	
10,700.0	10,673.0	10,632.0	10,508.1	38.5	39.0	-117.86	45.8	-793.4	765.2	690.6	74.59	10.259	
10,800.0	10,773.0	10,667.2	10,536.3	38.9	39.0	-119.36	24.8	-790.8	791.4	717.7	73.71	10.736	
10,900.0	10,873.0	10,701.8	10,562.2	39.2	39.1	-120.93	2.1	-788.5	825.5	753.0	72.45	11.393	
11,000.0	10,973.0	10,726.0	10,579.4	39.6	39.1	-122.07	-14.9	-787.0	867.1	796.4	70.65	12.272	
11,024.0	10,997.0	10,726.0	10,579.4	39.7	39.1	-122.07	-14.9	-787.0	878.3	808.3	70.03	12.541	
11,050.0	11,023.0	10,751.8	10,596.9	39.7	39.1	63.19	-33.9	-785.6	890.1	820.0	70.04	12.708	
11,100.0	11,072.8	10,770.8	10,609.4	39.9	39.2	60.13	-48.0	-784.8	913.1	843.9	69.21	13.192	
11,150.0	11,122.0	10,790.5	10,622.3	40.0	39.2	57.29	-63.0	-784.2	935.5	867.1	68.37	13.682	
11,200.0	11,170.3	10,821.0	10,641.5	40.2	39.2	54.45	-86.7	-783.5	957.2	889.4	67.80	14.118	
11,250.0	11,217.2	10,821.0	10,641.5	40.3	39.2	52.63	-86.7	-783.5	977.8	911.5	66.34	14.739	
11,300.0	11,262.5	10,852.2	10,659.9	40.4	39.3	50.35	-111.9	-783.2	997.4	931.6	65.80	15.159	
11,350.0	11,305.7	10,852.2	10,659.9	40.5	39.3	48.83	-111.9	-783.2	1,015.9	951.6	64.36	15.786	
11,400.0	11,346.6	10,875.2	10,672.3	40.6	39.3	47.17	-131.2	-783.2	1,033.1	969.5	63.62	16.238	
11,450.0	11,384.8	10,890.8	10,680.1	40.6	39.3	45.81	-144.7	-783.3	1,049.1	986.4	62.72	16.727	
11,500.0	11,420.1	10,915.0	10,691.4	40.7	39.4	44.60	-166.1	-783.5	1,063.7	1,001.6	62.10	17.129	
11,550.0	11,452.2	10,915.0	10,691.4	40.8	39.4	43.66	-166.1	-783.5	1,076.6	1,015.7	60.94	17.668	
11,600.0	11,480.8	10,949.6	10,706.1	40.9	39.4	42.85	-197.4	-784.2	1,087.6	1,026.8	60.75	17.902	
11,650.0	11,505.7	10,973.4	10,715.5	40.9	39.4	42.27	-219.3	-784.9	1,096.6	1,036.2	60.39	18.159	
11,700.0	11,526.7	11,009.0	10,728.5	41.0	39.5	41.97	-252.4	-786.1	1,103.8	1,043.4	60.40	18.274	
11,750.0	11,543.8	11,009.0	10,728.5	41.1	39.5	41.64	-252.4	-786.1	1,108.7	1,049.0	59.76	18.554	
11,800.0	11,556.6	11,051.0	10,742.5	41.2	39.6	41.82	-292.0	-787.7	1,111.3	1,051.2	60.14	18.479	
11,850.0	11,565.2	11,078.6	10,750.9	41.2	39.6	42.10	-318.3	-788.8	1,111.8	1,051.5	60.34	18.426	
11,900.0	11,569.5	11,103.0	10,757.8	41.3	39.7	42.53	-341.6	-789.9	1,110.1	1,049.5	60.61	18.314	
11,924.0	11,570.0	11,103.0	10,757.8	41.4	39.7	42.63	-341.6	-789.9	1,108.7	1,048.1	60.61	18.294	
12,000.0	11,570.0	11,138.4	10,766.3	41.5	39.8	43.10	-375.9	-791.7	1,104.3	1,043.1	61.25	18.030	
12,100.0	11,570.0	11,198.0	10,775.6	41.8	39.9	43.74	-434.6	-796.1	1,102.8	1,040.5	62.24	17.719	
12,142.3	11,570.0	11,198.0	10,775.6	41.9	39.9	43.74	-434.6	-796.1	1,102.2	1,039.7	62.42	17.657	
12,200.0	11,570.0	11,239.7	10,779.3	42.1	40.1	44.05	-476.0	-798.8	1,102.8	1,039.7	63.02	17.499	
12,292.2	11,570.0	11,337.7	10,785.5	42.5	40.4	44.39	-573.8	-800.4	1,101.0	1,037.0	63.98	17.207	
12,300.0	11,570.0	11,344.0	10,785.7	42.5	40.4	44.40	-580.1	-800.4	1,100.8	1,036.7	64.05	17.186	
12,400.0	11,570.0	11,449.2	10,788.7	42.9	40.9	44.49	-685.3	-799.4	1,098.6	1,033.6	64.96	16.913	
12,500.0	11,570.0	11,559.2	10,793.6	43.4	41.4	44.66	-795.2	-798.3	1,095.1	1,029.1	66.04	16.584	
12,600.0	11,570.0	11,665.1	10,799.2	44.0	42.0	44.84	-900.9	-797.1	1,091.0	1,023.8	67.21	16.233	
12,700.0	11,570.0	11,765.8	10,804.2	44.6	42.7	44.97	-1,001.4	-794.9	1,086.3	1,017.9	68.40	15.881	
12,800.0	11,570.0	11,855.5	10,808.3	45.3	43.3	45.08	-1,091.0	-793.3	1,082.2	1,012.6	69.64	15.540	
12,900.0	11,570.0	11,945.6	10,811.4	46.0	44.0	45.18	-1,181.0	-792.1	1,079.3	1,008.3	70.94	15.214	
13,000.0	11,570.0	12,043.2	10,814.0	46.7	44.8	45.24	-1,278.6	-790.5	1,076.6	1,004.3	72.30	14.891	
13,100.0	11,570.0	12,139.0	10,815.7	47.6	45.6	45.25	-1,374.4	-788.7	1,074.5	1,000.8	73.69	14.580	
13,200.0	11,570.0	12,241.7	10,817.2	48.4	46.5	45.25	-1,477.1	-786.6	1,072.4	997.2	75.15	14.269	
13,300.0	11,570.0	12,350.0	10,818.8	49.3	47.5	45.21	-1,585.3	-783.4	1,069.7	993.0	76.65	13.955	
13,400.0	11,570.0	12,443.9	10,820.4	50.2	48.4	45.19	-1,679.2	-780.4	1,066.7	988.5	78.19	13.643	
13,500.0	11,570.0	12,524.5	10,821.4	51.2	49.2	45.18	-1,759.7	-778.9	1,064.9	985.2	79.77	13.350	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #504H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 364-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,531.0	11,570.0	12,548.1	10,821.5	51.5	49.4	45.19	-1,783.3	-778.9	1,064.8	984.6	80.28	13.264	
13,600.0	11,570.0	12,605.8	10,821.8	52.2	50.0	45.23	-1,841.0	-779.3	1,065.3	983.8	81.44	13.080	
13,700.0	11,570.0	12,702.7	10,822.2	53.2	51.1	45.33	-1,937.9	-781.1	1,066.7	983.5	83.25	12.814	
13,800.0	11,570.0	12,811.9	10,822.2	54.3	52.3	45.38	-2,047.1	-781.7	1,067.6	982.5	85.07	12.549	
13,900.0	11,570.0	12,919.3	10,822.4	55.4	53.5	45.41	-2,154.5	-781.6	1,067.7	980.8	86.92	12.285	
14,000.0	11,570.0	13,017.7	10,822.8	56.5	54.6	45.43	-2,252.9	-781.1	1,067.5	978.7	88.78	12.024	
14,009.7	11,570.0	13,026.8	10,822.8	56.6	54.7	45.43	-2,262.0	-781.0	1,067.5	978.5	88.96	11.999	
14,100.0	11,570.0	13,108.8	10,822.7	57.7	55.7	45.44	-2,344.0	-780.8	1,067.8	977.1	90.66	11.779	
14,200.0	11,570.0	13,192.7	10,822.8	58.9	56.7	45.50	-2,427.9	-782.1	1,069.2	976.6	92.61	11.546	
14,300.0	11,570.0	13,283.1	10,822.9	60.1	57.8	45.65	-2,518.2	-785.4	1,072.2	977.5	94.68	11.325	
14,400.0	11,570.0	13,387.6	10,823.7	61.3	59.1	45.88	-2,622.6	-790.1	1,075.3	978.4	96.90	11.096	
14,500.0	11,570.0	13,490.5	10,823.9	62.5	60.4	46.03	-2,725.5	-793.4	1,077.8	978.7	99.09	10.878	
14,600.0	11,570.0	13,589.1	10,824.2	63.8	61.6	46.18	-2,824.0	-796.5	1,080.4	979.1	101.28	10.667	
14,700.0	11,570.0	13,693.2	10,824.4	65.0	63.0	46.33	-2,928.1	-799.8	1,082.9	979.4	103.53	10.459	
14,800.0	11,570.0	13,792.6	10,824.5	66.3	64.3	46.45	-3,027.5	-802.3	1,085.1	979.4	105.76	10.261	
14,900.0	11,570.0	13,912.7	10,824.0	67.6	65.9	46.50	-3,147.5	-803.5	1,086.6	978.6	107.99	10.062	
15,000.0	11,570.0	14,024.8	10,823.6	69.0	67.4	46.47	-3,259.6	-802.6	1,086.7	976.5	110.14	9.866	
15,100.0	11,570.0	14,133.0	10,824.1	70.3	68.9	46.44	-3,367.8	-800.5	1,085.4	973.1	112.29	9.666	
15,200.0	11,570.0	14,224.8	10,825.5	71.7	70.1	46.49	-3,459.6	-799.9	1,084.2	969.7	114.54	9.466	
15,300.0	11,570.0	14,321.2	10,826.7	73.0	71.5	46.57	-3,556.0	-800.1	1,084.0	967.1	116.84	9.277	
15,400.0	11,570.0	14,425.0	10,827.1	74.4	72.9	46.57	-3,659.8	-799.1	1,083.4	964.3	119.08	9.098	
15,500.0	11,570.0	14,531.7	10,827.8	75.8	74.4	46.57	-3,766.5	-797.8	1,082.5	961.2	121.34	8.921	
15,600.0	11,570.0	14,622.2	10,827.8	77.2	75.7	46.52	-3,856.9	-796.0	1,081.5	957.9	123.54	8.754	
15,700.0	11,570.0	14,724.7	10,828.3	78.6	77.1	46.54	-3,959.4	-795.4	1,081.2	955.3	125.84	8.592	
15,800.0	11,570.0	14,824.0	10,828.8	80.0	78.6	46.54	-4,058.7	-794.4	1,080.5	952.4	128.14	8.432	
15,852.9	11,570.0	14,870.6	10,828.8	80.8	79.2	46.53	-4,105.4	-793.8	1,080.3	951.0	129.34	8.353	
15,900.0	11,570.0	14,910.9	10,828.6	81.4	79.8	46.52	-4,145.6	-793.6	1,080.5	950.1	130.40	8.286	
16,000.0	11,570.0	15,026.8	10,826.9	82.9	81.5	46.41	-4,261.4	-791.6	1,080.7	948.1	132.59	8.151	
16,100.0	11,570.0	15,117.8	10,825.1	84.3	82.8	46.26	-4,352.4	-788.9	1,080.3	945.6	134.70	8.020	
16,149.7	11,570.0	15,168.7	10,824.3	85.0	83.6	46.21	-4,403.3	-787.8	1,080.3	944.5	135.79	7.956	
16,200.0	11,570.0	15,220.6	10,824.1	85.8	84.3	46.18	-4,455.2	-787.2	1,080.2	943.3	136.93	7.888	
16,300.0	11,570.0	15,324.6	10,823.7	87.2	85.9	46.14	-4,559.2	-785.7	1,079.9	940.7	139.22	7.757	
16,400.0	11,570.0	15,437.4	10,824.1	88.7	87.5	46.08	-4,672.0	-783.1	1,078.3	936.8	141.49	7.621	
16,500.0	11,570.0	15,531.7	10,825.1	90.2	88.9	46.08	-4,766.3	-781.5	1,076.8	933.0	143.85	7.486	
16,600.0	11,570.0	15,630.9	10,826.4	91.6	90.4	46.11	-4,865.4	-780.5	1,075.6	929.4	146.27	7.354	
16,700.0	11,570.0	15,729.9	10,827.3	93.1	91.9	46.12	-4,964.4	-779.1	1,074.4	925.7	148.66	7.227	
16,800.0	11,570.0	15,828.8	10,827.9	94.6	93.4	46.11	-5,063.3	-777.8	1,073.4	922.4	151.04	7.107	
16,900.0	11,570.0	15,932.1	10,829.0	96.1	95.0	46.13	-5,166.6	-776.5	1,072.2	918.8	153.47	6.987	
17,000.0	11,570.0	16,030.4	10,829.9	97.6	96.4	46.14	-5,264.8	-775.0	1,070.9	915.0	155.88	6.870	
17,100.0	11,570.0	16,138.6	10,831.1	99.1	98.1	46.15	-5,373.0	-773.5	1,069.6	911.3	158.30	6.756	
17,200.0	11,570.0	16,234.5	10,832.0	100.6	99.5	46.12	-5,468.9	-771.3	1,067.7	907.0	160.68	6.645	
17,300.0	11,570.0	16,335.4	10,833.0	102.1	101.1	46.11	-5,569.8	-769.5	1,066.2	903.1	163.09	6.537	
17,400.0	11,570.0	16,426.4	10,833.8	103.7	102.5	46.11	-5,660.7	-768.1	1,064.9	899.4	165.52	6.434	
17,500.0	11,570.0	16,527.8	10,834.8	105.2	104.0	46.14	-5,762.2	-767.4	1,064.1	896.1	168.01	6.334	
17,600.0	11,570.0	16,632.7	10,836.4	106.7	105.7	46.20	-5,867.0	-766.6	1,063.0	892.4	170.56	6.232	
17,658.8	11,570.0	16,676.8	10,836.6	107.6	106.3	46.21	-5,911.1	-766.2	1,062.6	890.6	172.00	6.178	
17,700.0	11,570.0	16,708.4	10,836.3	108.3	106.8	46.19	-5,942.7	-765.9	1,062.8	889.8	172.96	6.145	
17,800.0	11,570.0	16,825.9	10,835.3	109.8	108.6	46.14	-6,060.2	-764.9	1,063.2	887.9	175.34	6.064	
17,900.0	11,570.0	16,928.0	10,836.1	111.3	110.2	46.16	-6,162.3	-764.0	1,062.4	884.6	177.83	5.974	
18,000.0	11,570.0	17,028.2	10,837.2	112.9	111.8	46.19	-6,262.5	-763.1	1,061.5	881.2	180.36	5.886	
18,100.0	11,570.0	17,136.0	10,838.2	114.4	113.5	46.20	-6,370.3	-761.7	1,060.3	877.5	182.84	5.799	
18,200.0	11,570.0	17,219.8	10,839.2	116.0	114.8	46.20	-6,454.1	-760.0	1,058.6	873.3	185.31	5.713	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #504H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 364-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
18,307.1	11,570.0	17,327.0	10,839.3	117.4	116.4	46.18	-6,561.3	-758.8	1,058.1	870.4	187.68	5.638	
18,307.7	11,570.0	17,327.0	10,839.3	117.4	116.4	46.18	-6,561.3	-758.8	1,058.1	870.4	187.69	5.637	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #703H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 200-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	2.0	2.0	0.0	0.0	66.96	23.9	56.1	61.0				
100.0	100.0	101.6	101.6	0.1	0.2	66.72	24.2	56.3	61.3	61.0	0.29	212.757	
200.0	200.0	201.3	201.3	0.5	0.3	66.04	25.3	56.8	62.2	61.4	0.80	77.585	
300.0	300.0	301.2	301.2	0.8	0.7	65.29	26.5	57.6	63.4	61.9	1.52	41.804	
400.0	400.0	401.2	401.2	1.2	1.0	64.91	27.4	58.6	64.7	62.5	2.23	28.976	
500.0	500.0	501.3	501.2	1.6	1.4	64.97	27.9	59.7	65.9	62.9	2.95	22.358	
600.0	600.0	601.3	601.2	1.9	1.7	65.03	28.3	60.8	67.1	63.4	3.66	18.309	
700.0	700.0	701.8	701.7	2.3	2.1	65.12	28.6	61.6	67.9	63.5	4.38	15.499	
800.0	800.0	802.2	802.2	2.6	2.4	65.23	28.4	61.6	67.9	62.8	5.08	13.370	
900.0	900.0	902.2	902.2	3.0	2.8	65.23	28.4	61.5	67.8	62.0	5.77	11.741	
1,000.0	1,000.0	1,002.5	1,002.4	3.4	3.1	65.08	28.3	60.9	67.1	60.7	6.47	10.374	
1,100.0	1,100.0	1,102.3	1,102.2	3.7	3.5	64.97	28.3	60.6	66.8	59.7	7.17	9.319	
1,200.0	1,200.0	1,202.5	1,202.4	4.1	3.8	64.64	28.4	59.9	66.3	58.4	7.88	8.411	
1,300.0	1,300.0	1,302.4	1,302.4	4.4	4.2	64.23	28.5	59.1	65.6	57.0	8.58	7.645	
1,400.0	1,400.0	1,402.3	1,402.2	4.8	4.5	64.08	28.5	58.6	65.1	55.9	9.29	7.011	
1,500.0	1,500.0	1,502.3	1,502.2	5.1	4.9	63.94	28.5	58.3	64.9	54.9	10.00	6.487	
1,600.0	1,600.0	1,602.4	1,602.4	5.5	5.2	83.21	28.6	58.0	64.6	53.9	10.71	6.027	
1,700.0	1,700.0	1,703.2	1,703.2	5.9	5.6	85.07	28.6	56.6	63.1	51.6	11.42	5.520	
1,779.5	1,779.4	1,781.4	1,781.3	6.1	5.8	87.73	28.7	56.0	62.3	50.3	11.98	5.201	
1,800.0	1,799.9	1,801.7	1,801.6	6.2	5.9	88.61	28.8	56.1	62.4	50.2	12.13	5.142	
1,900.0	1,899.7	1,901.3	1,901.2	6.6	6.3	93.78	29.3	56.4	63.0	50.1	12.83	4.907 ES	
2,000.0	1,999.4	2,000.2	2,000.1	6.9	6.6	100.03	30.3	57.5	65.2	51.7	13.54	4.817	
2,100.0	2,098.9	2,098.6	2,098.5	7.3	7.0	105.96	32.7	60.0	70.1	55.9	14.24	4.923	
2,200.0	2,198.3	2,196.7	2,196.4	7.7	7.3	110.64	37.1	64.1	77.9	62.9	14.94	5.213	
2,300.0	2,297.4	2,294.3	2,293.5	8.0	7.6	113.97	43.5	70.3	88.8	73.1	15.64	5.676	
2,400.0	2,396.4	2,392.4	2,391.0	8.4	8.0	116.23	51.3	78.3	101.9	85.6	16.35	6.234	
2,500.0	2,495.5	2,491.2	2,489.1	8.8	8.4	117.78	59.4	86.8	115.6	98.5	17.08	6.767	
2,600.0	2,594.5	2,589.7	2,586.8	9.2	8.7	118.80	67.9	95.7	129.6	111.8	17.80	7.277	
2,700.0	2,693.5	2,687.8	2,684.1	9.6	9.1	119.45	76.7	105.0	144.1	125.5	18.53	7.774	
2,800.0	2,792.5	2,785.7	2,781.2	10.0	9.5	120.23	84.7	114.9	159.3	140.0	19.26	8.269	
2,900.0	2,891.6	2,883.7	2,878.4	10.3	9.8	120.99	92.2	125.2	175.0	155.0	20.00	8.749	
3,000.0	2,990.6	2,982.2	2,976.0	10.7	10.2	121.56	99.9	135.8	191.0	170.3	20.74	9.209	
3,100.0	3,089.6	3,080.5	3,073.4	11.1	10.6	122.20	107.0	146.4	207.1	185.6	21.48	9.639	
3,200.0	3,188.6	3,179.0	3,171.1	11.5	11.0	122.84	113.8	157.1	223.4	201.2	22.23	10.049	
3,300.0	3,287.7	3,277.7	3,269.0	11.9	11.3	123.35	120.7	167.8	239.7	216.8	22.99	10.430	
3,400.0	3,386.7	3,376.1	3,366.5	12.3	11.7	123.73	127.9	178.6	256.1	232.4	23.74	10.789	
3,500.0	3,485.7	3,478.8	3,468.4	12.7	12.1	124.22	134.9	189.1	271.9	247.4	24.54	11.083	
3,600.0	3,584.8	3,579.8	3,568.9	13.1	12.5	124.87	141.1	198.0	286.5	261.2	25.31	11.319	
3,700.0	3,683.8	3,678.0	3,666.5	13.5	12.9	125.46	147.1	206.3	300.9	274.9	26.06	11.547	
3,800.0	3,782.8	3,778.6	3,766.6	13.9	13.3	125.95	153.7	214.8	315.2	288.4	26.84	11.745	
3,900.0	3,881.8	3,877.8	3,865.1	14.3	13.7	126.34	160.5	223.0	329.2	301.6	27.60	11.929	
4,000.0	3,980.9	3,976.4	3,963.2	14.7	14.0	126.67	167.4	231.2	343.2	314.9	28.36	12.104	
4,100.0	4,079.9	4,075.0	4,061.1	15.2	14.4	126.94	174.4	239.6	357.5	328.3	29.12	12.276	
4,200.0	4,178.9	4,175.0	4,160.5	15.6	14.8	127.17	181.7	248.1	371.5	341.6	29.89	12.429	
4,300.0	4,277.9	4,274.6	4,259.5	16.0	15.2	127.36	189.2	256.4	385.4	354.7	30.66	12.568	
4,400.0	4,377.0	4,374.5	4,358.8	16.4	15.6	127.48	197.2	264.6	399.1	367.7	31.44	12.694	
4,500.0	4,476.0	4,474.8	4,458.4	16.8	16.0	127.56	205.5	272.7	412.5	380.3	32.22	12.803	
4,600.0	4,575.0	4,574.7	4,557.6	17.2	16.4	127.59	214.1	280.7	425.7	392.7	33.00	12.901	
4,625.7	4,600.5	4,600.4	4,583.1	17.3	16.5	127.59	216.4	282.7	429.1	395.9	33.20	12.924	
4,700.0	4,674.1	4,675.2	4,657.4	17.6	16.8	127.65	222.9	288.5	438.3	404.5	33.78	12.973	
4,800.0	4,773.6	4,775.1	4,756.7	18.0	17.2	127.60	230.8	295.7	449.0	414.5	34.55	12.997	
4,900.0	4,873.2	4,874.4	4,855.5	18.4	17.5	127.31	238.4	302.8	458.2	422.9	35.30	12.980	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #703H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 200-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	4,973.5	4,954.0	18.7	17.9	126.71	246.4	310.1	465.9	429.9	36.04	12.927	
5,100.0	5,073.0	5,076.1	5,056.1	19.1	18.3	125.89	254.2	317.2	471.9	435.1	36.80	12.825	
5,159.0	5,132.1	5,136.0	5,115.7	19.3	18.6	106.75	258.1	320.9	474.5	437.3	37.23	12.745	
5,200.0	5,173.0	5,177.4	5,156.9	19.4	18.7	106.38	260.6	323.2	476.1	438.6	37.53	12.686	
5,300.0	5,273.0	5,276.9	5,256.1	19.8	19.1	105.54	266.3	328.9	479.9	441.7	38.24	12.550	
5,400.0	5,373.0	5,377.0	5,355.9	20.1	19.5	104.71	272.0	334.5	483.9	444.9	38.96	12.420	
5,500.0	5,473.0	5,476.8	5,455.4	20.4	19.8	103.91	277.6	340.0	487.9	448.2	39.67	12.297	
5,600.0	5,573.0	5,576.4	5,554.7	20.8	20.2	103.13	283.1	345.5	491.9	451.6	40.39	12.181	
5,700.0	5,673.0	5,676.1	5,654.1	21.1	20.6	102.36	288.7	351.0	496.1	455.0	41.10	12.072	
5,800.0	5,773.0	5,772.4	5,750.1	21.4	21.0	101.62	294.0	356.5	500.5	458.7	41.79	11.978	
5,900.0	5,873.0	5,866.3	5,843.5	21.8	21.3	100.76	300.4	363.2	506.3	463.8	42.46	11.924	
6,000.0	5,973.0	5,964.9	5,941.6	22.1	21.7	99.80	307.6	371.0	512.7	469.6	43.17	11.877	
6,100.0	6,073.0	6,064.5	6,040.6	22.5	22.1	98.85	315.1	378.8	519.3	475.4	43.89	11.831	
6,200.0	6,173.0	6,163.7	6,139.2	22.8	22.5	97.89	322.7	386.6	526.0	481.4	44.60	11.793	
6,300.0	6,273.0	6,263.7	6,238.5	23.1	22.9	96.94	330.5	394.5	532.9	487.5	45.32	11.757	
6,400.0	6,373.0	6,364.2	6,338.4	23.5	23.3	95.99	338.5	402.3	539.7	493.6	46.05	11.720	
6,500.0	6,473.0	6,464.9	6,438.5	23.8	23.7	95.09	346.4	409.9	546.4	499.7	46.78	11.682	
6,600.0	6,573.0	6,566.6	6,539.7	24.2	24.1	94.23	354.0	417.2	553.0	505.5	47.51	11.640	
6,700.0	6,673.0	6,656.3	6,628.8	24.5	24.4	93.49	360.8	424.0	560.2	512.0	48.14	11.637	
6,800.0	6,773.0	6,750.8	6,722.7	24.9	24.8	92.68	368.3	432.8	569.0	520.2	48.80	11.659	
6,900.0	6,873.0	6,851.1	6,822.2	25.2	25.2	91.86	376.1	442.3	578.2	528.7	49.53	11.675	
7,000.0	6,973.0	6,954.8	6,925.2	25.6	25.6	91.09	383.6	451.7	587.1	536.8	50.28	11.676	
7,100.0	7,073.0	7,056.2	7,026.0	25.9	26.0	90.43	390.3	460.2	595.4	544.4	51.01	11.673	
7,200.0	7,173.0	7,159.8	7,129.1	26.3	26.4	89.83	396.5	468.4	603.4	551.6	51.75	11.658	
7,300.0	7,273.0	7,261.9	7,230.7	26.6	26.8	89.31	402.0	475.9	610.7	558.2	52.48	11.637	
7,400.0	7,373.0	7,359.7	7,328.1	26.9	27.2	88.71	408.6	483.0	618.2	565.0	53.18	11.624	
7,500.0	7,473.0	7,459.6	7,427.4	27.3	27.6	88.06	415.9	490.5	625.8	571.9	53.89	11.612	
7,600.0	7,573.0	7,561.5	7,528.8	27.6	28.0	87.44	423.0	497.8	633.3	578.7	54.62	11.594	
7,700.0	7,673.0	7,663.4	7,630.3	28.0	28.3	86.85	429.8	504.7	640.4	585.1	55.35	11.570	
7,800.0	7,773.0	7,760.1	7,726.6	28.3	28.7	86.33	436.0	511.1	647.5	591.4	56.04	11.554	
7,900.0	7,873.0	7,852.1	7,818.0	28.7	29.1	85.78	442.8	518.1	655.6	598.9	56.69	11.564	
8,000.0	7,973.0	7,944.2	7,909.5	29.0	29.4	85.17	450.5	526.1	664.9	607.5	57.33	11.596	
8,100.0	8,073.0	8,040.9	8,005.4	29.4	29.8	84.50	459.2	535.2	675.1	617.1	58.02	11.636	
8,200.0	8,173.0	8,143.4	8,107.0	29.7	30.2	83.85	467.8	544.8	685.3	626.5	58.76	11.661	
8,300.0	8,273.0	8,253.2	8,216.1	30.1	30.7	83.23	476.3	554.1	694.6	635.1	59.57	11.662	
8,400.0	8,373.0	8,377.8	8,340.3	30.4	31.2	82.76	483.0	561.9	701.5	641.1	60.44	11.606	
8,500.0	8,473.0	8,501.3	8,463.7	30.8	31.6	82.47	487.0	565.0	704.3	643.1	61.24	11.501	
8,600.0	8,573.0	8,602.3	8,564.7	31.1	32.0	82.26	489.8	566.1	705.8	643.9	61.94	11.395	
8,700.0	8,673.0	8,702.4	8,664.6	31.5	32.3	82.07	492.3	567.3	707.3	644.6	62.64	11.291	
8,800.0	8,773.0	8,802.6	8,764.8	31.8	32.6	81.89	494.7	568.4	708.8	645.4	63.35	11.189	
8,900.0	8,873.0	8,905.3	8,867.5	32.2	33.0	81.73	496.9	569.5	710.1	646.0	64.05	11.086	
9,000.0	8,973.0	9,014.3	8,976.5	32.5	33.4	81.60	498.5	569.8	710.6	645.9	64.76	10.973	
9,100.0	9,073.0	9,119.5	9,081.7	32.9	33.7	81.54	499.2	569.0	710.0	644.5	65.45	10.847	
9,200.0	9,173.0	9,227.9	9,190.1	33.2	34.1	81.45	500.1	567.2	708.5	642.3	66.13	10.713	
9,300.0	9,273.0	9,330.3	9,292.4	33.6	34.4	81.34	501.1	564.6	706.1	639.3	66.81	10.569	
9,400.0	9,373.0	9,423.1	9,385.2	33.9	34.7	81.23	502.1	562.6	704.1	636.6	67.50	10.432	
9,500.0	9,473.0	9,517.6	9,479.7	34.3	35.0	81.11	503.4	561.5	703.2	635.0	68.19	10.313	
9,600.0	9,573.0	9,623.4	9,585.5	34.6	35.4	80.96	505.1	560.1	702.1	633.2	68.88	10.193	
9,700.0	9,673.0	9,723.0	9,685.0	35.0	35.7	80.76	507.2	558.1	700.4	630.8	69.57	10.068	
9,800.0	9,773.0	9,816.8	9,778.8	35.3	36.0	80.53	509.9	556.9	699.6	629.4	70.26	9.958	
9,900.0	9,873.0	9,914.3	9,876.2	35.7	36.3	80.27	512.9	555.7	699.0	628.0	70.96	9.850	
9,907.9	9,881.0	9,921.1	9,883.0	35.7	36.4	80.25	513.1	555.7	698.9	627.9	71.01	9.843	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #703H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 200-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.0	9,973.0	10,001.2	9,963.1	36.0	36.6	80.15	514.5	556.2	699.8	628.2	71.63	9.770	
10,100.0	10,073.0	10,096.0	10,057.9	36.4	37.0	80.15	514.9	558.3	702.0	629.7	72.32	9.708	
10,200.0	10,173.0	10,198.3	10,160.1	36.7	37.3	80.21	514.4	560.7	704.3	631.3	73.02	9.645	
10,300.0	10,273.0	10,299.2	10,261.0	37.1	37.6	80.31	513.6	562.9	706.3	632.6	73.71	9.582	
10,400.0	10,373.0	10,398.0	10,359.8	37.4	38.0	80.45	512.2	565.2	708.3	633.9	74.40	9.520	
10,500.0	10,473.0	10,497.5	10,459.3	37.8	38.3	80.63	510.5	567.8	710.6	635.5	75.09	9.463	
10,600.0	10,573.0	10,599.6	10,561.3	38.2	38.6	80.82	508.4	570.2	712.7	636.9	75.79	9.404	
10,700.0	10,673.0	10,701.7	10,662.8	38.5	38.9	81.55	499.7	573.4	714.5	638.0	76.47	9.344	
10,800.0	10,773.0	10,819.3	10,775.4	38.9	39.2	84.22	466.8	578.6	715.4	638.3	77.15	9.273	
10,848.6	10,821.7	10,871.7	10,823.7	39.0	39.3	85.85	446.5	580.4	715.4	637.9	77.46	9.235	
10,900.0	10,873.0	10,926.4	10,873.9	39.2	39.5	87.60	424.7	581.6	715.4	637.7	77.80	9.197	
11,000.0	10,973.0	11,005.6	10,945.4	39.6	39.6	90.31	390.8	583.9	717.7	639.3	78.35	9.160	
11,024.0	10,997.0	11,028.2	10,965.4	39.7	39.6	91.15	380.4	584.6	718.8	640.3	78.48	9.158	
11,050.0	11,023.0	11,053.2	10,987.2	39.7	39.7	-80.09	368.0	585.4	719.9	641.3	78.61	9.158	
11,100.0	11,072.8	11,100.1	11,026.5	39.9	39.8	-78.14	342.6	586.4	722.1	643.2	78.83	9.160	
11,150.0	11,122.0	11,141.4	11,059.6	40.0	39.8	-76.48	317.8	587.1	724.1	645.1	78.96	9.170	
11,200.0	11,170.3	11,181.7	11,090.3	40.2	39.9	-74.94	291.9	587.7	725.9	646.9	79.02	9.187	
11,250.0	11,217.2	11,221.5	11,119.1	40.3	39.9	-73.52	264.4	588.2	727.6	648.6	79.02	9.208	
11,300.0	11,262.5	11,260.3	11,145.1	40.4	39.9	-72.18	235.6	588.5	729.0	650.1	78.94	9.235	
11,350.0	11,305.7	11,293.0	11,165.2	40.5	39.9	-71.08	209.8	588.6	730.1	651.4	78.74	9.273	
11,400.0	11,346.6	11,330.7	11,186.3	40.6	39.9	-69.90	178.5	588.7	731.0	652.4	78.52	9.309	
11,450.0	11,384.8	11,363.4	11,202.6	40.6	40.0	-68.93	150.2	588.8	731.7	653.5	78.19	9.357	
11,500.0	11,420.1	11,396.7	11,217.3	40.7	40.0	-68.02	120.4	589.0	732.1	654.3	77.83	9.406	
11,550.0	11,452.2	11,432.2	11,230.7	40.8	39.9	-67.12	87.4	588.9	732.1	654.6	77.46	9.451	
11,600.0	11,480.8	11,467.0	11,241.3	40.9	39.9	-66.30	54.3	588.6	731.5	654.4	77.06	9.492	
11,650.0	11,505.7	11,500.4	11,249.1	40.9	39.9	-65.59	21.9	588.1	730.4	653.7	76.63	9.531	
11,700.0	11,526.7	11,532.8	11,254.5	41.0	39.9	-64.97	-10.1	587.4	728.7	652.5	76.21	9.562	
11,750.0	11,543.8	11,564.6	11,257.5	41.1	39.9	-64.44	-41.8	586.4	726.6	650.7	75.82	9.583	
11,800.0	11,556.6	11,604.7	11,258.9	41.2	39.9	-63.85	-81.8	585.1	723.7	648.2	75.48	9.587	
11,850.0	11,565.2	11,649.8	11,259.4	41.2	40.0	-63.45	-126.8	583.3	719.4	644.1	75.24	9.560	
11,900.0	11,569.5	11,694.1	11,259.1	41.3	40.1	-63.41	-171.1	581.5	713.5	638.4	75.13	9.498	
11,924.0	11,570.0	11,715.2	11,259.1	41.4	40.2	-63.55	-192.1	580.8	710.2	635.0	75.13	9.452	
12,000.0	11,570.0	11,797.3	11,259.4	41.5	40.4	-63.22	-274.3	578.3	699.7	624.5	75.29	9.294	
12,100.0	11,570.0	11,901.5	11,259.9	41.8	40.8	-62.83	-378.3	573.6	687.5	611.9	75.61	9.093	
12,200.0	11,570.0	11,990.5	11,259.7	42.1	41.2	-62.55	-467.3	569.7	678.8	602.7	76.07	8.922	
12,292.2	11,570.0	12,076.2	11,259.5	42.5	41.6	-62.42	-552.9	567.5	674.9	598.2	76.70	8.800	
12,300.0	11,570.0	12,083.7	11,259.5	42.5	41.6	-62.41	-560.4	567.3	674.7	598.0	76.76	8.790	
12,400.0	11,570.0	12,188.0	11,259.3	42.9	42.1	-62.27	-664.7	564.8	672.2	594.6	77.57	8.665	
12,500.0	11,570.0	12,277.6	11,258.9	43.4	42.6	-62.13	-754.3	562.7	669.8	591.3	78.49	8.533	
12,585.4	11,570.0	12,353.2	11,258.6	43.9	43.1	-62.07	-829.8	562.3	669.2	589.8	79.40	8.428	
12,600.0	11,570.0	12,366.3	11,258.5	44.0	43.2	-62.07	-842.9	562.4	669.2	589.6	79.55	8.412	
12,700.0	11,570.0	12,457.6	11,258.0	44.6	43.8	-62.06	-934.2	563.6	670.1	589.4	80.74	8.300	
12,800.0	11,570.0	12,562.6	11,256.8	45.3	44.5	-62.01	-1,039.2	565.3	671.6	589.6	82.01	8.189	
12,900.0	11,570.0	12,664.6	11,255.6	46.0	45.3	-61.92	-1,141.2	565.9	672.1	588.8	83.34	8.065	
13,000.0	11,570.0	12,750.6	11,254.7	46.7	46.0	-61.89	-1,227.2	567.3	673.5	588.7	84.77	7.945	
13,100.0	11,570.0	12,853.3	11,253.9	47.6	46.9	-61.94	-1,329.9	570.6	676.2	589.8	86.35	7.831	
13,200.0	11,570.0	12,963.6	11,252.8	48.4	47.9	-61.89	-1,440.1	572.3	677.6	589.6	87.95	7.704	
13,300.0	11,570.0	13,064.9	11,251.7	49.3	48.8	-61.82	-1,541.4	573.0	678.1	588.5	89.61	7.568	
13,400.0	11,570.0	13,159.8	11,250.6	50.2	49.7	-61.75	-1,636.3	573.8	678.9	587.6	91.32	7.435	
13,500.0	11,570.0	13,257.4	11,249.4	51.2	50.7	-61.70	-1,733.9	575.4	680.4	587.3	93.11	7.308	
13,600.0	11,570.0	13,363.1	11,248.4	52.2	51.8	-61.65	-1,839.6	576.7	681.4	586.5	94.97	7.175	
13,700.0	11,570.0	13,463.4	11,247.4	53.2	52.9	-61.58	-1,939.9	577.5	682.1	585.2	96.88	7.041	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Big Stag Fed Com #703H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 200-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,800.0	11,570.0	13,562.1	11,246.3	54.3	54.0	-61.51	-2,038.5	578.2	682.8	584.0	98.82	6.910	
13,900.0	11,570.0	13,661.5	11,245.1	55.4	55.1	-61.44	-2,137.9	579.4	683.9	583.0	100.82	6.783	
14,000.0	11,570.0	13,760.9	11,244.1	56.5	56.3	-61.38	-2,237.3	580.3	684.7	581.8	102.87	6.656	
14,100.0	11,570.0	13,860.0	11,243.6	57.7	57.4	-61.39	-2,336.4	582.1	685.9	580.9	105.01	6.532	
14,200.0	11,570.0	13,957.6	11,243.1	58.9	58.6	-61.40	-2,434.0	583.7	687.1	579.9	107.18	6.410	
14,300.0	11,570.0	14,063.4	11,243.0	60.1	59.9	-61.46	-2,539.8	585.9	688.5	579.1	109.45	6.291	
14,400.0	11,570.0	14,158.9	11,243.3	61.3	61.1	-61.51	-2,635.2	587.3	689.2	577.5	111.74	6.168	
14,500.0	11,570.0	14,262.5	11,243.5	62.5	62.4	-61.60	-2,738.8	589.7	690.6	576.5	114.10	6.052	
14,600.0	11,570.0	14,366.9	11,244.1	63.8	63.7	-61.67	-2,843.2	591.1	691.0	574.5	116.49	5.932	
14,700.0	11,570.0	14,461.9	11,244.9	65.0	65.0	-61.77	-2,938.2	592.6	691.5	572.6	118.91	5.815	
14,800.0	11,570.0	14,559.0	11,245.6	66.3	66.2	-61.89	-3,035.3	594.8	692.6	571.2	121.39	5.705	
14,900.0	11,570.0	14,659.3	11,246.5	67.6	67.6	-62.02	-3,135.5	597.3	693.9	570.0	123.92	5.600	
15,000.0	11,570.0	14,766.7	11,247.3	69.0	69.0	-62.14	-3,242.9	599.2	694.6	568.1	126.47	5.492	
15,100.0	11,570.0	14,869.9	11,248.0	70.3	70.4	-62.19	-3,346.1	600.1	694.5	565.5	129.00	5.384	
15,200.0	11,570.0	14,969.9	11,248.4	71.7	71.8	-62.22	-3,446.1	600.6	694.2	562.7	131.51	5.279	
15,273.7	11,570.0	15,042.4	11,248.8	72.7	72.8	-62.25	-3,518.6	601.1	694.1	560.7	133.39	5.203	
15,300.0	11,570.0	15,067.0	11,249.0	73.0	73.1	-62.27	-3,543.2	601.3	694.1	560.0	134.07	5.177	
15,400.0	11,570.0	15,162.7	11,249.7	74.4	74.5	-62.35	-3,638.9	602.8	694.6	558.0	136.67	5.082	
15,500.0	11,570.0	15,263.8	11,250.3	75.8	75.9	-62.45	-3,739.9	604.7	695.5	556.1	139.32	4.992	
15,600.0	11,570.0	15,361.6	11,250.3	77.2	77.3	-62.47	-3,837.8	605.8	696.0	554.0	141.91	4.904	
15,700.0	11,570.0	15,457.3	11,251.1	78.6	78.6	-62.60	-3,933.4	608.4	697.4	552.8	144.62	4.822	
15,800.0	11,570.0	15,556.1	11,251.9	80.0	80.1	-62.74	-4,032.1	611.0	698.9	551.6	147.36	4.743	
15,900.0	11,570.0	15,663.1	11,252.8	81.4	81.6	-62.90	-4,139.1	614.0	700.5	550.4	150.17	4.665	
16,000.0	11,570.0	15,786.1	11,253.9	82.9	83.4	-62.95	-4,262.1	614.2	699.8	546.9	152.88	4.577	
16,100.0	11,570.0	15,888.5	11,254.6	84.3	84.9	-62.90	-4,364.5	612.0	697.0	541.5	155.49	4.483	
16,200.0	11,570.0	15,984.0	11,255.4	85.8	86.3	-62.87	-4,460.0	610.2	694.5	536.3	158.15	4.391	
16,300.0	11,570.0	16,083.2	11,256.1	87.2	87.7	-62.84	-4,559.1	608.7	692.3	531.5	160.80	4.305	
16,400.0	11,570.0	16,184.4	11,256.8	88.7	89.2	-62.81	-4,660.4	607.1	690.0	526.6	163.47	4.221	
16,500.0	11,570.0	16,284.9	11,257.5	90.2	90.7	-62.77	-4,760.8	605.3	687.5	521.4	166.14	4.138	
16,600.0	11,570.0	16,381.3	11,257.5	91.6	92.1	-62.69	-4,857.3	603.7	685.6	516.8	168.78	4.062	
16,700.0	11,570.0	16,487.9	11,258.1	93.1	93.7	-62.64	-4,963.7	601.7	683.2	511.7	171.43	3.985	
16,800.0	11,570.0	16,588.0	11,258.5	94.6	95.2	-62.54	-5,063.8	599.1	680.1	506.1	174.06	3.907	
16,900.0	11,570.0	16,680.8	11,258.5	96.1	96.6	-62.44	-5,156.6	597.1	677.7	501.0	176.71	3.835	
17,000.0	11,570.0	16,774.0	11,257.9	97.6	98.0	-62.34	-5,249.8	596.1	676.5	497.2	179.35	3.772	
17,100.0	11,570.0	16,877.7	11,257.9	99.1	99.6	-62.30	-5,353.5	595.7	675.7	493.7	182.06	3.711	
17,200.0	11,570.0	16,981.2	11,258.3	100.6	101.1	-62.25	-5,457.0	594.4	673.9	489.1	184.77	3.647	
17,300.0	11,570.0	17,076.4	11,258.2	102.1	102.6	-62.17	-5,552.2	593.2	672.3	484.8	187.45	3.586	
17,400.0	11,570.0	17,177.4	11,258.1	103.7	104.1	-62.12	-5,653.2	592.5	671.2	481.0	190.17	3.530	
17,500.0	11,570.0	17,280.7	11,257.7	105.2	105.7	-62.00	-5,756.5	591.1	669.6	476.8	192.81	3.473	
17,600.0	11,570.0	17,370.1	11,257.5	106.7	107.0	-61.93	-5,845.9	590.3	668.4	472.9	195.51	3.419	
17,611.6	11,570.0	17,380.2	11,257.5	106.9	107.2	-61.93	-5,855.9	590.3	668.4	472.6	195.84	3.413	
17,700.0	11,570.0	17,460.6	11,257.7	108.3	108.4	-61.98	-5,936.3	591.5	669.0	470.7	198.34	3.373	
17,800.0	11,570.0	17,561.3	11,257.5	109.8	110.0	-62.02	-6,037.0	593.5	670.3	469.1	201.21	3.331	
17,900.0	11,570.0	17,661.0	11,257.3	111.3	111.5	-62.05	-6,136.8	595.1	671.4	467.3	204.06	3.290	
18,000.0	11,570.0	17,754.2	11,257.6	112.9	113.0	-62.14	-6,229.9	597.5	673.0	466.0	206.97	3.252	
18,100.0	11,570.0	17,854.9	11,257.7	114.4	114.6	-62.25	-6,330.6	600.7	675.2	465.2	209.96	3.216	
18,200.0	11,570.0	17,955.6	11,257.7	116.0	116.1	-62.34	-6,431.3	603.5	677.1	464.2	212.92	3.180	
18,307.1	11,570.0	18,029.0	11,257.5	117.4	117.3	-62.38	-6,504.6	605.4	680.0	464.7	215.31	3.158	SF
18,307.7	11,570.0	18,029.0	11,257.5	117.4	117.3	-62.38	-6,504.6	605.4	680.0	464.7	215.31	3.158	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Fed Com #011H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 325-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	6.48	7,731.4	878.0	7,781.5				
100.0	100.0	24.6	24.6	0.1	0.0	6.48	7,731.4	878.0	7,781.1	7,780.9	0.17	N/A	
200.0	200.0	144.8	144.8	0.5	0.2	6.48	7,731.2	877.8	7,780.9	7,780.2	0.73	N/A	
300.0	300.0	265.0	265.0	0.8	0.4	6.47	7,730.7	877.3	7,780.5	7,779.2	1.29	6,038.063	
400.0	400.0	385.2	385.2	1.2	0.6	6.47	7,730.0	876.5	7,779.8	7,777.9	1.85	4,209.566	
500.0	500.0	490.0	490.0	1.6	1.1	6.47	7,729.2	876.3	7,779.0	7,776.3	2.69	2,886.690	
600.0	600.0	629.7	629.7	1.9	1.6	6.47	7,727.6	875.8	7,777.8	7,774.3	3.55	2,188.815	
700.0	700.0	749.3	749.3	2.3	2.1	6.46	7,725.8	875.3	7,776.3	7,772.0	4.34	1,791.640	
800.0	800.0	992.1	992.0	2.6	2.9	6.46	7,719.8	874.3	7,773.9	7,768.4	5.57	1,395.492	
900.0	900.0	1,023.8	1,023.7	3.0	3.1	6.46	7,719.0	874.2	7,771.0	7,765.0	6.04	1,286.666	
1,000.0	1,000.0	1,073.1	1,072.9	3.4	3.2	6.46	7,717.9	874.2	7,768.7	7,762.1	6.57	1,182.066	
1,100.0	1,100.0	1,160.0	1,159.9	3.7	3.5	6.47	7,716.6	874.4	7,767.3	7,760.0	7.24	1,072.951	
1,200.0	1,200.0	1,188.1	1,188.0	4.1	3.6	6.47	7,716.4	874.6	7,766.1	7,758.4	7.70	1,008.938	
1,300.0	1,300.0	1,307.7	1,307.5	4.4	4.1	6.47	7,715.1	875.1	7,765.1	7,756.6	8.48	915.652	
1,400.0	1,400.0	1,411.5	1,411.3	4.8	4.4	6.47	7,713.8	875.3	7,763.9	7,754.7	9.21	843.083	
1,500.0	1,500.0	1,508.5	1,508.3	5.1	4.8	6.47	7,712.7	875.3	7,762.7	7,752.8	9.91	782.966	
1,600.0	1,600.0	1,619.5	1,619.3	5.5	5.2	25.13	7,711.4	875.4	7,760.8	7,750.1	10.67	727.351	
1,700.0	1,700.0	1,684.6	1,684.4	5.9	5.4	25.16	7,710.6	875.8	7,757.3	7,746.1	11.26	689.197	
1,800.0	1,799.9	1,746.8	1,746.6	6.2	5.6	25.19	7,710.1	876.9	7,752.8	7,741.0	11.83	655.321	
1,900.0	1,899.7	1,818.0	1,817.8	6.6	5.9	25.24	7,709.9	878.8	7,747.2	7,734.7	12.44	622.905	
2,000.0	1,999.4	1,869.2	1,869.0	6.9	6.0	25.30	7,709.9	880.4	7,740.5	7,727.5	12.97	596.823	
2,100.0	2,098.9	1,911.0	1,910.7	7.3	6.2	25.35	7,710.2	881.4	7,732.7	7,719.3	13.47	574.081	
2,200.0	2,198.3	1,973.0	1,972.8	7.7	6.4	25.42	7,711.0	882.3	7,724.0	7,710.0	14.04	550.277	
2,300.0	2,297.4	2,059.3	2,059.0	8.0	6.7	25.50	7,712.8	882.7	7,714.4	7,699.7	14.69	525.320	
2,400.0	2,396.4	2,169.5	2,169.2	8.4	7.0	25.54	7,715.0	881.7	7,703.7	7,688.2	15.42	499.727	
2,500.0	2,495.5	2,228.2	2,227.8	8.8	7.2	25.55	7,716.4	880.7	7,693.2	7,677.2	15.98	481.553	
2,600.0	2,594.5	2,291.0	2,290.6	9.2	7.5	25.57	7,718.3	879.9	7,683.4	7,666.9	16.55	464.210	
2,700.0	2,693.5	2,534.5	2,534.0	9.6	8.3	25.65	7,723.4	876.1	7,672.6	7,654.9	17.75	432.266	
2,800.0	2,792.5	2,590.9	2,590.4	10.0	8.5	25.67	7,724.2	875.9	7,661.4	7,643.1	18.31	418.410	
2,900.0	2,891.6	2,669.0	2,668.5	10.3	8.7	25.71	7,725.5	876.3	7,650.5	7,631.6	18.95	403.807	
3,000.0	2,990.6	2,719.5	2,719.0	10.7	8.9	25.74	7,726.5	877.1	7,640.1	7,620.6	19.49	392.032	
3,100.0	3,089.6	2,764.0	2,763.5	11.1	9.1	25.77	7,727.6	878.2	7,630.4	7,610.4	20.01	381.313	
3,200.0	3,188.6	18,149.3	10,719.5	11.5	129.7	170.76	220.2	108.7	7,612.3	7,547.2	65.09	116.954	
3,300.0	3,287.7	18,141.7	10,719.4	11.9	129.6	170.57	227.7	108.8	7,513.3	7,448.3	65.02	115.547	
3,400.0	3,386.7	3,400.0	10,719.1	12.3	104.4	169.47	269.3	109.4	7,414.3	7,361.4	53.00	139.905	
3,500.0	3,485.7	18,137.2	10,719.4	12.7	129.6	170.45	232.3	108.8	7,315.4	7,250.4	65.01	112.533	
3,600.0	3,584.8	18,069.5	10,718.9	13.1	128.5	168.60	300.0	109.8	7,216.5	7,152.0	64.47	111.935	
3,700.0	3,683.8	18,026.0	10,718.3	13.5	127.8	167.28	343.5	110.7	7,117.4	7,053.3	64.14	110.970	
3,800.0	3,782.8	18,014.6	10,718.2	13.9	127.6	166.91	354.8	111.0	7,018.4	6,954.3	64.08	109.526	
3,900.0	3,881.8	18,003.2	10,718.0	14.3	127.4	166.54	366.2	111.2	6,919.3	6,855.3	64.03	108.066	
4,000.0	3,980.9	17,991.8	10,717.8	14.7	127.3	166.16	377.6	111.5	6,820.3	6,756.3	63.99	106.590	
4,100.0	4,079.9	17,980.5	10,717.6	15.2	127.1	165.78	389.0	111.8	6,721.2	6,657.3	63.95	105.098	
4,200.0	4,178.9	17,969.1	10,717.5	15.6	126.9	165.38	400.3	112.2	6,622.2	6,558.3	63.93	103.590	
4,300.0	4,277.9	17,957.7	10,717.3	16.0	126.7	164.98	411.7	112.5	6,523.2	6,459.3	63.91	102.068	
4,400.0	4,377.0	17,946.4	10,717.1	16.4	126.5	164.56	423.0	112.8	6,424.2	6,360.3	63.90	100.533	
4,500.0	4,476.0	17,935.0	10,716.9	16.8	126.4	164.14	434.4	113.1	6,325.2	6,261.3	63.90	98.984	
4,600.0	4,575.0	17,923.7	10,716.8	17.2	126.2	163.71	445.7	113.5	6,226.3	6,162.4	63.91	97.424	
4,625.7	4,600.5	17,920.8	10,716.7	17.3	126.1	163.60	448.6	113.6	6,200.8	6,136.9	63.91	97.021	
4,700.0	4,674.1	17,913.0	10,716.6	17.6	126.0	160.76	456.4	113.8	6,127.2	6,063.3	63.93	95.842	
4,800.0	4,773.6	17,904.7	10,716.5	18.0	125.9	155.42	464.7	114.1	6,027.9	5,963.9	63.97	94.228	
4,900.0	4,873.2	17,898.8	10,716.4	18.4	125.8	147.09	470.6	114.2	5,928.3	5,864.2	64.03	92.586	
5,000.0	4,973.1	17,895.2	10,716.3	18.7	125.7	133.06	474.1	114.4	5,828.5	5,764.4	64.10	90.922	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Fed Com #011H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 325-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	17,894.1	10,716.3	19.1	125.7	109.24	475.2	114.4	5,728.7	5,664.5	64.20	89.237	
5,159.0	5,132.1	17,894.6	10,716.3	19.3	125.7	72.09	474.8	114.4	5,669.7	5,605.5	64.26	88.234	
5,200.0	5,173.0	17,895.3	10,716.3	19.4	125.7	72.22	474.1	114.4	5,628.8	5,564.5	64.30	87.535	
5,300.0	5,273.0	17,896.8	10,716.3	19.8	125.8	72.54	472.6	114.3	5,528.9	5,464.5	64.42	85.830	
5,400.0	5,373.0	17,898.3	10,716.4	20.1	125.8	72.86	471.1	114.3	5,429.0	5,364.5	64.54	84.122	
5,500.0	5,473.0	17,899.8	10,716.4	20.4	125.8	73.18	469.6	114.2	5,329.1	5,264.5	64.66	82.413	
5,600.0	5,573.0	17,901.4	10,716.4	20.8	125.8	73.50	468.0	114.2	5,229.2	5,164.4	64.80	80.704	
5,700.0	5,673.0	17,902.9	10,716.4	21.1	125.9	73.82	466.5	114.1	5,129.4	5,064.4	64.93	78.994	
5,800.0	5,773.0	17,904.4	10,716.5	21.4	125.9	74.14	465.0	114.1	5,029.5	4,964.4	65.08	77.285	
5,900.0	5,873.0	17,906.0	10,716.5	21.8	125.9	74.47	463.4	114.0	4,929.6	4,864.4	65.23	75.577	
6,000.0	5,973.0	17,907.5	10,716.5	22.1	125.9	74.80	461.9	114.0	4,829.8	4,764.4	65.38	73.871	
6,100.0	6,073.0	17,909.0	10,716.5	22.5	126.0	75.12	460.4	113.9	4,729.9	4,664.4	65.54	72.166	
6,200.0	6,173.0	17,910.5	10,716.5	22.8	126.0	75.45	458.9	113.9	4,630.0	4,564.3	65.71	70.464	
6,300.0	6,273.0	17,912.1	10,716.6	23.1	126.0	75.78	457.3	113.8	4,530.2	4,464.3	65.88	68.765	
6,400.0	6,373.0	17,913.6	10,716.6	23.5	126.0	76.11	455.8	113.8	4,430.4	4,364.3	66.06	67.069	
6,500.0	6,473.0	17,915.1	10,716.6	23.8	126.1	76.45	454.3	113.7	4,330.5	4,264.3	66.24	65.376	
6,600.0	6,573.0	17,916.7	10,716.6	24.2	126.1	76.78	452.7	113.7	4,230.7	4,164.3	66.43	63.688	
6,700.0	6,673.0	17,918.2	10,716.7	24.5	126.1	77.11	451.2	113.6	4,130.9	4,064.3	66.62	62.004	
6,800.0	6,773.0	17,919.7	10,716.7	24.9	126.1	77.45	449.7	113.6	4,031.1	3,964.3	66.82	60.325	
6,900.0	6,873.0	17,921.2	10,716.7	25.2	126.1	77.78	448.2	113.5	3,931.3	3,864.3	67.03	58.650	
7,000.0	6,973.0	17,922.8	10,716.7	25.6	126.2	78.12	446.6	113.5	3,831.5	3,764.3	67.24	56.981	
7,100.0	7,073.0	17,924.3	10,716.8	25.9	126.2	78.46	445.1	113.4	3,731.7	3,664.3	67.46	55.317	
7,200.0	7,173.0	17,925.8	10,716.8	26.3	126.2	78.80	443.6	113.4	3,632.0	3,564.3	67.69	53.659	
7,300.0	7,273.0	17,927.4	10,716.8	26.6	126.2	79.14	442.0	113.4	3,532.2	3,464.3	67.92	52.006	
7,400.0	7,373.0	17,928.9	10,716.8	26.9	126.3	79.48	440.5	113.3	3,432.5	3,364.3	68.16	50.360	
7,500.0	7,473.0	17,930.4	10,716.9	27.3	126.3	79.82	439.0	113.3	3,332.7	3,264.3	68.41	48.720	
7,600.0	7,573.0	17,931.9	10,716.9	27.6	126.3	80.16	437.5	113.2	3,233.0	3,164.4	68.66	47.087	
7,700.0	7,673.0	17,933.5	10,716.9	28.0	126.3	80.51	435.9	113.2	3,133.3	3,064.4	68.93	45.460	
7,800.0	7,773.0	17,935.0	10,716.9	28.3	126.4	80.85	434.4	113.1	3,033.7	2,964.5	69.20	43.840	
7,900.0	7,873.0	17,936.5	10,717.0	28.7	126.4	81.20	432.9	113.1	2,934.0	2,864.5	69.48	42.226	
8,000.0	7,973.0	17,938.1	10,717.0	29.0	126.4	81.54	431.3	113.0	2,834.4	2,764.6	69.78	40.620	
8,100.0	8,073.0	17,939.6	10,717.0	29.4	126.4	81.89	429.8	113.0	2,734.8	2,664.7	70.08	39.021	
8,200.0	8,173.0	17,941.1	10,717.0	29.7	126.5	82.24	428.3	112.9	2,635.2	2,564.8	70.40	37.429	
8,300.0	8,273.0	17,942.6	10,717.0	30.1	126.5	82.59	426.8	112.9	2,535.7	2,464.9	70.74	35.845	
8,400.0	8,373.0	17,944.2	10,717.1	30.4	126.5	82.93	425.2	112.9	2,436.2	2,365.1	71.09	34.268	
8,500.0	8,473.0	17,945.7	10,717.1	30.8	126.5	83.28	423.7	112.8	2,336.7	2,265.3	71.46	32.698	
8,600.0	8,573.0	17,947.2	10,717.1	31.1	126.6	83.63	422.2	112.8	2,237.3	2,165.5	71.86	31.136	
8,700.0	8,673.0	17,948.8	10,717.1	31.5	126.6	83.99	420.7	112.7	2,138.0	2,065.7	72.27	29.581	
8,800.0	8,773.0	17,950.3	10,717.2	31.8	126.6	84.34	419.1	112.7	2,038.7	1,965.9	72.72	28.034	
8,900.0	8,873.0	17,951.8	10,717.2	32.2	126.6	84.69	417.6	112.6	1,939.4	1,866.2	73.20	26.495	
9,000.0	8,973.0	17,953.4	10,717.2	32.5	126.7	85.04	416.1	112.6	1,840.3	1,766.6	73.72	24.962	
9,100.0	9,073.0	17,954.9	10,717.2	32.9	126.7	85.39	414.5	112.5	1,741.2	1,666.9	74.29	23.438	
9,200.0	9,173.0	17,956.4	10,717.3	33.2	126.7	85.75	413.0	112.5	1,642.3	1,567.4	74.92	21.920	
9,300.0	9,273.0	17,957.9	10,717.3	33.6	126.7	86.10	411.5	112.5	1,543.5	1,467.9	75.62	20.410	
9,400.0	9,373.0	17,959.5	10,717.3	33.9	126.8	86.46	410.0	112.4	1,444.9	1,368.5	76.42	18.908	
9,500.0	9,473.0	17,961.0	10,717.3	34.3	126.8	86.81	408.4	112.4	1,346.4	1,269.1	77.32	17.413	
9,600.0	9,573.0	17,962.5	10,717.4	34.6	126.8	87.17	406.9	112.3	1,248.3	1,169.9	78.38	15.926	
9,700.0	9,673.0	17,964.1	10,717.4	35.0	126.8	87.52	405.4	112.3	1,150.4	1,070.8	79.63	14.447	
9,800.0	9,773.0	17,965.6	10,717.4	35.3	126.8	87.88	403.8	112.2	1,052.9	971.8	81.14	12.977	
9,900.0	9,873.0	17,967.1	10,717.4	35.7	126.9	88.23	402.3	112.2	956.0	873.0	82.99	11.518	
10,000.0	9,973.0	17,968.6	10,717.4	36.0	126.9	88.59	400.8	112.2	859.7	774.3	85.34	10.073	
10,100.0	10,073.0	17,970.2	10,717.5	36.4	126.9	88.95	399.3	112.1	764.4	676.0	88.39	8.648	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Fed Com #011H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 325-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	17,971.7	10,717.5	36.7	126.9	89.30	397.7	112.1	670.4	578.0	92.46	7.251	
10,300.0	10,273.0	17,973.2	10,717.5	37.1	127.0	89.66	396.2	112.0	578.5	480.5	98.07	5.899	
10,400.0	10,373.0	17,974.8	10,717.5	37.4	127.0	90.02	394.7	112.0	489.8	383.8	105.99	4.621	
10,500.0	10,473.0	17,976.3	10,717.6	37.8	127.0	90.37	393.1	112.0	406.3	288.9	117.37	3.462	
10,600.0	10,573.0	17,977.8	10,717.6	38.2	127.0	90.73	391.6	111.9	332.1	198.8	133.27	2.492	
10,700.0	10,673.0	17,979.3	10,717.6	38.5	127.1	91.09	390.1	111.9	274.7	122.4	152.34	1.803	
10,800.0	10,773.0	17,980.9	10,717.6	38.9	127.1	91.45	388.6	111.8	246.3	81.1	165.22	1.491	Level 3
10,824.1	10,797.1	17,981.2	10,717.6	38.9	127.1	91.53	388.2	111.8	245.1	79.4	165.71	1.479	Level 3, CC, ES, SF
10,900.0	10,873.0	17,982.4	10,717.7	39.2	127.1	91.80	387.0	111.8	256.6	97.1	159.46	1.609	
11,000.0	10,973.0	17,983.9	10,717.7	39.6	127.1	92.16	385.5	111.7	301.7	160.7	140.97	2.140	
11,024.0	10,997.0	17,984.3	10,717.7	39.7	127.1	92.25	385.1	111.7	316.2	179.9	136.31	2.320	
11,050.0	11,023.0	17,985.3	10,717.7	39.7	127.2	-77.63	384.2	111.7	333.2	201.8	131.45	2.535	
11,100.0	11,072.8	17,990.4	10,717.8	39.9	127.2	-71.74	379.1	111.6	368.3	245.3	122.98	2.995	
11,150.0	11,122.0	17,999.6	10,717.9	40.0	127.4	-64.61	369.8	111.3	405.4	289.7	115.77	3.502	
11,200.0	11,170.3	18,013.0	10,718.1	40.2	127.6	-56.88	356.4	111.0	443.7	333.9	109.81	4.041	
11,250.0	11,217.2	18,030.4	10,718.4	40.3	127.9	-49.26	339.0	110.6	482.2	377.3	104.95	4.595	
11,300.0	11,262.5	18,050.4	10,718.7	40.4	128.2	-42.44	319.1	110.1	520.3	419.3	100.99	5.152	
11,350.0	11,305.7	18,073.6	10,719.0	40.5	128.6	-36.51	295.9	109.7	557.4	459.6	97.80	5.699	
11,400.0	11,346.6	18,100.0	10,719.2	40.6	129.0	-31.54	269.5	109.3	592.9	497.7	95.24	6.226	
11,450.0	11,384.8	18,129.8	10,719.4	40.6	129.4	-27.42	239.7	108.9	626.6	533.4	93.20	6.723	
11,500.0	11,420.1	18,166.0	10,719.6	40.7	130.0	-23.92	203.4	108.6	657.8	566.2	91.63	7.178	
11,550.0	11,452.2	18,204.5	10,719.9	40.8	130.6	-21.13	165.0	108.4	686.2	595.8	90.41	7.590	
11,600.0	11,480.8	18,245.3	10,720.3	40.9	131.3	-18.87	124.1	108.1	711.4	622.0	89.45	7.953	
11,650.0	11,505.7	18,273.0	10,720.5	40.9	131.7	-17.40	96.5	108.0	733.4	644.9	88.53	8.284	
11,700.0	11,526.7	18,273.0	10,720.5	41.0	131.7	-16.74	96.5	108.0	754.0	666.4	87.52	8.614	
11,750.0	11,543.8	18,273.0	10,720.5	41.1	131.7	-16.14	96.5	108.0	773.4	686.6	86.78	8.912	
11,800.0	11,556.6	18,273.0	10,720.5	41.2	131.7	-15.60	96.5	108.0	791.8	705.5	86.28	9.177	
11,850.0	11,565.2	18,273.0	10,720.5	41.2	131.7	-15.12	96.5	108.0	809.0	723.0	85.96	9.411	
11,900.0	11,569.5	18,273.0	10,720.5	41.3	131.7	-14.68	96.5	108.0	824.9	739.1	85.80	9.615	
11,924.0	11,570.0	18,273.0	10,720.5	41.4	131.7	-14.49	96.5	108.0	832.1	746.4	85.76	9.704	
12,000.0	11,570.0	18,273.0	10,720.5	41.5	131.7	-13.96	96.5	108.0	857.9	772.1	85.75	10.004	
12,100.0	11,570.0	18,273.0	10,720.5	41.8	131.7	-13.03	96.5	108.0	901.0	815.2	85.85	10.495	
12,200.0	11,570.0	18,273.0	10,720.5	42.1	131.7	-11.83	96.5	108.0	953.4	867.5	85.95	11.092	
12,292.2	11,570.0	18,273.0	10,720.5	42.5	131.7	-10.47	96.5	108.0	1,008.6	922.6	86.00	11.728	
12,300.0	11,570.0	18,273.0	10,720.5	42.5	131.7	-10.47	96.5	108.0	1,013.5	927.5	86.00	11.786	
12,400.0	11,570.0	18,273.0	10,720.5	42.9	131.7	-10.47	96.5	108.0	1,079.8	993.9	85.95	12.563	
12,500.0	11,570.0	18,273.0	10,720.5	43.4	131.7	-10.47	96.5	108.0	1,151.0	1,065.1	85.82	13.411	
12,600.0	11,570.0	18,273.0	10,720.5	44.0	131.7	-10.47	96.5	108.0	1,226.1	1,140.5	85.66	14.314	
12,700.0	11,570.0	18,273.0	10,720.5	44.6	131.7	-10.47	96.5	108.0	1,304.7	1,219.2	85.48	15.263	
12,800.0	11,570.0	18,273.0	10,720.5	45.3	131.7	-10.47	96.5	108.0	1,386.0	1,300.7	85.30	16.249	
12,900.0	11,570.0	18,273.0	10,720.5	46.0	131.7	-10.47	96.5	108.0	1,469.6	1,384.4	85.13	17.263	
13,000.0	11,570.0	18,273.0	10,720.5	46.7	131.7	-10.47	96.5	108.0	1,555.1	1,470.1	84.97	18.301	
13,100.0	11,570.0	18,273.0	10,720.5	47.6	131.7	-10.47	96.5	108.0	1,642.3	1,557.4	84.84	19.358	
13,200.0	11,570.0	18,273.0	10,720.5	48.4	131.7	-10.47	96.5	108.0	1,730.8	1,646.1	84.72	20.430	
13,300.0	11,570.0	18,273.0	10,720.5	49.3	131.7	-10.47	96.5	108.0	1,820.6	1,735.9	84.62	21.515	
13,400.0	11,570.0	18,273.0	10,720.5	50.2	131.7	-10.47	96.5	108.0	1,911.3	1,826.8	84.53	22.610	
13,500.0	11,570.0	18,273.0	10,720.5	51.2	131.7	-10.47	96.5	108.0	2,003.0	1,918.5	84.46	23.714	
13,600.0	11,570.0	18,273.0	10,720.5	52.2	131.7	-10.47	96.5	108.0	2,095.4	2,011.0	84.40	24.825	
13,700.0	11,570.0	18,273.0	10,720.5	53.2	131.7	-10.47	96.5	108.0	2,188.5	2,104.1	84.36	25.942	
13,800.0	11,570.0	18,273.0	10,720.5	54.3	131.7	-10.47	96.5	108.0	2,282.1	2,197.8	84.32	27.064	
13,900.0	11,570.0	18,273.0	10,720.5	55.4	131.7	-10.47	96.5	108.0	2,376.3	2,292.0	84.30	28.190	
14,000.0	11,570.0	18,273.0	10,720.5	56.5	131.7	-10.47	96.5	108.0	2,470.9	2,386.7	84.28	29.319	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Fed Com #011H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 325-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	18,273.0	10,720.5	57.7	131.7	-10.47	96.5	108.0	2,566.0	2,481.7	84.26	30.451	
14,200.0	11,570.0	18,273.0	10,720.5	58.9	131.7	-10.47	96.5	108.0	2,661.4	2,577.1	84.26	31.586	
14,300.0	11,570.0	18,273.0	10,720.5	60.1	131.7	-10.47	96.5	108.0	2,757.1	2,672.8	84.26	32.722	
14,400.0	11,570.0	18,273.0	10,720.5	61.3	131.7	-10.47	96.5	108.0	2,853.1	2,768.9	84.27	33.859	
14,500.0	11,570.0	18,273.0	10,720.5	62.5	131.7	-10.47	96.5	108.0	2,949.4	2,865.1	84.28	34.998	
14,600.0	11,570.0	18,273.0	10,720.5	63.8	131.7	-10.47	96.5	108.0	3,045.9	2,961.7	84.29	36.137	
14,700.0	11,570.0	18,273.0	10,720.5	65.0	131.7	-10.47	96.5	108.0	3,142.7	3,058.4	84.31	37.277	
14,800.0	11,570.0	18,273.0	10,720.5	66.3	131.7	-10.47	96.5	108.0	3,239.6	3,155.3	84.33	38.417	
14,900.0	11,570.0	18,273.0	10,720.5	67.6	131.7	-10.47	96.5	108.0	3,336.8	3,252.4	84.35	39.558	
15,000.0	11,570.0	18,273.0	10,720.5	69.0	131.7	-10.47	96.5	108.0	3,434.0	3,349.7	84.38	40.698	
15,100.0	11,570.0	18,273.0	10,720.5	70.3	131.7	-10.47	96.5	108.0	3,531.5	3,447.1	84.41	41.838	
15,200.0	11,570.0	18,273.0	10,720.5	71.7	131.7	-10.47	96.5	108.0	3,629.1	3,544.6	84.44	42.978	
15,300.0	11,570.0	18,273.0	10,720.5	73.0	131.7	-10.47	96.5	108.0	3,726.8	3,642.3	84.47	44.118	
15,400.0	11,570.0	18,273.0	10,720.5	74.4	131.7	-10.47	96.5	108.0	3,824.6	3,740.1	84.51	45.257	
15,500.0	11,570.0	18,273.0	10,720.5	75.8	131.7	-10.47	96.5	108.0	3,922.5	3,838.0	84.55	46.395	
15,600.0	11,570.0	18,273.0	10,720.5	77.2	131.7	-10.47	96.5	108.0	4,020.6	3,936.0	84.59	47.532	
15,700.0	11,570.0	18,273.0	10,720.5	78.6	131.7	-10.47	96.5	108.0	4,118.7	4,034.1	84.63	48.669	
15,800.0	11,570.0	18,273.0	10,720.5	80.0	131.7	-10.47	96.5	108.0	4,216.9	4,132.3	84.67	49.804	
15,900.0	11,570.0	18,273.0	10,720.5	81.4	131.7	-10.47	96.5	108.0	4,315.2	4,230.5	84.71	50.938	
16,000.0	11,570.0	18,273.0	10,720.5	82.9	131.7	-10.47	96.5	108.0	4,413.6	4,328.8	84.76	52.071	
16,100.0	11,570.0	18,273.0	10,720.5	84.3	131.7	-10.47	96.5	108.0	4,512.0	4,427.2	84.81	53.203	
16,200.0	11,570.0	18,273.0	10,720.5	85.8	131.7	-10.47	96.5	108.0	4,610.6	4,525.7	84.86	54.334	
16,300.0	11,570.0	18,273.0	10,720.5	87.2	131.7	-10.47	96.5	108.0	4,709.1	4,624.2	84.91	55.463	
16,400.0	11,570.0	18,273.0	10,720.5	88.7	131.7	-10.47	96.5	108.0	4,807.8	4,722.8	84.96	56.591	
16,500.0	11,570.0	18,273.0	10,720.5	90.2	131.7	-10.47	96.5	108.0	4,906.5	4,821.5	85.01	57.717	
16,600.0	11,570.0	18,273.0	10,720.5	91.6	131.7	-10.47	96.5	108.0	5,005.2	4,920.2	85.06	58.842	
16,700.0	11,570.0	18,273.0	10,720.5	93.1	131.7	-10.47	96.5	108.0	5,104.0	5,018.9	85.12	59.965	
16,800.0	11,570.0	18,273.0	10,720.5	94.6	131.7	-10.47	96.5	108.0	5,202.8	5,117.7	85.17	61.086	
16,900.0	11,570.0	18,273.0	10,720.5	96.1	131.7	-10.47	96.5	108.0	5,301.7	5,216.5	85.23	62.205	
17,000.0	11,570.0	18,273.0	10,720.5	97.6	131.7	-10.47	96.5	108.0	5,400.7	5,315.4	85.29	63.323	
17,100.0	11,570.0	18,273.0	10,720.5	99.1	131.7	-10.47	96.5	108.0	5,499.6	5,414.3	85.35	64.439	
17,200.0	11,570.0	18,273.0	10,720.5	100.6	131.7	-10.47	96.5	108.0	5,598.6	5,513.2	85.41	65.553	
17,300.0	11,570.0	18,273.0	10,720.5	102.1	131.7	-10.47	96.5	108.0	5,697.7	5,612.2	85.47	66.665	
17,400.0	11,570.0	18,273.0	10,720.5	103.7	131.7	-10.47	96.5	108.0	5,796.7	5,711.2	85.53	67.775	
17,500.0	11,570.0	18,273.0	10,720.5	105.2	131.7	-10.47	96.5	108.0	5,895.8	5,810.2	85.59	68.884	
17,600.0	11,570.0	18,273.0	10,720.5	106.7	131.7	-10.47	96.5	108.0	5,994.9	5,909.3	85.65	69.990	
17,700.0	11,570.0	18,273.0	10,720.5	108.3	131.7	-10.47	96.5	108.0	6,094.1	6,008.4	85.72	71.094	
17,800.0	11,570.0	18,273.0	10,720.5	109.8	131.7	-10.47	96.5	108.0	6,193.3	6,107.5	85.79	72.195	
17,900.0	11,570.0	18,273.0	10,720.5	111.3	131.7	-10.47	96.5	108.0	6,292.5	6,206.6	85.85	73.295	
18,000.0	11,570.0	18,273.0	10,720.5	112.9	131.7	-10.47	96.5	108.0	6,391.7	6,305.8	85.92	74.393	
18,100.0	11,570.0	18,273.0	10,720.5	114.4	131.7	-10.47	96.5	108.0	6,491.0	6,405.0	85.99	75.488	
18,200.0	11,570.0	18,273.0	10,720.5	116.0	131.7	-10.47	96.5	108.0	6,590.3	6,504.2	86.06	76.581	
18,307.1	11,570.0	18,273.0	10,720.5	117.4	131.7	-10.47	96.5	108.0	6,696.7	6,607.8	88.89	75.336	
18,307.7	11,570.0	18,273.0	10,720.5	117.4	131.7	-10.47	96.5	108.0	6,697.2	6,608.3	88.89	75.342	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #004H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 198-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-13.26	7,730.7	-1,821.6	7,942.9				
100.0	100.0	8.8	8.8	0.1	0.0	-13.26	7,730.7	-1,821.6	7,942.4	7,942.3	0.14	N/A	
200.0	200.0	106.1	106.1	0.5	0.2	-13.26	7,730.7	-1,821.5	7,942.4	7,941.8	0.65	N/A	
300.0	300.0	207.0	207.0	0.8	0.3	-13.26	7,730.9	-1,821.2	7,942.5	7,941.3	1.18	6,716.628	
400.0	400.0	342.7	342.7	1.2	0.8	-13.25	7,730.6	-1,820.8	7,942.2	7,940.1	2.02	3,935.752	
500.0	500.0	428.4	428.4	1.6	1.1	-13.25	7,730.3	-1,820.5	7,941.8	7,939.2	2.68	2,962.469	
585.1	585.1	494.1	494.1	1.9	1.4	-13.25	7,730.3	-1,820.1	7,941.7	7,938.5	3.22	2,466.787	
600.0	600.0	502.8	502.8	1.9	1.4	-13.25	7,730.3	-1,820.1	7,941.7	7,938.4	3.30	2,404.085	
700.0	700.0	611.3	611.3	2.3	1.8	-13.25	7,730.5	-1,819.8	7,941.9	7,937.8	4.05	1,962.750	
753.9	753.9	663.0	662.9	2.5	2.0	-13.25	7,730.6	-1,819.8	7,941.9	7,937.4	4.42	1,795.156	
800.0	800.0	692.3	692.3	2.6	2.1	-13.25	7,730.6	-1,819.7	7,941.9	7,937.2	4.69	1,692.042	
900.0	900.0	798.0	798.0	3.0	2.4	-13.24	7,731.0	-1,819.1	7,942.2	7,936.7	5.43	1,463.241	
1,000.0	1,000.0	1,000.0	914.0	3.4	3.2	-13.24	7,731.1	-1,818.8	7,942.1	7,935.6	6.50	1,221.021	
1,027.5	1,027.5	936.6	936.5	3.5	2.9	-13.24	7,731.0	-1,818.8	7,942.1	7,935.7	6.38	1,245.701	
1,100.0	1,100.0	980.8	980.8	3.7	3.1	-13.24	7,731.1	-1,818.7	7,942.2	7,935.4	6.79	1,169.781	
1,200.0	1,200.0	1,119.4	1,119.4	4.1	3.6	-13.24	7,731.2	-1,818.9	7,942.3	7,934.6	7.62	1,042.086	
1,235.1	1,235.1	1,144.1	1,144.1	4.2	3.6	-13.24	7,731.1	-1,818.9	7,942.2	7,934.4	7.83	1,014.233	
1,300.0	1,300.0	1,198.7	1,198.7	4.4	3.8	-13.24	7,731.2	-1,819.2	7,942.3	7,934.1	8.25	962.896	
1,400.0	1,400.0	1,400.0	1,356.1	4.8	4.5	-13.25	7,730.5	-1,819.6	7,941.9	7,932.6	9.30	854.165	
1,500.0	1,500.0	1,458.7	1,458.7	5.1	4.7	-13.24	7,729.8	-1,819.2	7,941.2	7,931.3	9.87	804.944	
1,600.0	1,600.0	1,560.0	1,560.0	5.5	5.1	5.41	7,728.9	-1,818.6	7,939.3	7,928.7	10.58	750.259	
1,700.0	1,700.0	1,607.5	1,607.5	5.9	5.2	5.41	7,728.5	-1,818.7	7,936.2	7,925.1	11.10	714.666	
1,800.0	1,799.9	1,655.0	1,655.0	6.2	5.4	5.40	7,728.6	-1,819.9	7,932.4	7,920.7	11.63	682.253	
1,900.0	1,899.7	1,655.0	1,655.0	6.6	5.4	5.41	7,728.6	-1,819.9	7,927.6	7,915.6	11.98	661.553	
2,000.0	1,999.4	1,691.9	1,691.8	6.9	5.5	5.41	7,729.1	-1,821.5	7,922.1	7,909.6	12.47	635.502	
2,100.0	2,098.9	1,750.0	1,749.8	7.3	5.7	5.39	7,730.4	-1,824.9	7,915.9	7,902.9	13.02	607.931	
2,200.0	2,198.3	1,750.0	1,749.8	7.7	5.7	5.40	7,730.4	-1,824.9	7,908.5	7,895.1	13.38	591.260	
2,300.0	2,297.4	1,791.9	1,791.5	8.0	5.9	5.39	7,731.8	-1,828.0	7,900.4	7,886.5	13.88	569.348	
2,400.0	2,396.4	1,844.0	1,843.4	8.4	6.1	5.37	7,733.8	-1,832.6	7,892.1	7,877.7	14.41	547.582	
2,500.0	2,495.5	1,916.0	1,915.0	8.8	6.3	5.33	7,736.7	-1,839.2	7,884.3	7,869.3	15.02	524.845	
2,600.0	2,594.5	2,290.8	2,287.2	9.2	7.7	5.07	7,741.9	-1,883.1	7,873.5	7,856.8	16.74	470.266	
2,700.0	2,693.5	2,405.9	2,401.3	9.6	8.1	4.97	7,741.5	-1,897.8	7,862.3	7,844.8	17.53	448.450	
2,800.0	2,792.5	2,475.2	2,470.1	10.0	8.4	4.91	7,741.3	-1,906.7	7,851.2	7,833.0	18.15	432.456	
2,900.0	2,891.6	2,558.5	2,552.7	10.3	8.7	4.85	7,741.4	-1,917.0	7,840.4	7,821.5	18.83	416.342	
3,000.0	2,990.6	2,681.0	2,674.4	10.7	9.1	4.75	7,741.7	-1,931.3	7,829.6	7,809.9	19.66	398.306	
3,100.0	3,089.6	2,795.0	2,787.8	11.1	9.6	4.68	7,742.1	-1,943.0	7,818.4	7,798.0	20.45	382.336	
3,200.0	3,188.6	2,864.1	2,856.6	11.5	9.8	4.64	7,742.5	-1,949.4	7,807.5	7,786.4	21.07	370.514	
3,300.0	3,287.7	2,918.8	2,911.0	11.9	10.0	4.61	7,743.2	-1,954.4	7,796.9	7,775.3	21.64	360.265	
3,400.0	3,386.7	2,977.0	2,968.9	12.3	10.2	4.58	7,744.1	-1,960.2	7,787.0	7,764.8	22.23	350.355	
3,500.0	3,485.7	3,027.6	3,019.3	12.7	10.4	4.55	7,745.3	-1,965.3	7,777.7	7,754.9	22.78	341.395	
3,600.0	3,584.8	3,109.1	3,100.3	13.1	10.8	4.50	7,747.5	-1,973.2	7,768.8	7,745.4	23.45	331.237	
3,700.0	3,683.8	3,202.9	3,193.7	13.5	11.1	4.45	7,750.1	-1,981.9	7,759.9	7,735.7	24.17	321.008	
3,800.0	3,782.8	3,261.0	3,251.4	13.9	11.3	4.41	7,751.7	-1,988.3	7,751.4	7,726.6	24.76	313.063	
3,900.0	3,881.8	3,327.8	3,317.6	14.3	11.6	4.36	7,753.5	-1,996.7	7,743.3	7,717.9	25.39	305.031	
4,000.0	3,980.9	3,445.8	3,434.5	14.7	12.1	4.26	7,756.9	-2,012.6	7,735.6	7,709.4	26.21	295.082	
4,100.0	4,079.9	3,533.6	3,521.5	15.2	12.4	4.19	7,759.2	-2,024.3	7,727.6	7,700.7	26.93	286.981	
4,200.0	4,178.9	3,623.9	3,611.0	15.6	12.8	4.11	7,761.7	-2,036.5	7,719.8	7,692.2	27.65	279.191	
4,300.0	4,277.9	18,621.8	11,468.7	16.0	129.6	-94.52	357.1	-2,601.5	7,697.3	7,623.1	74.24	103.681	
4,400.0	4,377.0	18,610.5	11,468.6	16.4	129.4	-94.26	368.4	-2,601.6	7,602.2	7,527.7	74.51	102.027	
4,500.0	4,476.0	18,593.7	11,468.4	16.8	129.1	-93.89	385.2	-2,601.7	7,507.1	7,432.4	74.75	100.431	
4,600.0	4,575.0	18,577.0	11,468.3	17.2	128.9	-93.51	401.9	-2,601.8	7,412.2	7,337.2	75.00	98.829	
4,625.7	4,600.5	18,572.8	11,468.2	17.3	128.8	-93.42	406.1	-2,601.9	7,387.8	7,312.8	75.07	98.416	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #004H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 198-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,700.0	4,674.1	18,561.4	11,468.1	17.6	128.6	-89.83	417.5	-2,601.9	7,317.4	7,242.1	75.28	97.207	
4,800.0	4,773.6	18,549.1	11,468.0	18.0	128.4	-85.12	429.8	-2,602.0	7,222.7	7,147.1	75.60	95.539	
4,900.0	4,873.2	18,540.2	11,467.9	18.4	128.3	-80.60	438.7	-2,602.1	7,128.2	7,052.2	75.97	93.828	
5,000.0	4,973.1	18,534.6	11,467.9	18.7	128.2	-76.34	444.3	-2,602.1	7,033.9	6,957.5	76.39	92.077	
5,100.0	5,073.0	18,532.3	11,467.9	19.1	128.2	-72.36	446.6	-2,602.1	6,940.1	6,863.2	76.86	90.291	
5,159.0	5,132.1	18,532.6	11,467.9	19.3	128.2	-88.80	446.3	-2,602.1	6,884.9	6,807.8	77.17	89.223	
5,200.0	5,173.0	18,533.1	11,467.9	19.4	128.2	-88.82	445.8	-2,602.1	6,846.7	6,769.3	77.38	88.478	
5,300.0	5,273.0	18,534.4	11,467.9	19.8	128.2	-88.85	444.5	-2,602.1	6,753.5	6,675.6	77.93	86.662	
5,400.0	5,373.0	18,535.7	11,467.9	20.1	128.2	-88.88	443.2	-2,602.1	6,660.5	6,582.0	78.49	84.853	
5,500.0	5,473.0	18,537.0	11,467.9	20.4	128.3	-88.91	441.9	-2,602.1	6,567.8	6,488.7	79.08	83.052	
5,600.0	5,573.0	18,538.3	11,467.9	20.8	128.3	-88.94	440.6	-2,602.1	6,475.2	6,395.5	79.68	81.260	
5,700.0	5,673.0	18,539.6	11,467.9	21.1	128.3	-88.97	439.3	-2,602.1	6,382.9	6,302.6	80.31	79.477	
5,800.0	5,773.0	18,540.8	11,468.0	21.4	128.3	-88.99	438.1	-2,602.1	6,290.8	6,209.8	80.96	77.704	
5,900.0	5,873.0	18,542.1	11,468.0	21.8	128.3	-89.02	436.8	-2,602.0	6,198.9	6,117.3	81.63	75.942	
6,000.0	5,973.0	18,543.4	11,468.0	22.1	128.4	-89.05	435.5	-2,602.0	6,107.3	6,025.0	82.32	74.190	
6,100.0	6,073.0	18,544.6	11,468.0	22.5	128.4	-89.08	434.3	-2,602.0	6,016.0	5,933.0	83.04	72.450	
6,200.0	6,173.0	18,545.8	11,468.0	22.8	128.4	-89.11	433.1	-2,602.0	5,925.0	5,841.2	83.78	70.722	
6,300.0	6,273.0	18,547.1	11,468.0	23.1	128.4	-89.14	431.8	-2,602.0	5,834.2	5,749.7	84.55	69.007	
6,400.0	6,373.0	18,548.3	11,468.0	23.5	128.4	-89.17	430.6	-2,602.0	5,743.8	5,658.4	85.34	67.305	
6,500.0	6,473.0	18,549.5	11,468.0	23.8	128.5	-89.20	429.4	-2,602.0	5,653.6	5,567.5	86.16	65.617	
6,600.0	6,573.0	18,550.7	11,468.0	24.2	128.5	-89.22	428.2	-2,602.0	5,563.9	5,476.8	87.01	63.944	
6,700.0	6,673.0	18,551.9	11,468.1	24.5	128.5	-89.25	427.0	-2,602.0	5,474.4	5,386.5	87.89	62.286	
6,800.0	6,773.0	18,553.1	11,468.1	24.9	128.5	-89.28	425.8	-2,602.0	5,385.4	5,296.6	88.80	60.644	
6,900.0	6,873.0	18,554.2	11,468.1	25.2	128.5	-89.31	424.7	-2,602.0	5,296.7	5,206.9	89.75	59.018	
7,000.0	6,973.0	18,555.4	11,468.1	25.6	128.5	-89.33	423.5	-2,602.0	5,208.4	5,117.7	90.73	57.409	
7,100.0	7,073.0	18,556.6	11,468.1	25.9	128.6	-89.36	422.3	-2,602.0	5,120.6	5,028.8	91.74	55.818	
7,200.0	7,173.0	18,557.7	11,468.1	26.3	128.6	-89.39	421.2	-2,602.0	5,033.2	4,940.4	92.79	54.245	
7,300.0	7,273.0	18,558.9	11,468.1	26.6	128.6	-89.41	420.1	-2,602.0	4,946.3	4,852.4	93.87	52.691	
7,400.0	7,373.0	18,560.0	11,468.1	26.9	128.6	-89.44	418.9	-2,601.9	4,859.9	4,764.9	95.00	51.157	
7,500.0	7,473.0	18,561.1	11,468.1	27.3	128.6	-89.47	417.8	-2,601.9	4,774.0	4,677.9	96.17	49.643	
7,600.0	7,573.0	18,562.2	11,468.2	27.6	128.7	-89.49	416.7	-2,601.9	4,688.7	4,591.4	97.38	48.151	
7,700.0	7,673.0	18,563.4	11,468.2	28.0	128.7	-89.52	415.6	-2,601.9	4,604.0	4,505.4	98.63	46.680	
7,800.0	7,773.0	18,564.5	11,468.2	28.3	128.7	-89.54	414.4	-2,601.9	4,519.9	4,420.0	99.93	45.232	
7,900.0	7,873.0	18,565.6	11,468.2	28.7	128.7	-89.57	413.3	-2,601.9	4,436.5	4,335.2	101.27	43.808	
8,000.0	7,973.0	18,566.6	11,468.2	29.0	128.7	-89.59	412.3	-2,601.9	4,353.8	4,251.1	102.67	42.407	
8,100.0	8,073.0	18,567.7	11,468.2	29.4	128.7	-89.62	411.2	-2,601.9	4,271.8	4,167.7	104.11	41.031	
8,200.0	8,173.0	18,568.8	11,468.2	29.7	128.8	-89.64	410.1	-2,601.9	4,190.6	4,085.0	105.61	39.681	
8,300.0	8,273.0	18,569.9	11,468.2	30.1	128.8	-89.67	409.0	-2,601.9	4,110.2	4,003.0	107.16	38.357	
8,400.0	8,373.0	18,570.9	11,468.2	30.4	128.8	-89.69	408.0	-2,601.9	4,030.7	3,921.9	108.76	37.061	
8,500.0	8,473.0	18,572.0	11,468.2	30.8	128.8	-89.72	406.9	-2,601.9	3,952.1	3,841.7	110.42	35.792	
8,600.0	8,573.0	18,573.1	11,468.3	31.1	128.8	-89.74	405.9	-2,601.9	3,874.5	3,762.4	112.13	34.553	
8,700.0	8,673.0	18,574.1	11,468.3	31.5	128.8	-89.77	404.8	-2,601.9	3,798.0	3,684.1	113.91	33.343	
8,800.0	8,773.0	18,575.1	11,468.3	31.8	128.9	-89.79	403.8	-2,601.9	3,722.6	3,606.8	115.74	32.163	
8,900.0	8,873.0	18,576.2	11,468.3	32.2	128.9	-89.81	402.7	-2,601.8	3,648.3	3,530.7	117.63	31.015	
9,000.0	8,973.0	18,577.2	11,468.3	32.5	128.9	-89.84	401.7	-2,601.8	3,575.3	3,455.8	119.58	29.899	
9,100.0	9,073.0	18,578.2	11,468.3	32.9	128.9	-89.86	400.7	-2,601.8	3,503.7	3,382.1	121.59	28.817	
9,200.0	9,173.0	18,579.2	11,468.3	33.2	128.9	-89.88	399.7	-2,601.8	3,433.4	3,309.8	123.65	27.768	
9,300.0	9,273.0	18,580.2	11,468.3	33.6	128.9	-89.91	398.7	-2,601.8	3,364.7	3,238.9	125.77	26.753	
9,400.0	9,373.0	18,581.2	11,468.3	33.9	129.0	-89.93	397.7	-2,601.8	3,297.6	3,169.6	127.94	25.774	
9,500.0	9,473.0	18,582.2	11,468.3	34.3	129.0	-89.95	396.7	-2,601.8	3,232.1	3,102.0	130.16	24.832	
9,600.0	9,573.0	18,583.2	11,468.3	34.6	129.0	-89.98	395.7	-2,601.8	3,168.5	3,036.1	132.43	23.926	
9,700.0	9,673.0	18,584.2	11,468.3	35.0	129.0	-90.00	394.7	-2,601.8	3,106.8	2,972.1	134.74	23.058	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #004H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 198-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,800.0	9,773.0	18,585.1	11,468.4	35.3	129.0	-90.02	393.8	-2,601.8	3,047.1	2,910.0	137.08	22.229	
9,900.0	9,873.0	18,586.1	11,468.4	35.7	129.0	-90.04	392.8	-2,601.8	2,989.6	2,850.1	139.45	21.439	
10,000.0	9,973.0	18,587.1	11,468.4	36.0	129.0	-90.07	391.8	-2,601.8	2,934.4	2,792.5	141.83	20.689	
10,100.0	10,073.0	18,588.0	11,468.4	36.4	129.1	-90.09	390.9	-2,601.8	2,881.5	2,737.3	144.22	19.980	
10,200.0	10,173.0	18,589.0	11,468.4	36.7	129.1	-90.11	389.9	-2,601.8	2,831.2	2,684.6	146.61	19.311	
10,300.0	10,273.0	18,589.9	11,468.4	37.1	129.1	-90.13	389.0	-2,601.8	2,783.6	2,634.7	148.98	18.685	
10,400.0	10,373.0	18,590.8	11,468.4	37.4	129.1	-90.16	388.1	-2,601.8	2,738.9	2,587.5	151.32	18.100	
10,500.0	10,473.0	18,591.8	11,468.4	37.8	129.1	-90.18	387.1	-2,601.7	2,697.0	2,543.4	153.60	17.559	
10,600.0	10,573.0	18,592.7	11,468.4	38.2	129.1	-90.20	386.2	-2,601.7	2,658.3	2,502.5	155.82	17.060	
10,700.0	10,673.0	18,593.6	11,468.4	38.5	129.1	-90.22	385.3	-2,601.7	2,622.9	2,464.9	157.96	16.605	
10,800.0	10,773.0	18,594.5	11,468.4	38.9	129.2	-90.24	384.4	-2,601.7	2,590.8	2,430.8	159.99	16.193	
10,900.0	10,873.0	18,595.4	11,468.4	39.2	129.2	-90.26	383.5	-2,601.7	2,562.2	2,400.3	161.90	15.825	
11,000.0	10,973.0	18,596.4	11,468.5	39.6	129.2	-90.28	382.6	-2,601.7	2,537.3	2,373.6	163.67	15.502	
11,024.0	10,997.0	18,596.6	11,468.5	39.7	129.2	-90.29	382.3	-2,601.7	2,531.8	2,367.7	164.07	15.431	
11,050.0	11,023.0	18,597.4	11,468.5	39.7	129.2	97.96	381.5	-2,601.7	2,526.2	2,361.7	164.50	15.357	
11,100.0	11,072.8	18,602.7	11,468.5	39.9	129.3	98.80	376.2	-2,601.7	2,516.7	2,351.4	165.33	15.222	
11,150.0	11,122.0	18,613.8	11,468.6	40.0	129.5	99.34	365.1	-2,601.6	2,508.8	2,342.6	166.19	15.096	
11,200.0	11,170.3	18,631.2	11,468.7	40.2	129.7	99.59	347.7	-2,601.4	2,502.4	2,335.4	167.07	14.979	
11,250.0	11,217.2	18,654.1	11,469.0	40.3	130.1	99.56	324.8	-2,601.2	2,497.7	2,329.7	167.96	14.871	
11,300.0	11,262.5	18,682.3	11,469.2	40.4	130.5	99.30	296.6	-2,600.8	2,494.4	2,325.6	168.86	14.772	
11,350.0	11,305.7	18,715.7	11,469.6	40.5	131.1	98.82	263.2	-2,600.3	2,492.6	2,322.8	169.77	14.682	
11,392.8	11,340.9	18,737.6	11,469.9	40.6	131.4	98.46	241.3	-2,599.9	2,492.1	2,321.7	170.45	14.621	CC
11,400.0	11,346.6	18,742.1	11,469.9	40.6	131.5	98.37	236.8	-2,599.8	2,492.1	2,321.6	170.57	14.611	
11,450.0	11,384.8	18,775.4	11,470.3	40.6	132.0	97.71	203.5	-2,599.2	2,492.9	2,321.5	171.39	14.545	ES
11,500.0	11,420.1	18,810.8	11,470.6	40.7	132.6	96.95	168.1	-2,598.6	2,494.8	2,322.6	172.21	14.487	
11,550.0	11,452.2	18,847.5	11,471.0	40.8	133.1	96.13	131.5	-2,598.0	2,497.7	2,324.7	173.01	14.437	
11,600.0	11,480.8	18,886.6	11,471.4	40.9	133.8	95.24	92.4	-2,597.4	2,501.5	2,327.6	173.82	14.391	
11,650.0	11,505.7	18,929.6	11,471.7	40.9	134.4	94.31	49.3	-2,596.7	2,505.9	2,331.3	174.65	14.348	SF
11,700.0	11,526.7	18,931.0	11,471.7	41.0	134.5	93.75	48.0	-2,596.7	2,511.3	2,336.3	174.98	14.352	
11,750.0	11,543.8	18,931.0	11,471.7	41.1	134.5	93.09	48.0	-2,596.7	2,517.9	2,342.7	175.24	14.368	
11,800.0	11,556.6	18,931.0	11,471.7	41.2	134.5	92.29	48.0	-2,596.7	2,525.7	2,350.3	175.45	14.395	
11,850.0	11,565.2	18,931.0	11,471.7	41.2	134.5	91.38	48.0	-2,596.7	2,534.7	2,359.1	175.62	14.433	
11,900.0	11,569.5	18,931.0	11,471.7	41.3	134.5	90.36	48.0	-2,596.7	2,544.7	2,369.0	175.73	14.481	
11,924.0	11,570.0	18,931.0	11,471.7	41.4	134.5	89.83	48.0	-2,596.7	2,549.9	2,374.1	175.77	14.507	
12,000.0	11,570.0	18,931.0	11,471.7	41.5	134.5	89.83	48.0	-2,596.7	2,566.6	2,390.8	175.84	14.596	
12,100.0	11,570.0	18,931.0	11,471.7	41.8	134.5	89.84	48.0	-2,596.7	2,589.0	2,413.1	175.83	14.724	
12,200.0	11,570.0	18,931.0	11,471.7	42.1	134.5	89.84	48.0	-2,596.7	2,611.5	2,435.8	175.70	14.863	
12,292.2	11,570.0	18,931.0	11,471.7	42.5	134.5	89.84	48.0	-2,596.7	2,632.6	2,457.1	175.48	15.002	
12,300.0	11,570.0	18,931.0	11,471.7	42.5	134.5	89.84	48.0	-2,596.7	2,634.4	2,458.9	175.46	15.014	
12,400.0	11,570.0	18,931.0	11,471.7	42.9	134.5	89.84	48.0	-2,596.7	2,659.3	2,484.2	175.10	15.187	
12,500.0	11,570.0	18,931.0	11,471.7	43.4	134.5	89.84	48.0	-2,596.7	2,687.8	2,513.2	174.64	15.390	
12,600.0	11,570.0	18,931.0	11,471.7	44.0	134.5	89.84	48.0	-2,596.7	2,719.6	2,545.6	174.09	15.622	
12,700.0	11,570.0	18,931.0	11,471.7	44.6	134.5	89.84	48.0	-2,596.7	2,754.8	2,581.3	173.45	15.882	
12,800.0	11,570.0	18,931.0	11,471.7	45.3	134.5	89.84	48.0	-2,596.7	2,793.0	2,620.3	172.72	16.171	
12,900.0	11,570.0	18,931.0	11,471.7	46.0	134.5	89.84	48.0	-2,596.7	2,834.3	2,662.3	171.92	16.486	
13,000.0	11,570.0	18,931.0	11,471.7	46.7	134.5	89.84	48.0	-2,596.7	2,878.4	2,707.4	171.05	16.827	
13,100.0	11,570.0	18,931.0	11,471.7	47.6	134.5	89.84	48.0	-2,596.7	2,925.3	2,755.2	170.13	17.195	
13,200.0	11,570.0	18,931.0	11,471.7	48.4	134.5	89.84	48.0	-2,596.7	2,974.8	2,805.7	169.16	17.586	
13,300.0	11,570.0	18,931.0	11,471.7	49.3	134.5	89.84	48.0	-2,596.7	3,026.8	2,858.7	168.14	18.002	
13,400.0	11,570.0	18,931.0	11,471.7	50.2	134.5	89.84	48.0	-2,596.7	3,081.2	2,914.1	167.09	18.441	
13,500.0	11,570.0	18,931.0	11,471.7	51.2	134.5	89.84	48.0	-2,596.7	3,137.9	2,971.8	166.01	18.901	
13,600.0	11,570.0	18,931.0	11,471.7	52.2	134.5	89.84	48.0	-2,596.7	3,196.6	3,031.7	164.91	19.384	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #004H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 198-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,700.0	11,570.0	18,931.0	11,471.7	53.2	134.5	89.84	48.0	-2,596.7	3,257.4	3,093.6	163.80	19.886	
13,800.0	11,570.0	18,931.0	11,471.7	54.3	134.5	89.84	48.0	-2,596.7	3,320.0	3,157.4	162.68	20.409	
13,900.0	11,570.0	18,931.0	11,471.7	55.4	134.5	89.84	48.0	-2,596.7	3,384.5	3,222.9	161.55	20.950	
14,000.0	11,570.0	18,931.0	11,471.7	56.5	134.5	89.84	48.0	-2,596.7	3,450.7	3,290.2	160.43	21.509	
14,100.0	11,570.0	18,931.0	11,471.7	57.7	134.5	89.84	48.0	-2,596.7	3,518.4	3,359.1	159.31	22.086	
14,200.0	11,570.0	18,931.0	11,471.7	58.9	134.5	89.84	48.0	-2,596.7	3,587.7	3,429.5	158.19	22.679	
14,300.0	11,570.0	18,931.0	11,471.7	60.1	134.5	89.84	48.0	-2,596.7	3,658.4	3,501.3	157.09	23.288	
14,400.0	11,570.0	18,931.0	11,471.7	61.3	134.5	89.84	48.0	-2,596.7	3,730.4	3,574.4	156.00	23.912	
14,500.0	11,570.0	18,931.0	11,471.7	62.5	134.5	89.84	48.0	-2,596.7	3,803.7	3,648.7	154.93	24.551	
14,600.0	11,570.0	18,931.0	11,471.7	63.8	134.5	89.84	48.0	-2,596.7	3,878.2	3,724.3	153.88	25.203	
14,700.0	11,570.0	18,931.0	11,471.7	65.0	134.5	89.84	48.0	-2,596.7	3,953.8	3,800.9	152.84	25.869	
14,800.0	11,570.0	18,931.0	11,471.7	66.3	134.5	89.84	48.0	-2,596.7	4,030.4	3,878.6	151.83	26.547	
14,900.0	11,570.0	18,931.0	11,471.7	67.6	134.5	89.84	48.0	-2,596.7	4,108.1	3,957.3	150.83	27.237	
15,000.0	11,570.0	18,931.0	11,471.7	69.0	134.5	89.84	48.0	-2,596.7	4,186.7	4,036.9	149.86	27.938	
15,100.0	11,570.0	18,931.0	11,471.7	70.3	134.5	89.84	48.0	-2,596.7	4,266.3	4,117.4	148.91	28.650	
15,200.0	11,570.0	18,931.0	11,471.7	71.7	134.5	89.84	48.0	-2,596.7	4,346.6	4,198.6	147.98	29.372	
15,300.0	11,570.0	18,931.0	11,471.7	73.0	134.5	89.84	48.0	-2,596.7	4,427.8	4,280.7	147.08	30.104	
15,400.0	11,570.0	18,931.0	11,471.7	74.4	134.5	89.84	48.0	-2,596.7	4,509.7	4,363.5	146.20	30.846	
15,500.0	11,570.0	18,931.0	11,471.7	75.8	134.5	89.84	48.0	-2,596.7	4,592.4	4,447.0	145.35	31.596	
15,600.0	11,570.0	18,931.0	11,471.7	77.2	134.5	89.84	48.0	-2,596.7	4,675.7	4,531.2	144.51	32.355	
15,700.0	11,570.0	18,931.0	11,471.7	78.6	134.5	89.84	48.0	-2,596.7	4,759.6	4,615.9	143.70	33.121	
15,800.0	11,570.0	18,931.0	11,471.7	80.0	134.5	89.84	48.0	-2,596.7	4,844.2	4,701.3	142.92	33.896	
15,900.0	11,570.0	18,931.0	11,471.7	81.4	134.5	89.84	48.0	-2,596.7	4,929.3	4,787.2	142.15	34.677	
16,000.0	11,570.0	18,931.0	11,471.7	82.9	134.5	89.84	48.0	-2,596.7	5,015.0	4,873.6	141.41	35.465	
16,100.0	11,570.0	18,931.0	11,471.7	84.3	134.5	89.84	48.0	-2,596.7	5,101.3	4,960.6	140.69	36.260	
16,200.0	11,570.0	18,931.0	11,471.7	85.8	134.5	89.84	48.0	-2,596.7	5,188.0	5,048.0	139.99	37.060	
16,300.0	11,570.0	18,931.0	11,471.7	87.2	134.5	89.84	48.0	-2,596.7	5,275.1	5,135.8	139.31	37.867	
16,400.0	11,570.0	18,931.0	11,471.7	88.7	134.5	89.84	48.0	-2,596.7	5,362.8	5,224.1	138.65	38.679	
16,500.0	11,570.0	18,931.0	11,471.7	90.2	134.5	89.84	48.0	-2,596.7	5,450.8	5,312.8	138.01	39.496	
16,600.0	11,570.0	18,931.0	11,471.7	91.6	134.5	89.84	48.0	-2,596.7	5,539.3	5,401.9	137.39	40.318	
16,700.0	11,570.0	18,931.0	11,471.7	93.1	134.5	89.84	48.0	-2,596.7	5,628.1	5,491.3	136.79	41.144	
16,800.0	11,570.0	18,931.0	11,471.7	94.6	134.5	89.84	48.0	-2,596.7	5,717.3	5,581.1	136.21	41.975	
16,900.0	11,570.0	18,931.0	11,471.7	96.1	134.5	89.84	48.0	-2,596.7	5,806.9	5,671.3	135.64	42.810	
17,000.0	11,570.0	18,931.0	11,471.7	97.6	134.5	89.84	48.0	-2,596.7	5,896.8	5,761.7	135.10	43.649	
17,100.0	11,570.0	18,931.0	11,471.7	99.1	134.5	89.84	48.0	-2,596.7	5,987.0	5,852.5	134.56	44.492	
17,200.0	11,570.0	18,931.0	11,471.7	100.6	134.5	89.84	48.0	-2,596.7	6,077.6	5,943.5	134.05	45.338	
17,300.0	11,570.0	18,931.0	11,471.7	102.1	134.5	89.84	48.0	-2,596.7	6,168.4	6,034.8	133.55	46.187	
17,400.0	11,570.0	18,931.0	11,471.7	103.7	134.5	89.84	48.0	-2,596.7	6,259.5	6,126.4	133.07	47.039	
17,500.0	11,570.0	18,931.0	11,471.7	105.2	134.5	89.84	48.0	-2,596.7	6,350.9	6,218.3	132.60	47.894	
17,600.0	11,570.0	18,931.0	11,471.7	106.7	134.5	89.84	48.0	-2,596.7	6,442.5	6,310.3	132.15	48.752	
17,700.0	11,570.0	18,931.0	11,471.7	108.3	134.5	89.84	48.0	-2,596.7	6,534.3	6,402.6	131.71	49.612	
17,800.0	11,570.0	18,931.0	11,471.7	109.8	134.5	89.84	48.0	-2,596.7	6,626.5	6,495.2	131.28	50.474	
17,900.0	11,570.0	18,931.0	11,471.7	111.3	134.5	89.84	48.0	-2,596.7	6,718.8	6,587.9	130.87	51.339	
18,000.0	11,570.0	18,931.0	11,471.7	112.9	134.5	89.84	48.0	-2,596.7	6,811.3	6,680.9	130.47	52.205	
18,100.0	11,570.0	18,931.0	11,471.7	114.4	134.5	89.84	48.0	-2,596.7	6,904.1	6,774.0	130.09	53.073	
18,200.0	11,570.0	18,931.0	11,471.7	116.0	134.5	89.84	48.0	-2,596.7	6,997.0	6,867.3	129.71	53.943	
18,307.1	11,570.0	18,931.0	11,471.7	117.4	134.5	89.84	48.0	-2,596.7	7,096.8	6,965.5	131.38	54.016	
18,307.7	11,570.0	18,931.0	11,471.7	117.4	134.5	89.84	48.0	-2,596.7	7,097.3	6,965.9	131.38	54.021	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #005H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 288-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-13.05	7,730.9	-1,791.7	7,936.3				
100.0	100.0	0.0	0.0	0.1	0.0	-13.05	7,730.9	-1,791.7	7,935.8	7,935.7	0.13	N/A	
200.0	200.0	82.9	82.9	0.5	0.1	-13.05	7,731.0	-1,792.0	7,936.0	7,935.3	0.62	N/A	
300.0	300.0	160.7	160.7	0.8	0.3	-13.05	7,731.2	-1,792.6	7,936.4	7,935.3	1.11	7,158.169	
400.0	400.0	238.4	238.4	1.2	0.4	-13.06	7,731.5	-1,793.6	7,937.1	7,935.5	1.59	4,977.812	
500.0	500.0	349.8	349.8	1.6	0.7	-13.07	7,732.1	-1,795.6	7,938.0	7,935.8	2.26	3,518.684	
600.0	600.0	676.6	676.5	1.9	1.8	-13.09	7,729.1	-1,797.0	7,937.1	7,933.3	3.76	2,111.279	
700.0	700.0	750.0	749.9	2.3	2.1	-13.08	7,727.9	-1,796.1	7,935.1	7,930.8	4.37	1,816.919	
800.0	800.0	814.6	814.5	2.6	2.3	-13.08	7,727.0	-1,795.4	7,933.6	7,928.6	4.95	1,603.328	
900.0	900.0	881.5	881.4	3.0	2.5	-13.08	7,726.4	-1,794.6	7,932.4	7,926.9	5.54	1,432.510	
1,000.0	1,000.0	959.0	958.9	3.4	2.8	-13.07	7,726.0	-1,793.8	7,931.7	7,925.5	6.16	1,286.737	
1,100.0	1,100.0	1,087.8	1,087.7	3.7	3.3	-13.06	7,725.1	-1,792.0	7,930.7	7,923.7	6.97	1,137.289	
1,200.0	1,200.0	1,180.2	1,180.0	4.1	3.6	-13.05	7,724.5	-1,790.8	7,929.7	7,922.0	7.66	1,035.649	
1,300.0	1,300.0	1,266.9	1,266.7	4.4	3.9	-13.05	7,724.0	-1,789.8	7,928.8	7,920.5	8.32	952.863	
1,400.0	1,400.0	1,355.7	1,355.5	4.8	4.2	-13.04	7,723.6	-1,788.9	7,928.2	7,919.2	8.99	881.536	
1,500.0	1,500.0	1,456.8	1,456.7	5.1	4.6	-13.03	7,723.1	-1,787.9	7,927.6	7,917.8	9.71	816.398	
1,600.0	1,600.0	1,591.3	1,591.1	5.5	5.0	5.62	7,722.4	-1,786.3	7,925.9	7,915.3	10.55	751.552	
1,700.0	1,700.0	1,712.5	1,712.3	5.9	5.5	5.64	7,721.4	-1,784.2	7,922.0	7,910.7	11.34	698.887	
1,800.0	1,799.9	1,767.9	1,767.7	6.2	5.7	5.66	7,721.2	-1,782.4	7,916.7	7,904.8	11.89	665.840	
1,900.0	1,899.7	1,839.1	1,838.8	6.6	5.9	5.70	7,721.6	-1,779.0	7,910.1	7,897.6	12.50	632.800	
2,000.0	1,999.4	1,923.0	1,922.6	6.9	6.2	5.75	7,722.5	-1,774.0	7,902.0	7,888.8	13.16	600.621	
2,100.0	2,098.9	2,012.2	2,011.5	7.3	6.5	5.80	7,723.7	-1,768.2	7,892.3	7,878.4	13.83	570.562	
2,200.0	2,198.3	2,095.4	2,094.5	7.7	6.8	5.87	7,725.0	-1,762.6	7,881.1	7,866.6	14.49	543.943	
2,300.0	2,297.4	2,196.9	2,195.8	8.0	7.2	5.94	7,726.7	-1,755.6	7,868.2	7,853.0	15.21	517.215	
2,400.0	2,396.4	2,298.4	2,297.0	8.4	7.6	6.01	7,728.5	-1,748.3	7,854.4	7,838.5	15.94	492.815	
2,500.0	2,495.5	2,393.7	2,392.0	8.8	7.9	6.07	7,730.2	-1,740.8	7,840.7	7,824.1	16.64	471.089	
2,600.0	2,594.5	2,498.4	2,496.3	9.2	8.3	6.16	7,732.4	-1,731.5	7,827.0	7,809.6	17.39	450.147	
2,700.0	2,693.5	2,621.7	2,618.8	9.6	8.8	6.27	7,735.2	-1,718.7	7,813.1	7,794.9	18.20	429.175	
2,800.0	2,792.5	2,730.2	2,726.5	10.0	9.2	6.38	7,737.7	-1,705.5	7,798.9	7,779.9	18.97	411.013	
2,900.0	2,891.6	2,802.8	2,798.6	10.3	9.4	6.46	7,739.6	-1,696.5	7,784.9	7,765.3	19.61	396.901	
3,000.0	2,990.6	2,862.2	2,857.5	10.7	9.7	6.52	7,741.2	-1,689.5	7,771.3	7,751.1	20.20	384.642	
3,100.0	3,089.6	2,921.0	2,915.9	11.1	9.9	6.57	7,743.1	-1,683.1	7,758.3	7,737.5	20.79	373.131	
3,200.0	3,188.6	3,027.7	3,021.9	11.5	10.3	6.67	7,746.7	-1,671.6	7,745.6	7,724.0	21.56	359.231	
3,300.0	3,287.7	3,262.6	3,256.0	11.9	11.2	6.85	7,750.2	-1,652.8	7,731.1	7,708.4	22.79	339.168	
3,400.0	3,386.7	3,349.0	3,342.3	12.3	11.5	6.89	7,750.7	-1,647.7	7,716.6	7,693.2	23.48	328.683	
3,500.0	3,485.7	3,435.6	3,428.7	12.7	11.8	6.94	7,751.2	-1,642.7	7,702.3	7,678.1	24.16	318.788	
3,600.0	3,584.8	3,514.5	3,507.5	13.1	12.1	6.99	7,751.8	-1,638.3	7,688.1	7,663.3	24.82	309.780	
3,700.0	3,683.8	3,585.0	3,577.9	13.5	12.4	7.03	7,752.7	-1,634.2	7,674.2	7,648.8	25.45	301.598	
3,800.0	3,782.8	3,658.0	3,650.8	13.9	12.6	7.07	7,753.8	-1,629.8	7,660.7	7,634.6	26.08	293.709	
3,900.0	3,881.8	3,731.3	3,723.8	14.3	12.9	7.11	7,755.2	-1,625.4	7,647.6	7,620.9	26.72	286.199	
4,000.0	3,980.9	3,821.8	3,814.2	14.7	13.2	7.17	7,757.3	-1,619.7	7,634.7	7,607.3	27.42	278.402	
4,100.0	4,079.9	18,657.8	11,476.9	15.2	130.4	-123.54	301.6	-1,192.5	7,570.1	7,503.8	66.29	114.188	
4,200.0	4,178.9	18,649.0	11,476.8	15.6	130.2	-123.29	310.4	-1,192.6	7,471.4	7,405.1	66.35	112.609	
4,300.0	4,277.9	18,640.2	11,476.8	16.0	130.1	-123.04	319.3	-1,192.7	7,372.8	7,306.4	66.41	111.019	
4,400.0	4,377.0	18,631.2	11,476.8	16.4	130.0	-122.78	328.2	-1,192.8	7,274.2	7,207.7	66.48	109.419	
4,500.0	4,476.0	18,622.2	11,476.8	16.8	129.8	-122.51	337.3	-1,192.9	7,175.6	7,109.1	66.56	107.811	
4,600.0	4,575.0	18,621.2	11,476.8	17.2	129.8	-122.48	338.3	-1,192.9	7,077.1	7,010.3	66.72	106.076	
4,625.7	4,600.5	18,616.9	11,476.8	17.3	129.7	-122.35	342.6	-1,193.0	7,051.8	6,985.0	66.72	105.689	
4,700.0	4,674.1	18,605.3	11,476.8	17.6	129.6	-116.23	354.1	-1,193.1	6,978.5	6,911.7	66.75	104.548	
4,800.0	4,773.6	18,592.5	11,476.8	18.0	129.4	-107.01	366.9	-1,193.1	6,879.7	6,812.9	66.82	102.961	
4,900.0	4,873.2	18,582.9	11,476.8	18.4	129.2	-97.01	376.5	-1,193.2	6,780.9	6,714.0	66.92	101.322	
5,000.0	4,973.1	18,576.5	11,476.8	18.7	129.1	-86.81	383.0	-1,193.3	6,682.0	6,615.0	67.07	99.634	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #005H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 288-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	18,573.1	11,476.8	19.1	129.1	-77.09	386.3	-1,193.3	6,583.2	6,516.0	67.24	97.900	
5,159.0	5,132.1	18,572.6	11,476.8	19.3	129.0	-90.43	386.8	-1,193.3	6,525.0	6,457.6	67.37	96.857	
5,200.0	5,173.0	18,572.6	11,476.8	19.4	129.0	-90.43	386.8	-1,193.3	6,484.5	6,417.1	67.46	96.127	
5,300.0	5,273.0	18,572.7	11,476.8	19.8	129.0	-90.43	386.8	-1,193.3	6,385.9	6,318.2	67.69	94.343	
5,400.0	5,373.0	18,572.7	11,476.8	20.1	129.0	-90.43	386.8	-1,193.3	6,287.3	6,219.4	67.93	92.557	
5,500.0	5,473.0	18,572.7	11,476.8	20.4	129.0	-90.43	386.7	-1,193.3	6,188.8	6,120.6	68.18	90.770	
5,600.0	5,573.0	18,572.7	11,476.8	20.8	129.0	-90.43	386.7	-1,193.3	6,090.3	6,021.8	68.44	88.983	
5,700.0	5,673.0	18,572.8	11,476.8	21.1	129.0	-90.44	386.7	-1,193.3	5,991.8	5,923.1	68.72	87.196	
5,800.0	5,773.0	18,572.8	11,476.8	21.4	129.0	-90.44	386.7	-1,193.3	5,893.4	5,824.4	69.00	85.409	
5,900.0	5,873.0	18,572.8	11,476.8	21.8	129.0	-90.44	386.6	-1,193.3	5,795.1	5,725.8	69.30	83.624	
6,000.0	5,973.0	18,572.8	11,476.8	22.1	129.0	-90.44	386.6	-1,193.3	5,696.8	5,627.2	69.61	81.840	
6,100.0	6,073.0	18,572.8	11,476.8	22.5	129.0	-90.44	386.6	-1,193.3	5,598.6	5,528.6	69.93	80.058	
6,200.0	6,173.0	18,572.9	11,476.8	22.8	129.0	-90.44	386.6	-1,193.3	5,500.4	5,430.1	70.27	78.279	
6,300.0	6,273.0	18,572.9	11,476.8	23.1	129.1	-90.44	386.6	-1,193.3	5,402.3	5,331.7	70.62	76.503	
6,400.0	6,373.0	18,572.9	11,476.8	23.5	129.1	-90.44	386.5	-1,193.3	5,304.3	5,233.3	70.98	74.731	
6,500.0	6,473.0	18,572.9	11,476.8	23.8	129.1	-90.44	386.5	-1,193.3	5,206.4	5,135.0	71.36	72.962	
6,600.0	6,573.0	18,572.9	11,476.8	24.2	129.1	-90.45	386.5	-1,193.3	5,108.5	5,036.7	71.75	71.198	
6,700.0	6,673.0	18,573.0	11,476.8	24.5	129.1	-90.45	386.5	-1,193.3	5,010.7	4,938.6	72.16	69.438	
6,800.0	6,773.0	18,573.0	11,476.8	24.9	129.1	-90.45	386.5	-1,193.3	4,913.0	4,840.4	72.59	67.684	
6,900.0	6,873.0	18,573.0	11,476.8	25.2	129.1	-90.45	386.4	-1,193.3	4,815.4	4,742.4	73.03	65.935	
7,000.0	6,973.0	18,573.0	11,476.8	25.6	129.1	-90.45	386.4	-1,193.3	4,717.9	4,644.4	73.50	64.191	
7,100.0	7,073.0	18,573.0	11,476.8	25.9	129.1	-90.45	386.4	-1,193.3	4,620.5	4,546.6	73.98	62.454	
7,200.0	7,173.0	18,573.1	11,476.8	26.3	129.1	-90.45	386.4	-1,193.3	4,523.3	4,448.8	74.49	60.724	
7,300.0	7,273.0	18,573.1	11,476.8	26.6	129.1	-90.45	386.4	-1,193.3	4,426.1	4,351.1	75.02	59.000	
7,400.0	7,373.0	18,573.1	11,476.8	26.9	129.1	-90.45	386.3	-1,193.3	4,329.1	4,253.5	75.57	57.284	
7,500.0	7,473.0	18,573.1	11,476.8	27.3	129.1	-90.46	386.3	-1,193.3	4,232.2	4,156.1	76.15	55.576	
7,600.0	7,573.0	18,573.1	11,476.8	27.6	129.1	-90.46	386.3	-1,193.3	4,135.5	4,058.7	76.76	53.876	
7,700.0	7,673.0	18,573.2	11,476.8	28.0	129.1	-90.46	386.3	-1,193.3	4,038.9	3,961.5	77.40	52.184	
7,800.0	7,773.0	18,573.2	11,476.8	28.3	129.1	-90.46	386.3	-1,193.3	3,942.5	3,864.4	78.07	50.502	
7,900.0	7,873.0	18,573.2	11,476.8	28.7	129.1	-90.46	386.2	-1,193.3	3,846.3	3,767.5	78.77	48.829	
8,000.0	7,973.0	18,573.2	11,476.8	29.0	129.1	-90.46	386.2	-1,193.3	3,750.2	3,670.7	79.51	47.166	
8,100.0	8,073.0	18,573.2	11,476.8	29.4	129.1	-90.46	386.2	-1,193.3	3,654.4	3,574.1	80.29	45.513	
8,200.0	8,173.0	18,573.2	11,476.8	29.7	129.1	-90.46	386.2	-1,193.3	3,558.8	3,477.7	81.12	43.872	
8,300.0	8,273.0	18,573.3	11,476.8	30.1	129.1	-90.46	386.2	-1,193.3	3,463.5	3,381.5	81.99	42.242	
8,400.0	8,373.0	18,573.3	11,476.8	30.4	129.1	-90.46	386.2	-1,193.3	3,368.5	3,285.5	82.91	40.626	
8,500.0	8,473.0	18,573.3	11,476.8	30.8	129.1	-90.47	386.1	-1,193.3	3,273.7	3,189.8	83.89	39.022	
8,600.0	8,573.0	18,573.3	11,476.8	31.1	129.1	-90.47	386.1	-1,193.3	3,179.2	3,094.3	84.93	37.432	
8,700.0	8,673.0	18,573.3	11,476.8	31.5	129.1	-90.47	386.1	-1,193.3	3,085.1	2,999.1	86.04	35.857	
8,800.0	8,773.0	18,573.4	11,476.8	31.8	129.1	-90.47	386.1	-1,193.3	2,991.4	2,904.2	87.22	34.298	
8,900.0	8,873.0	18,573.4	11,476.8	32.2	129.1	-90.47	386.1	-1,193.3	2,898.1	2,809.7	88.48	32.756	
9,000.0	8,973.0	18,573.4	11,476.8	32.5	129.1	-90.47	386.1	-1,193.3	2,805.3	2,715.5	89.82	31.232	
9,100.0	9,073.0	18,573.4	11,476.8	32.9	129.1	-90.47	386.0	-1,193.3	2,713.0	2,621.7	91.26	29.728	
9,200.0	9,173.0	18,573.4	11,476.8	33.2	129.1	-90.47	386.0	-1,193.3	2,621.2	2,528.4	92.81	28.244	
9,300.0	9,273.0	18,573.4	11,476.8	33.6	129.1	-90.47	386.0	-1,193.3	2,530.1	2,435.6	94.47	26.783	
9,400.0	9,373.0	18,573.5	11,476.8	33.9	129.1	-90.47	386.0	-1,193.3	2,439.7	2,343.4	96.25	25.347	
9,500.0	9,473.0	18,573.5	11,476.8	34.3	129.1	-90.47	386.0	-1,193.3	2,350.0	2,251.8	98.18	23.936	
9,600.0	9,573.0	18,573.5	11,476.8	34.6	129.1	-90.48	386.0	-1,193.3	2,261.2	2,160.9	100.26	22.554	
9,700.0	9,673.0	18,573.5	11,476.8	35.0	129.1	-90.48	385.9	-1,193.3	2,173.4	2,070.9	102.50	21.204	
9,800.0	9,773.0	18,573.5	11,476.8	35.3	129.1	-90.48	385.9	-1,193.3	2,086.7	1,981.7	104.93	19.886	
9,900.0	9,873.0	18,573.5	11,476.8	35.7	129.1	-90.48	385.9	-1,193.3	2,001.2	1,893.6	107.56	18.605	
10,000.0	9,973.0	18,573.6	11,476.8	36.0	129.1	-90.48	385.9	-1,193.3	1,917.1	1,806.7	110.41	17.364	
10,100.0	10,073.0	18,573.6	11,476.8	36.4	129.1	-90.48	385.9	-1,193.3	1,834.6	1,721.1	113.49	16.165	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #005H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 288-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	18,573.6	11,476.8	36.7	129.1	-90.48	385.9	-1,193.3	1,753.9	1,637.1	116.82	15.014	
10,300.0	10,273.0	18,573.6	11,476.8	37.1	129.1	-90.48	385.8	-1,193.3	1,675.4	1,554.9	120.42	13.913	
10,400.0	10,373.0	18,573.6	11,476.8	37.4	129.1	-90.48	385.8	-1,193.3	1,599.2	1,474.9	124.29	12.866	
10,500.0	10,473.0	18,573.6	11,476.8	37.8	129.1	-90.48	385.8	-1,193.3	1,525.8	1,397.3	128.43	11.880	
10,600.0	10,573.0	18,573.6	11,476.8	38.2	129.1	-90.48	385.8	-1,193.3	1,455.5	1,322.7	132.84	10.957	
10,700.0	10,673.0	18,573.7	11,476.8	38.5	129.1	-90.48	385.8	-1,193.3	1,388.9	1,251.4	137.48	10.103	
10,800.0	10,773.0	18,573.7	11,476.8	38.9	129.1	-90.49	385.8	-1,193.3	1,326.5	1,184.2	142.30	9.322	
10,900.0	10,873.0	18,573.7	11,476.8	39.2	129.1	-90.49	385.7	-1,193.3	1,268.9	1,121.7	147.22	8.619	
11,000.0	10,973.0	18,573.7	11,476.8	39.6	129.1	-90.49	385.7	-1,193.3	1,216.8	1,064.7	152.11	7.999	
11,024.0	10,997.0	18,573.7	11,476.8	39.7	129.1	-90.49	385.7	-1,193.3	1,205.2	1,052.0	153.27	7.864	
11,050.0	11,023.0	18,574.3	11,476.8	39.7	129.1	98.53	385.2	-1,193.3	1,193.2	1,038.6	154.51	7.722	
11,100.0	11,072.8	18,578.6	11,476.8	39.9	129.1	100.65	380.8	-1,193.3	1,171.7	1,014.8	156.88	7.469	
11,150.0	11,122.0	18,587.1	11,476.8	40.0	129.3	102.22	372.3	-1,193.2	1,152.6	993.5	159.18	7.241	
11,200.0	11,170.3	18,599.7	11,476.8	40.2	129.5	103.27	359.7	-1,193.1	1,136.3	974.9	161.39	7.040	
11,250.0	11,217.2	18,617.4	11,476.8	40.3	129.8	103.78	342.1	-1,193.0	1,122.7	959.2	163.49	6.867	
11,300.0	11,262.5	18,639.6	11,476.8	40.4	130.1	103.80	319.8	-1,192.7	1,111.8	946.4	165.45	6.720	
11,350.0	11,305.7	18,666.1	11,476.9	40.5	130.5	103.41	293.3	-1,192.4	1,103.6	936.4	167.23	6.599	
11,400.0	11,346.6	18,696.7	11,477.0	40.6	131.0	102.66	262.8	-1,192.0	1,098.0	929.1	168.85	6.503	
11,450.0	11,384.8	18,729.3	11,477.2	40.6	131.5	101.68	230.2	-1,191.6	1,094.7	924.4	170.27	6.429	
11,500.0	11,420.1	18,765.1	11,477.4	40.7	132.1	100.48	194.4	-1,191.0	1,093.4	921.9	171.53	6.374	
11,507.4	11,425.1	18,770.6	11,477.5	40.7	132.2	100.29	188.8	-1,191.0	1,093.4	921.7	171.71	6.368	CC
11,550.0	11,452.2	18,803.1	11,477.6	40.8	132.7	99.14	156.4	-1,190.5	1,094.0	921.4	172.65	6.337	ES
11,600.0	11,480.8	18,842.1	11,477.7	40.9	133.3	97.74	117.4	-1,189.9	1,096.2	922.6	173.62	6.314	
11,650.0	11,505.7	18,876.0	11,477.8	40.9	133.8	96.49	83.5	-1,189.5	1,099.7	925.4	174.35	6.308	SF
11,700.0	11,526.7	18,876.0	11,477.8	41.0	133.8	95.91	83.5	-1,189.5	1,105.5	931.4	174.10	6.350	
11,750.0	11,543.8	18,876.0	11,477.8	41.1	133.8	95.07	83.5	-1,189.5	1,113.9	940.3	173.59	6.417	
11,800.0	11,556.6	18,876.0	11,477.8	41.2	133.8	93.95	83.5	-1,189.5	1,124.8	952.0	172.83	6.508	
11,850.0	11,565.2	18,876.0	11,477.8	41.2	133.8	92.57	83.5	-1,189.5	1,138.1	966.3	171.85	6.623	
11,900.0	11,569.5	18,876.0	11,477.8	41.3	133.8	90.94	83.5	-1,189.5	1,153.6	982.9	170.69	6.758	
11,924.0	11,570.0	18,876.0	11,477.8	41.4	133.8	90.07	83.5	-1,189.5	1,161.8	991.7	170.08	6.831	
12,000.0	11,570.0	18,876.0	11,477.8	41.5	133.8	90.07	83.5	-1,189.5	1,189.6	1,021.6	167.93	7.084	
12,100.0	11,570.0	18,876.0	11,477.8	41.8	133.8	90.07	83.5	-1,189.5	1,229.5	1,064.9	164.69	7.466	
12,200.0	11,570.0	18,876.0	11,477.8	42.1	133.8	90.07	83.5	-1,189.5	1,273.1	1,112.0	161.08	7.903	
12,292.2	11,570.0	18,876.0	11,477.8	42.5	133.8	90.07	83.5	-1,189.5	1,316.0	1,158.5	157.52	8.355	
12,300.0	11,570.0	18,876.0	11,477.8	42.5	133.8	90.07	83.5	-1,189.5	1,319.8	1,162.6	157.21	8.395	
12,400.0	11,570.0	18,876.0	11,477.8	42.9	133.8	90.07	83.5	-1,189.5	1,370.9	1,217.7	153.21	8.948	
12,500.0	11,570.0	18,876.0	11,477.8	43.4	133.8	90.07	83.5	-1,189.5	1,427.2	1,278.0	149.20	9.566	
12,600.0	11,570.0	18,876.0	11,477.8	44.0	133.8	90.07	83.5	-1,189.5	1,488.2	1,342.9	145.28	10.243	
12,700.0	11,570.0	18,876.0	11,477.8	44.6	133.8	90.07	83.5	-1,189.5	1,553.2	1,411.7	141.50	10.977	
12,800.0	11,570.0	18,876.0	11,477.8	45.3	133.8	90.07	83.5	-1,189.5	1,621.7	1,483.8	137.88	11.761	
12,900.0	11,570.0	18,876.0	11,477.8	46.0	133.8	90.07	83.5	-1,189.5	1,693.4	1,558.9	134.47	12.593	
13,000.0	11,570.0	18,876.0	11,477.8	46.7	133.8	90.07	83.5	-1,189.5	1,767.8	1,636.6	131.27	13.467	
13,100.0	11,570.0	18,876.0	11,477.8	47.6	133.8	90.07	83.5	-1,189.5	1,844.7	1,716.4	128.27	14.381	
13,200.0	11,570.0	18,876.0	11,477.8	48.4	133.8	90.07	83.5	-1,189.5	1,923.7	1,798.2	125.49	15.329	
13,300.0	11,570.0	18,876.0	11,477.8	49.3	133.8	90.07	83.5	-1,189.5	2,004.5	1,881.6	122.91	16.309	
13,400.0	11,570.0	18,876.0	11,477.8	50.2	133.8	90.07	83.5	-1,189.5	2,087.0	1,966.5	120.52	17.317	
13,500.0	11,570.0	18,876.0	11,477.8	51.2	133.8	90.07	83.5	-1,189.5	2,171.0	2,052.7	118.32	18.350	
13,600.0	11,570.0	18,876.0	11,477.8	52.2	133.8	90.07	83.5	-1,189.5	2,256.3	2,140.0	116.28	19.405	
13,700.0	11,570.0	18,876.0	11,477.8	53.2	133.8	90.07	83.5	-1,189.5	2,342.8	2,228.4	114.40	20.479	
13,800.0	11,570.0	18,876.0	11,477.8	54.3	133.8	90.07	83.5	-1,189.5	2,430.3	2,317.6	112.67	21.571	
13,900.0	11,570.0	18,876.0	11,477.8	55.4	133.8	90.07	83.5	-1,189.5	2,518.7	2,407.6	111.07	22.677	
14,000.0	11,570.0	18,876.0	11,477.8	56.5	133.8	90.07	83.5	-1,189.5	2,608.0	2,498.4	109.59	23.797	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #005H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 288-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	18,876.0	11,477.8	57.7	133.8	90.07	83.5	-1,189.5	2,698.0	2,589.8	108.24	24.927	
14,200.0	11,570.0	18,876.0	11,477.8	58.9	133.8	90.07	83.5	-1,189.5	2,788.7	2,681.7	106.98	26.067	
14,300.0	11,570.0	18,876.0	11,477.8	60.1	133.8	90.07	83.5	-1,189.5	2,880.0	2,774.2	105.82	27.215	
14,400.0	11,570.0	18,876.0	11,477.8	61.3	133.8	90.07	83.5	-1,189.5	2,971.9	2,867.1	104.76	28.370	
14,500.0	11,570.0	18,876.0	11,477.8	62.5	133.8	90.07	83.5	-1,189.5	3,064.3	2,960.5	103.77	29.530	
14,600.0	11,570.0	18,876.0	11,477.8	63.8	133.8	90.07	83.5	-1,189.5	3,157.1	3,054.3	102.86	30.695	
14,700.0	11,570.0	18,876.0	11,477.8	65.0	133.8	90.07	83.5	-1,189.5	3,250.4	3,148.4	102.01	31.863	
14,800.0	11,570.0	18,876.0	11,477.8	66.3	133.8	90.07	83.5	-1,189.5	3,344.0	3,242.8	101.23	33.034	
14,900.0	11,570.0	18,876.0	11,477.8	67.6	133.8	90.07	83.5	-1,189.5	3,438.1	3,337.5	100.51	34.207	
15,000.0	11,570.0	18,876.0	11,477.8	69.0	133.8	90.07	83.5	-1,189.5	3,532.4	3,432.6	99.84	35.381	
15,100.0	11,570.0	18,876.0	11,477.8	70.3	133.8	90.07	83.5	-1,189.5	3,627.1	3,527.8	99.22	36.556	
15,200.0	11,570.0	18,876.0	11,477.8	71.7	133.8	90.07	83.5	-1,189.5	3,722.0	3,623.3	98.65	37.731	
15,300.0	11,570.0	18,876.0	11,477.8	73.0	133.8	90.07	83.5	-1,189.5	3,817.2	3,719.1	98.11	38.906	
15,400.0	11,570.0	18,876.0	11,477.8	74.4	133.8	90.07	83.5	-1,189.5	3,912.6	3,815.0	97.62	40.080	
15,500.0	11,570.0	18,876.0	11,477.8	75.8	133.8	90.07	83.5	-1,189.5	4,008.2	3,911.1	97.16	41.253	
15,600.0	11,570.0	18,876.0	11,477.8	77.2	133.8	90.07	83.5	-1,189.5	4,104.1	4,007.4	96.74	42.425	
15,700.0	11,570.0	18,876.0	11,477.8	78.6	133.8	90.07	83.5	-1,189.5	4,200.2	4,103.8	96.34	43.595	
15,800.0	11,570.0	18,876.0	11,477.8	80.0	133.8	90.07	83.5	-1,189.5	4,296.4	4,200.4	95.98	44.764	
15,900.0	11,570.0	18,876.0	11,477.8	81.4	133.8	90.07	83.5	-1,189.5	4,392.8	4,297.1	95.64	45.930	
16,000.0	11,570.0	18,876.0	11,477.8	82.9	133.8	90.07	83.5	-1,189.5	4,489.3	4,394.0	95.33	47.095	
16,100.0	11,570.0	18,876.0	11,477.8	84.3	133.8	90.07	83.5	-1,189.5	4,586.0	4,491.0	95.03	48.257	
16,200.0	11,570.0	18,876.0	11,477.8	85.8	133.8	90.07	83.5	-1,189.5	4,682.9	4,588.1	94.76	49.417	
16,300.0	11,570.0	18,876.0	11,477.8	87.2	133.8	90.07	83.5	-1,189.5	4,779.9	4,685.4	94.51	50.574	
16,400.0	11,570.0	18,876.0	11,477.8	88.7	133.8	90.07	83.5	-1,189.5	4,877.0	4,782.7	94.28	51.728	
16,500.0	11,570.0	18,876.0	11,477.8	90.2	133.8	90.07	83.5	-1,189.5	4,974.2	4,880.1	94.07	52.879	
16,600.0	11,570.0	18,876.0	11,477.8	91.6	133.8	90.07	83.5	-1,189.5	5,071.5	4,977.6	93.87	54.028	
16,700.0	11,570.0	18,876.0	11,477.8	93.1	133.8	90.07	83.5	-1,189.5	5,168.9	5,075.2	93.68	55.174	
16,800.0	11,570.0	18,876.0	11,477.8	94.6	133.8	90.07	83.5	-1,189.5	5,266.4	5,172.9	93.51	56.317	
16,900.0	11,570.0	18,876.0	11,477.8	96.1	133.8	90.07	83.5	-1,189.5	5,364.0	5,270.7	93.36	57.457	
17,000.0	11,570.0	18,876.0	11,477.8	97.6	133.8	90.07	83.5	-1,189.5	5,461.7	5,368.5	93.21	58.593	
17,100.0	11,570.0	18,876.0	11,477.8	99.1	133.8	90.07	83.5	-1,189.5	5,559.5	5,466.4	93.08	59.727	
17,200.0	11,570.0	18,876.0	11,477.8	100.6	133.8	90.07	83.5	-1,189.5	5,657.4	5,564.4	92.96	60.858	
17,300.0	11,570.0	18,876.0	11,477.8	102.1	133.8	90.07	83.5	-1,189.5	5,755.3	5,662.4	92.85	61.985	
17,400.0	11,570.0	18,876.0	11,477.8	103.7	133.8	90.07	83.5	-1,189.5	5,853.3	5,760.5	92.75	63.109	
17,500.0	11,570.0	18,876.0	11,477.8	105.2	133.8	90.07	83.5	-1,189.5	5,951.4	5,858.7	92.66	64.230	
17,600.0	11,570.0	18,876.0	11,477.8	106.7	133.8	90.07	83.5	-1,189.5	6,049.5	5,956.9	92.57	65.348	
17,700.0	11,570.0	18,876.0	11,477.8	108.3	133.8	90.07	83.5	-1,189.5	6,147.7	6,055.2	92.50	66.463	
17,800.0	11,570.0	18,876.0	11,477.8	109.8	133.8	90.07	83.5	-1,189.5	6,245.9	6,153.5	92.43	67.575	
17,900.0	11,570.0	18,876.0	11,477.8	111.3	133.8	90.07	83.5	-1,189.5	6,344.2	6,251.9	92.37	68.683	
18,000.0	11,570.0	18,876.0	11,477.8	112.9	133.8	90.07	83.5	-1,189.5	6,442.6	6,350.3	92.32	69.788	
18,100.0	11,570.0	18,876.0	11,477.8	114.4	133.8	90.07	83.5	-1,189.5	6,541.0	6,448.7	92.27	70.890	
18,200.0	11,570.0	18,876.0	11,477.8	116.0	133.8	90.07	83.5	-1,189.5	6,639.4	6,547.2	92.23	71.988	
18,307.1	11,570.0	18,876.0	11,477.8	117.4	133.8	90.07	83.5	-1,189.5	6,745.0	6,649.9	95.07	70.946	
18,307.7	11,570.0	18,876.0	11,477.8	117.4	133.8	90.07	83.5	-1,189.5	6,745.5	6,650.4	95.07	70.951	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #006H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 290-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	7.34	7,602.2	978.7	7,665.2				
100.0	100.0	32.7	32.7	0.1	0.1	7.34	7,602.2	978.7	7,664.9	7,664.8	0.18	N/A	
200.0	200.0	136.5	136.5	0.5	0.2	7.33	7,602.2	978.5	7,664.9	7,664.2	0.71	N/A	
300.0	300.0	240.2	240.2	0.8	0.4	7.33	7,602.2	978.0	7,664.8	7,663.6	1.23	6,232.129	
400.0	400.0	368.2	368.2	1.2	0.7	7.32	7,602.0	977.0	7,664.6	7,662.6	1.95	3,933.472	
500.0	500.0	450.0	450.0	1.6	1.0	7.32	7,601.7	976.3	7,664.2	7,661.6	2.60	2,948.166	
600.0	600.0	536.3	536.2	1.9	1.3	7.31	7,601.7	975.4	7,664.1	7,660.8	3.27	2,345.754	
700.0	700.0	659.8	659.8	2.3	1.8	7.30	7,601.7	973.8	7,663.9	7,659.9	4.07	1,883.472	
729.5	729.5	729.5	677.4	2.4	2.0	7.30	7,601.7	973.6	7,663.8	7,659.4	4.42	1,732.061	
800.0	800.0	696.7	696.6	2.6	1.9	7.30	7,601.8	973.4	7,663.9	7,659.4	4.56	1,682.127	
900.0	900.0	737.0	737.0	3.0	2.1	7.30	7,602.2	973.4	7,664.9	7,659.8	5.05	1,516.399	
1,000.0	1,000.0	762.9	762.8	3.4	2.1	7.30	7,602.7	973.7	7,666.6	7,661.1	5.50	1,393.651	
1,100.0	1,100.0	801.3	801.3	3.7	2.3	7.30	7,603.6	974.2	7,669.2	7,663.2	5.99	1,280.436	
1,200.0	1,200.0	867.0	866.9	4.1	2.5	7.31	7,605.7	975.6	7,672.6	7,666.0	6.57	1,167.807	
1,300.0	1,300.0	1,018.2	1,018.0	4.4	3.0	7.33	7,610.0	978.7	7,675.7	7,668.2	7.45	1,030.833	
1,400.0	1,400.0	1,097.0	1,096.7	4.8	3.3	7.34	7,612.1	980.2	7,678.6	7,670.5	8.08	950.546	
1,500.0	1,500.0	1,259.9	1,259.6	5.1	3.9	7.36	7,616.1	983.1	7,681.3	7,672.3	9.01	852.849	
1,600.0	1,600.0	1,365.4	1,365.1	5.5	4.2	26.01	7,618.2	984.7	7,682.6	7,672.9	9.74	789.123	
1,700.0	1,700.0	1,452.7	1,452.3	5.9	4.5	26.02	7,620.0	985.9	7,682.5	7,672.1	10.40	738.606	
1,800.0	1,799.9	1,551.0	1,550.6	6.2	4.9	26.05	7,622.1	987.6	7,680.9	7,669.7	11.11	691.523	
1,900.0	1,899.7	1,607.2	1,606.8	6.6	5.1	26.08	7,623.3	988.9	7,677.9	7,666.2	11.66	658.243	
2,000.0	1,999.4	1,652.2	1,651.7	6.9	5.3	26.12	7,624.6	990.3	7,674.1	7,662.0	12.18	629.981	
2,100.0	2,098.9	1,706.2	1,705.7	7.3	5.4	26.17	7,626.5	992.5	7,669.5	7,656.8	12.73	602.378	
2,200.0	2,198.3	1,781.6	1,780.9	7.7	5.7	26.25	7,629.3	996.3	7,663.7	7,650.4	13.36	573.587	
2,300.0	2,297.4	1,872.0	1,871.1	8.0	6.0	26.36	7,632.7	1,001.3	7,656.4	7,642.4	14.05	545.069	
2,400.0	2,396.4	1,931.9	1,930.8	8.4	6.3	26.41	7,635.0	1,004.8	7,648.7	7,634.1	14.62	523.009	
2,500.0	2,495.5	1,987.0	1,985.7	8.8	6.5	26.46	7,637.6	1,008.7	7,641.8	7,626.6	15.19	503.213	
2,600.0	2,594.5	2,038.5	2,037.1	9.2	6.7	26.51	7,640.3	1,012.6	7,635.4	7,619.7	15.74	485.193	
2,700.0	2,693.5	2,122.4	2,120.5	9.6	7.0	26.60	7,644.9	1,019.3	7,629.5	7,613.1	16.41	464.953	
2,800.0	2,792.5	2,155.0	2,153.0	10.0	7.1	26.63	7,646.8	1,021.9	7,623.9	7,607.0	16.89	451.324	
2,900.0	2,891.6	2,207.1	2,204.8	10.3	7.3	26.68	7,650.0	1,026.4	7,619.1	7,601.6	17.45	436.620	
3,000.0	2,990.6	2,250.0	2,247.4	10.7	7.4	26.73	7,653.2	1,030.6	7,615.2	7,597.2	17.97	423.691	
3,100.0	3,089.6	2,312.8	2,309.6	11.1	7.7	26.80	7,658.1	1,037.2	7,612.0	7,593.4	18.57	409.802	
3,200.0	3,188.6	2,406.5	2,402.4	11.5	8.0	26.92	7,665.5	1,047.3	7,608.9	7,589.6	19.30	394.313	
3,300.0	3,287.7	2,495.8	2,491.0	11.9	8.4	27.02	7,672.6	1,056.9	7,606.0	7,586.0	20.00	380.221	
3,400.0	3,386.7	2,586.6	2,581.0	12.3	8.7	27.13	7,679.9	1,066.7	7,603.2	7,582.5	20.72	366.961	
3,500.0	3,485.7	2,670.8	2,664.3	12.7	9.1	27.23	7,686.7	1,076.2	7,600.6	7,579.2	21.41	354.983	
3,600.0	3,584.8	2,753.1	2,745.8	13.1	9.4	27.34	7,693.6	1,085.8	7,598.3	7,576.2	22.10	343.845	
3,700.0	3,683.8	2,848.5	2,840.2	13.5	9.8	27.46	7,701.6	1,097.1	7,596.1	7,573.2	22.84	332.598	
3,800.0	3,782.8	2,945.6	2,936.2	13.9	10.2	27.58	7,709.7	1,108.8	7,593.9	7,570.3	23.59	321.935	
3,900.0	3,881.8	3,233.2	3,221.0	14.3	11.3	27.95	7,730.5	1,142.6	7,590.7	7,565.6	25.09	302.484	
4,000.0	3,980.9	3,334.0	3,321.0	14.7	11.7	28.07	7,736.6	1,153.4	7,586.1	7,560.3	25.86	293.368	
4,100.0	4,079.9	3,431.5	3,417.9	15.2	12.1	28.19	7,742.7	1,163.2	7,581.7	7,555.1	26.61	284.928	
4,200.0	4,178.9	4,200.0	11,526.5	15.6	100.7	135.13	375.8	1,378.4	7,562.8	7,506.5	56.33	134.256	
4,300.0	4,277.9	18,657.1	11,526.5	16.0	127.7	135.33	367.9	1,378.6	7,466.5	7,398.6	67.93	109.922	
4,400.0	4,377.0	18,631.9	11,526.4	16.4	127.3	134.70	393.1	1,378.1	7,370.3	7,302.3	67.98	108.418	
4,500.0	4,476.0	18,607.0	11,526.3	16.8	126.9	134.07	418.0	1,377.4	7,274.1	7,206.1	68.05	106.898	
4,600.0	4,575.0	18,582.3	11,526.2	17.2	126.5	133.45	442.7	1,376.7	7,178.0	7,109.9	68.13	105.362	
4,625.7	4,600.5	18,576.0	11,526.2	17.3	126.4	133.29	449.0	1,376.5	7,153.4	7,085.2	68.15	104.966	
4,700.0	4,674.1	18,568.0	11,526.1	17.6	126.3	130.14	457.0	1,376.2	7,081.9	7,013.5	68.31	103.676	
4,800.0	4,773.6	18,568.0	11,526.1	18.0	126.3	125.78	457.0	1,376.2	6,985.3	6,916.7	68.62	101.803	
4,900.0	4,873.2	18,554.6	11,526.0	18.4	126.1	120.50	470.4	1,375.8	6,888.5	6,819.7	68.80	100.118	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #006H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 290-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,973.1	18,551.7	11,526.0	18.7	126.1	115.05	473.3	1,375.7	6,791.4	6,722.4	69.08	98.309	
5,100.0	5,073.0	18,550.3	11,526.0	19.1	126.0	109.20	474.7	1,375.7	6,694.2	6,624.8	69.37	96.497	
5,159.0	5,132.1	18,550.2	11,526.0	19.3	126.0	86.96	474.8	1,375.7	6,636.8	6,567.2	69.55	95.426	
5,200.0	5,173.0	18,550.3	11,526.0	19.4	126.0	86.97	474.6	1,375.7	6,596.9	6,527.2	69.67	94.683	
5,300.0	5,273.0	18,550.7	11,526.0	19.8	126.0	86.98	474.3	1,375.7	6,499.5	6,429.6	69.98	92.871	
5,400.0	5,373.0	18,551.0	11,526.0	20.1	126.0	86.99	474.0	1,375.7	6,402.3	6,332.0	70.31	91.060	
5,500.0	5,473.0	18,551.4	11,526.0	20.4	126.0	87.01	473.6	1,375.7	6,305.2	6,234.6	70.65	89.250	
5,600.0	5,573.0	18,551.7	11,526.0	20.8	126.1	87.02	473.3	1,375.7	6,208.2	6,137.2	71.00	87.442	
5,700.0	5,673.0	18,552.1	11,526.0	21.1	126.1	87.03	472.9	1,375.7	6,111.2	6,039.9	71.36	85.636	
5,800.0	5,773.0	18,552.4	11,526.0	21.4	126.1	87.05	472.6	1,375.7	6,014.4	5,942.6	71.74	83.832	
5,900.0	5,873.0	18,552.8	11,526.0	21.8	126.1	87.06	472.2	1,375.7	5,917.6	5,845.5	72.14	82.031	
6,000.0	5,973.0	18,553.1	11,526.0	22.1	126.1	87.07	471.9	1,375.7	5,821.0	5,748.5	72.55	80.234	
6,100.0	6,073.0	18,553.5	11,526.0	22.5	126.1	87.09	471.5	1,375.8	5,724.5	5,651.5	72.98	78.441	
6,200.0	6,173.0	18,553.8	11,526.0	22.8	126.1	87.10	471.2	1,375.8	5,628.1	5,554.7	73.42	76.653	
6,300.0	6,273.0	18,554.2	11,526.0	23.1	126.1	87.11	470.8	1,375.8	5,531.8	5,457.9	73.89	74.869	
6,400.0	6,373.0	18,554.5	11,526.0	23.5	126.1	87.13	470.5	1,375.8	5,435.7	5,361.3	74.37	73.091	
6,500.0	6,473.0	18,554.9	11,526.0	23.8	126.1	87.14	470.1	1,375.8	5,339.7	5,264.8	74.87	71.319	
6,600.0	6,573.0	18,555.2	11,526.0	24.2	126.1	87.15	469.8	1,375.8	5,243.9	5,168.5	75.39	69.553	
6,700.0	6,673.0	18,555.6	11,526.1	24.5	126.1	87.17	469.4	1,375.8	5,148.2	5,072.3	75.94	67.794	
6,800.0	6,773.0	18,555.9	11,526.1	24.9	126.1	87.18	469.0	1,375.8	5,052.7	4,976.2	76.51	66.042	
6,900.0	6,873.0	18,556.3	11,526.1	25.2	126.1	87.19	468.7	1,375.8	4,957.4	4,880.3	77.10	64.298	
7,000.0	6,973.0	18,556.7	11,526.1	25.6	126.1	87.21	468.3	1,375.9	4,862.2	4,784.5	77.72	62.563	
7,100.0	7,073.0	18,557.0	11,526.1	25.9	126.1	87.22	468.0	1,375.9	4,767.3	4,688.9	78.36	60.837	
7,200.0	7,173.0	18,557.4	11,526.1	26.3	126.1	87.24	467.6	1,375.9	4,672.5	4,593.5	79.04	59.120	
7,300.0	7,273.0	18,557.8	11,526.1	26.6	126.1	87.25	467.2	1,375.9	4,578.0	4,498.3	79.74	57.412	
7,400.0	7,373.0	18,568.0	11,526.1	26.9	126.3	87.64	457.0	1,376.2	4,483.7	4,403.2	80.57	55.650	
7,500.0	7,473.0	18,568.0	11,526.1	27.3	126.3	87.64	457.0	1,376.2	4,389.7	4,308.4	81.34	53.969	
7,600.0	7,573.0	18,568.0	11,526.1	27.6	126.3	87.64	457.0	1,376.2	4,296.0	4,213.8	82.14	52.300	
7,700.0	7,673.0	18,568.0	11,526.1	28.0	126.3	87.64	457.0	1,376.2	4,202.5	4,119.5	82.98	50.643	
7,800.0	7,773.0	18,568.0	11,526.1	28.3	126.3	87.64	457.0	1,376.2	4,109.3	4,025.5	83.87	48.999	
7,900.0	7,873.0	18,568.0	11,526.1	28.7	126.3	87.64	457.0	1,376.2	4,016.5	3,931.7	84.79	47.369	
8,000.0	7,973.0	18,568.0	11,526.1	29.0	126.3	87.64	457.0	1,376.2	3,924.0	3,838.3	85.77	45.753	
8,100.0	8,073.0	18,568.0	11,526.1	29.4	126.3	87.64	457.0	1,376.2	3,831.9	3,745.1	86.79	44.152	
8,200.0	8,173.0	18,568.0	11,526.1	29.7	126.3	87.64	457.0	1,376.2	3,740.2	3,652.4	87.87	42.568	
8,300.0	8,273.0	18,568.0	11,526.1	30.1	126.3	87.64	457.0	1,376.2	3,649.0	3,560.0	89.00	41.000	
8,400.0	8,373.0	18,568.0	11,526.1	30.4	126.3	87.64	457.0	1,376.2	3,558.2	3,468.0	90.19	39.451	
8,500.0	8,473.0	18,568.0	11,526.1	30.8	126.3	87.64	457.0	1,376.2	3,467.9	3,376.5	91.45	37.921	
8,600.0	8,573.0	18,568.0	11,526.1	31.1	126.3	87.64	457.0	1,376.2	3,378.2	3,285.4	92.78	36.410	
8,700.0	8,673.0	18,568.0	11,526.1	31.5	126.3	87.64	457.0	1,376.2	3,289.1	3,194.9	94.18	34.922	
8,800.0	8,773.0	18,568.0	11,526.1	31.8	126.3	87.64	457.0	1,376.2	3,200.6	3,104.9	95.67	33.455	
8,900.0	8,873.0	18,568.0	11,526.1	32.2	126.3	87.64	457.0	1,376.2	3,112.8	3,015.5	97.23	32.013	
9,000.0	8,973.0	18,568.0	11,526.1	32.5	126.3	87.64	457.0	1,376.2	3,025.7	2,926.8	98.89	30.596	
9,100.0	9,073.0	18,568.0	11,526.1	32.9	126.3	87.64	457.0	1,376.2	2,939.5	2,838.8	100.65	29.206	
9,200.0	9,173.0	18,568.0	11,526.1	33.2	126.3	87.64	457.0	1,376.2	2,854.2	2,751.7	102.50	27.845	
9,300.0	9,273.0	18,568.0	11,526.1	33.6	126.3	87.64	457.0	1,376.2	2,769.8	2,665.4	104.47	26.514	
9,400.0	9,373.0	18,568.0	11,526.1	33.9	126.3	87.64	457.0	1,376.2	2,686.6	2,580.0	106.55	25.214	
9,500.0	9,473.0	18,568.0	11,526.1	34.3	126.3	87.64	457.0	1,376.2	2,604.5	2,495.7	108.75	23.949	
9,600.0	9,573.0	18,568.0	11,526.1	34.6	126.3	87.64	457.0	1,376.2	2,523.7	2,412.6	111.08	22.719	
9,700.0	9,673.0	18,568.0	11,526.1	35.0	126.3	87.64	457.0	1,376.2	2,444.3	2,330.8	113.55	21.527	
9,800.0	9,773.0	18,568.0	11,526.1	35.3	126.3	87.64	457.0	1,376.2	2,366.5	2,250.4	116.15	20.375	
9,900.0	9,873.0	18,568.0	11,526.1	35.7	126.3	87.64	457.0	1,376.2	2,290.4	2,171.5	118.89	19.266	
10,000.0	9,973.0	18,568.6	11,526.1	36.0	126.3	87.66	456.4	1,376.2	2,216.2	2,094.5	121.78	18.199	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #006H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 290-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	10,073.0	18,569.5	11,526.1	36.4	126.3	87.69	455.5	1,376.3	2,144.2	2,019.3	124.81	17.179	
10,200.0	10,173.0	18,570.3	11,526.1	36.7	126.3	87.73	454.7	1,376.3	2,074.4	1,946.4	127.98	16.209	
10,300.0	10,273.0	18,571.2	11,526.1	37.1	126.4	87.76	453.8	1,376.3	2,007.2	1,875.9	131.27	15.290	
10,400.0	10,373.0	18,572.0	11,526.1	37.4	126.4	87.79	453.0	1,376.4	1,942.8	1,808.1	134.68	14.425	
10,500.0	10,473.0	18,572.8	11,526.2	37.8	126.4	87.82	452.2	1,376.4	1,881.5	1,743.3	138.18	13.617	
10,600.0	10,573.0	18,573.6	11,526.2	38.2	126.4	87.85	451.4	1,376.4	1,823.7	1,681.9	141.73	12.867	
10,700.0	10,673.0	18,574.5	11,526.2	38.5	126.4	87.88	450.6	1,376.4	1,769.6	1,624.3	145.31	12.178	
10,800.0	10,773.0	18,575.3	11,526.2	38.9	126.4	87.91	449.8	1,376.5	1,719.6	1,570.8	148.86	11.552	
10,900.0	10,873.0	18,576.0	11,526.2	39.2	126.4	87.94	449.0	1,376.5	1,674.2	1,521.8	152.33	10.990	
11,000.0	10,973.0	18,576.8	11,526.2	39.6	126.5	87.97	448.2	1,376.5	1,633.6	1,477.9	155.64	10.496	
11,024.0	10,997.0	18,577.0	11,526.2	39.7	126.5	87.98	448.0	1,376.5	1,624.6	1,468.2	156.41	10.387	
11,050.0	11,023.0	18,578.0	11,526.2	39.7	126.5	-85.29	447.0	1,376.6	1,615.1	1,457.9	157.22	10.273	
11,100.0	11,072.8	18,584.5	11,526.2	39.9	126.6	-86.89	440.5	1,376.8	1,597.8	1,439.0	158.79	10.062	
11,150.0	11,122.0	18,596.9	11,526.3	40.0	126.8	-88.15	428.1	1,377.2	1,581.5	1,421.2	160.34	9.864	
11,200.0	11,170.3	18,615.0	11,526.4	40.2	127.1	-89.06	410.0	1,377.7	1,566.5	1,404.6	161.86	9.678	
11,250.0	11,217.2	18,638.6	11,526.5	40.3	127.4	-89.66	386.4	1,378.2	1,552.6	1,389.3	163.34	9.505	
11,300.0	11,262.5	18,695.2	11,526.7	40.4	128.3	-89.05	329.8	1,379.0	1,539.8	1,374.7	165.12	9.325	
11,350.0	11,305.7	18,860.2	11,529.6	40.5	130.9	-85.00	165.1	1,370.3	1,526.2	1,358.7	167.52	9.111	
11,400.0	11,346.6	18,889.1	11,530.3	40.6	131.3	-85.51	136.4	1,367.5	1,512.5	1,343.8	168.67	8.967	
11,450.0	11,384.8	18,921.3	11,531.0	40.6	131.8	-85.93	104.4	1,364.3	1,499.4	1,329.6	169.76	8.832	
11,500.0	11,420.1	18,956.5	11,531.8	40.7	132.4	-86.28	69.3	1,360.9	1,486.7	1,315.9	170.79	8.705	
11,550.0	11,452.2	18,949.0	11,531.6	40.8	132.3	-87.66	76.8	1,361.6	1,475.2	1,303.7	171.53	8.600	
11,600.0	11,480.8	18,949.0	11,531.6	40.9	132.3	-88.69	76.8	1,361.6	1,465.1	1,292.9	172.15	8.510	
11,650.0	11,505.7	18,949.0	11,531.6	40.9	132.3	-89.56	76.8	1,361.6	1,456.5	1,283.8	172.64	8.437	
11,700.0	11,526.7	18,949.0	11,531.6	41.0	132.3	-90.26	76.8	1,361.6	1,449.5	1,276.6	172.97	8.380	
11,750.0	11,543.8	18,949.0	11,531.6	41.1	132.3	-90.79	76.8	1,361.6	1,444.3	1,271.2	173.14	8.342	
11,800.0	11,556.6	18,949.0	11,531.6	41.2	132.3	-91.13	76.8	1,361.6	1,440.9	1,267.7	173.16	8.321	
11,850.0	11,565.2	18,949.0	11,531.6	41.2	132.3	-91.30	76.8	1,361.6	1,439.2	1,266.2	173.02	8.319	SF
11,869.4	11,567.4	18,949.0	11,531.6	41.3	132.3	-91.31	76.8	1,361.6	1,439.1	1,266.2	172.92	8.322	CC, ES
11,900.0	11,569.5	18,949.0	11,531.6	41.3	132.3	-91.28	76.8	1,361.6	1,439.5	1,266.7	172.71	8.334	
11,924.0	11,570.0	18,949.0	11,531.6	41.4	132.3	-91.20	76.8	1,361.6	1,440.2	1,267.7	172.51	8.348	
12,000.0	11,570.0	18,949.0	11,531.6	41.5	132.3	-91.20	76.8	1,361.6	1,446.2	1,274.6	171.68	8.424	
12,100.0	11,570.0	18,949.0	11,531.6	41.8	132.3	-91.21	76.8	1,361.6	1,463.2	1,293.0	170.17	8.598	
12,200.0	11,570.0	18,949.0	11,531.6	42.1	132.3	-91.22	76.8	1,361.6	1,490.1	1,321.8	168.27	8.855	
12,292.2	11,570.0	18,949.0	11,531.6	42.5	132.3	-91.24	76.8	1,361.6	1,523.1	1,356.9	166.24	9.162	
12,300.0	11,570.0	18,949.0	11,531.6	42.5	132.3	-91.24	76.8	1,361.6	1,526.3	1,360.2	166.06	9.191	
12,400.0	11,570.0	18,949.0	11,531.6	42.9	132.3	-91.24	76.8	1,361.6	1,569.3	1,405.7	163.62	9.591	
12,500.0	11,570.0	18,949.0	11,531.6	43.4	132.3	-91.24	76.8	1,361.6	1,617.4	1,456.4	161.01	10.045	
12,600.0	11,570.0	18,949.0	11,531.6	44.0	132.3	-91.24	76.8	1,361.6	1,670.2	1,511.8	158.31	10.550	
12,700.0	11,570.0	18,949.0	11,531.6	44.6	132.3	-91.24	76.8	1,361.6	1,727.1	1,571.5	155.55	11.103	
12,800.0	11,570.0	18,949.0	11,531.6	45.3	132.3	-91.24	76.8	1,361.6	1,787.7	1,635.0	152.79	11.701	
12,900.0	11,570.0	18,949.0	11,531.6	46.0	132.3	-91.24	76.8	1,361.6	1,851.9	1,701.8	150.06	12.340	
13,000.0	11,570.0	18,949.0	11,531.6	46.7	132.3	-91.24	76.8	1,361.6	1,919.0	1,771.6	147.40	13.019	
13,100.0	11,570.0	18,949.0	11,531.6	47.6	132.3	-91.24	76.8	1,361.6	1,989.0	1,844.2	144.81	13.735	
13,200.0	11,570.0	18,949.0	11,531.6	48.4	132.3	-91.24	76.8	1,361.6	2,061.4	1,919.1	142.32	14.484	
13,300.0	11,570.0	18,949.0	11,531.6	49.3	132.3	-91.24	76.8	1,361.6	2,136.0	1,996.1	139.94	15.264	
13,400.0	11,570.0	18,949.0	11,531.6	50.2	132.3	-91.24	76.8	1,361.6	2,212.7	2,075.0	137.66	16.073	
13,500.0	11,570.0	18,949.0	11,531.6	51.2	132.3	-91.24	76.8	1,361.6	2,291.1	2,155.6	135.50	16.909	
13,600.0	11,570.0	18,949.0	11,531.6	52.2	132.3	-91.24	76.8	1,361.6	2,371.2	2,237.8	133.44	17.769	
13,700.0	11,570.0	18,949.0	11,531.6	53.2	132.3	-91.24	76.8	1,361.6	2,452.7	2,321.2	131.50	18.652	
13,800.0	11,570.0	18,949.0	11,531.6	54.3	132.3	-91.24	76.8	1,361.6	2,535.6	2,405.9	129.66	19.555	
13,900.0	11,570.0	18,949.0	11,531.6	55.4	132.3	-91.24	76.8	1,361.6	2,619.6	2,491.7	127.93	20.478	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #006H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 290-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.0	11,570.0	18,949.0	11,531.6	56.5	132.3	-91.24	76.8	1,361.6	2,704.8	2,578.5	126.29	21.417	
14,100.0	11,570.0	18,949.0	11,531.6	57.7	132.3	-91.24	76.8	1,361.6	2,790.9	2,666.2	124.75	22.372	
14,200.0	11,570.0	18,949.0	11,531.6	58.9	132.3	-91.24	76.8	1,361.6	2,877.9	2,754.6	123.29	23.342	
14,300.0	11,570.0	18,949.0	11,531.6	60.1	132.3	-91.24	76.8	1,361.6	2,965.8	2,843.8	121.92	24.325	
14,400.0	11,570.0	18,949.0	11,531.6	61.3	132.3	-91.24	76.8	1,361.6	3,054.4	2,933.7	120.63	25.320	
14,500.0	11,570.0	18,949.0	11,531.6	62.5	132.3	-91.24	76.8	1,361.6	3,143.6	3,024.2	119.41	26.326	
14,600.0	11,570.0	18,949.0	11,531.6	63.8	132.3	-91.24	76.8	1,361.6	3,233.5	3,115.3	118.27	27.341	
14,700.0	11,570.0	18,949.0	11,531.6	65.0	132.3	-91.24	76.8	1,361.6	3,324.0	3,206.8	117.18	28.366	
14,800.0	11,570.0	18,949.0	11,531.6	66.3	132.3	-91.24	76.8	1,361.6	3,415.0	3,298.9	116.16	29.398	
14,900.0	11,570.0	18,949.0	11,531.6	67.6	132.3	-91.24	76.8	1,361.6	3,506.5	3,391.3	115.20	30.438	
15,000.0	11,570.0	18,949.0	11,531.6	69.0	132.3	-91.24	76.8	1,361.6	3,598.5	3,484.2	114.29	31.485	
15,100.0	11,570.0	18,949.0	11,531.6	70.3	132.3	-91.24	76.8	1,361.6	3,690.8	3,577.4	113.44	32.537	
15,200.0	11,570.0	18,949.0	11,531.6	71.7	132.3	-91.24	76.8	1,361.6	3,783.6	3,671.0	112.63	33.595	
15,300.0	11,570.0	18,949.0	11,531.6	73.0	132.3	-91.24	76.8	1,361.6	3,876.7	3,764.9	111.86	34.657	
15,400.0	11,570.0	18,949.0	11,531.6	74.4	132.3	-91.24	76.8	1,361.6	3,970.2	3,859.0	111.14	35.723	
15,500.0	11,570.0	18,949.0	11,531.6	75.8	132.3	-91.24	76.8	1,361.6	4,063.9	3,953.5	110.45	36.793	
15,600.0	11,570.0	18,949.0	11,531.6	77.2	132.3	-91.24	76.8	1,361.6	4,158.0	4,048.2	109.81	37.866	
15,700.0	11,570.0	18,949.0	11,531.6	78.6	132.3	-91.24	76.8	1,361.6	4,252.3	4,143.1	109.19	38.942	
15,800.0	11,570.0	18,949.0	11,531.6	80.0	132.3	-91.24	76.8	1,361.6	4,346.9	4,238.3	108.62	40.021	
15,900.0	11,570.0	18,949.0	11,531.6	81.4	132.3	-91.24	76.8	1,361.6	4,441.7	4,333.6	108.07	41.101	
16,000.0	11,570.0	18,949.0	11,531.6	82.9	132.3	-91.24	76.8	1,361.6	4,536.8	4,429.2	107.55	42.184	
16,100.0	11,570.0	18,949.0	11,531.6	84.3	132.3	-91.24	76.8	1,361.6	4,632.0	4,524.9	107.06	43.267	
16,200.0	11,570.0	18,949.0	11,531.6	85.8	132.3	-91.24	76.8	1,361.6	4,727.5	4,620.9	106.59	44.352	
16,300.0	11,570.0	18,949.0	11,531.6	87.2	132.3	-91.24	76.8	1,361.6	4,823.1	4,716.9	106.15	45.438	
16,400.0	11,570.0	18,949.0	11,531.6	88.7	132.3	-91.24	76.8	1,361.6	4,918.9	4,813.2	105.73	46.524	
16,500.0	11,570.0	18,949.0	11,531.6	90.2	132.3	-91.24	76.8	1,361.6	5,014.9	4,909.5	105.33	47.611	
16,600.0	11,570.0	18,949.0	11,531.6	91.6	132.3	-91.24	76.8	1,361.6	5,111.0	5,006.0	104.95	48.698	
16,700.0	11,570.0	18,949.0	11,531.6	93.1	132.3	-91.24	76.8	1,361.6	5,207.2	5,102.6	104.59	49.785	
16,800.0	11,570.0	18,949.0	11,531.6	94.6	132.3	-91.24	76.8	1,361.6	5,303.6	5,199.4	104.25	50.872	
16,900.0	11,570.0	18,949.0	11,531.6	96.1	132.3	-91.24	76.8	1,361.6	5,400.2	5,296.3	103.93	51.959	
17,000.0	11,570.0	18,949.0	11,531.6	97.6	132.3	-91.24	76.8	1,361.6	5,496.8	5,393.2	103.63	53.045	
17,100.0	11,570.0	18,949.0	11,531.6	99.1	132.3	-91.24	76.8	1,361.6	5,593.6	5,490.3	103.34	54.130	
17,200.0	11,570.0	18,949.0	11,531.6	100.6	132.3	-91.24	76.8	1,361.6	5,690.5	5,587.5	103.06	55.215	
17,300.0	11,570.0	18,949.0	11,531.6	102.1	132.3	-91.24	76.8	1,361.6	5,787.5	5,684.7	102.80	56.299	
17,400.0	11,570.0	18,949.0	11,531.6	103.7	132.3	-91.24	76.8	1,361.6	5,884.6	5,782.1	102.55	57.382	
17,500.0	11,570.0	18,949.0	11,531.6	105.2	132.3	-91.24	76.8	1,361.6	5,981.8	5,879.5	102.32	58.464	
17,600.0	11,570.0	18,949.0	11,531.6	106.7	132.3	-91.24	76.8	1,361.6	6,079.1	5,977.0	102.09	59.544	
17,700.0	11,570.0	18,949.0	11,531.6	108.3	132.3	-91.24	76.8	1,361.6	6,176.4	6,074.6	101.88	60.624	
17,800.0	11,570.0	18,949.0	11,531.6	109.8	132.3	-91.24	76.8	1,361.6	6,273.9	6,172.2	101.68	61.702	
17,900.0	11,570.0	18,949.0	11,531.6	111.3	132.3	-91.24	76.8	1,361.6	6,371.4	6,269.9	101.49	62.778	
18,000.0	11,570.0	18,949.0	11,531.6	112.9	132.3	-91.24	76.8	1,361.6	6,469.0	6,367.7	101.31	63.853	
18,100.0	11,570.0	18,949.0	11,531.6	114.4	132.3	-91.24	76.8	1,361.6	6,566.7	6,465.6	101.14	64.926	
18,200.0	11,570.0	18,949.0	11,531.6	116.0	132.3	-91.24	76.8	1,361.6	6,664.5	6,563.5	100.98	65.998	
18,307.1	11,570.0	18,949.0	11,531.6	117.4	132.3	-91.24	76.8	1,361.6	6,769.3	6,665.7	103.56	65.366	
18,307.7	11,570.0	18,949.0	11,531.6	117.4	132.3	-91.24	76.8	1,361.6	6,769.8	6,666.2	103.56	65.371	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #007H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	6.92	7,731.8	937.8	7,788.9				
100.0	100.0	30.6	30.6	0.1	0.1	6.92	7,731.8	937.8	7,788.5	7,788.3	0.18	N/A	
200.0	200.0	172.8	172.8	0.5	0.3	6.91	7,731.3	937.6	7,788.1	7,787.3	0.77	N/A	
300.0	300.0	315.0	314.9	0.8	0.5	6.91	7,730.0	937.2	7,787.1	7,785.8	1.37	5,693.342	
400.0	400.0	407.5	407.4	1.2	0.9	6.91	7,729.1	936.9	7,786.1	7,784.0	2.12	3,678.574	
500.0	500.0	544.8	544.7	1.6	1.4	6.91	7,727.2	937.1	7,784.8	7,781.8	2.97	2,624.161	
600.0	600.0	631.0	631.0	1.9	1.7	6.92	7,725.8	937.1	7,783.2	7,779.6	3.63	2,142.140	
700.0	700.0	753.0	752.9	2.3	2.2	6.92	7,724.0	937.2	7,781.7	7,777.3	4.43	1,757.033	
800.0	800.0	896.3	896.2	2.6	2.7	6.92	7,721.0	937.0	7,779.6	7,774.3	5.30	1,467.425	
900.0	900.0	989.4	989.3	3.0	3.0	6.92	7,718.9	937.1	7,777.4	7,771.4	5.99	1,297.659	
1,000.0	1,000.0	1,108.8	1,108.7	3.4	3.4	6.93	7,716.2	937.4	7,775.2	7,768.4	6.78	1,146.837	
1,100.0	1,100.0	1,167.8	1,167.6	3.7	3.6	6.93	7,714.9	937.8	7,773.0	7,765.7	7.35	1,057.869	
1,200.0	1,200.0	1,258.0	1,257.8	4.1	4.0	6.94	7,713.2	938.9	7,771.3	7,763.3	8.03	968.042	
1,300.0	1,300.0	1,365.1	1,364.9	4.4	4.4	6.95	7,711.1	939.7	7,769.5	7,760.7	8.77	886.045	
1,400.0	1,400.0	1,458.7	1,458.4	4.8	4.7	6.96	7,709.3	940.8	7,767.7	7,758.2	9.46	821.044	
1,500.0	1,500.0	1,547.2	1,546.9	5.1	5.0	6.97	7,707.5	942.8	7,766.0	7,755.8	10.13	766.392	
1,600.0	1,600.0	1,628.8	1,628.5	5.5	5.3	25.65	7,706.0	945.4	7,763.7	7,752.9	10.78	720.246	
1,700.0	1,700.0	1,707.1	1,706.7	5.9	5.6	25.70	7,704.6	948.5	7,760.1	7,748.7	11.41	679.932	
1,800.0	1,799.9	1,782.8	1,782.3	6.2	5.8	25.77	7,703.3	953.4	7,755.2	7,743.2	12.04	644.212	
1,900.0	1,899.7	1,865.2	1,864.3	6.6	6.1	25.87	7,701.8	961.0	7,749.0	7,736.4	12.69	610.696	
2,000.0	1,999.4	1,956.2	1,954.8	6.9	6.5	25.99	7,700.1	970.6	7,741.5	7,728.1	13.37	578.828	
2,100.0	2,098.9	1,989.7	1,988.1	7.3	6.6	26.07	7,699.7	974.1	7,732.9	7,719.0	13.85	558.149	
2,200.0	2,198.3	2,022.0	2,020.2	7.7	6.7	26.15	7,699.5	977.6	7,723.5	7,709.2	14.33	538.951	
2,300.0	2,297.4	2,052.0	2,050.0	8.0	6.8	26.23	7,699.5	981.0	7,713.5	7,698.7	14.80	521.214	
2,400.0	2,396.4	2,087.3	2,085.0	8.4	6.9	26.28	7,699.9	985.1	7,703.6	7,688.3	15.29	503.885	
2,500.0	2,495.5	2,147.0	2,144.3	8.8	7.1	26.36	7,701.2	992.5	7,694.7	7,678.8	15.87	484.919	
2,600.0	2,594.5	2,163.8	2,160.9	9.2	7.2	26.38	7,701.7	994.7	7,686.3	7,670.0	16.29	471.813	
2,700.0	2,693.5	2,240.0	2,236.4	9.6	7.5	26.49	7,703.9	1,004.5	7,678.5	7,661.6	16.94	453.370	
2,800.0	2,792.5	2,296.5	2,292.4	10.0	7.7	26.56	7,705.8	1,011.7	7,671.2	7,653.7	17.51	438.080	
2,900.0	2,891.6	2,335.0	2,330.6	10.3	7.8	26.62	7,707.4	1,016.5	7,664.6	7,646.6	18.02	425.384	
3,000.0	2,990.6	2,394.7	2,389.7	10.7	8.0	26.70	7,710.2	1,024.1	7,658.6	7,640.0	18.61	411.613	
3,100.0	3,089.6	2,453.7	2,448.2	11.1	8.3	26.78	7,713.3	1,031.5	7,653.2	7,634.0	19.19	398.747	
3,200.0	3,188.6	2,538.5	2,532.2	11.5	8.6	26.89	7,718.1	1,042.4	7,648.2	7,628.4	19.88	384.692	
3,300.0	3,287.7	2,617.1	2,609.9	11.9	8.9	27.00	7,722.6	1,052.9	7,643.5	7,622.9	20.55	371.959	
3,400.0	3,386.7	2,709.7	2,701.5	12.3	9.2	27.13	7,728.0	1,065.8	7,639.0	7,617.7	21.28	359.028	
3,500.0	3,485.7	2,780.2	2,771.1	12.7	9.5	27.24	7,732.2	1,075.9	7,634.7	7,612.8	21.92	348.299	
3,600.0	3,584.8	2,886.3	2,875.9	13.1	9.9	27.39	7,738.8	1,091.0	7,630.7	7,608.0	22.71	336.032	
3,700.0	3,683.8	2,977.7	2,966.2	13.5	10.3	27.53	7,744.4	1,104.2	7,626.6	7,603.2	23.44	325.361	
3,800.0	3,782.8	3,216.1	3,201.8	13.9	11.2	27.88	7,757.2	1,138.1	7,622.0	7,597.3	24.77	307.680	
3,900.0	3,881.8	3,348.4	3,332.9	14.3	11.8	28.07	7,762.8	1,155.3	7,616.1	7,590.4	25.67	296.661	
4,000.0	3,980.9	3,462.7	3,446.3	14.7	12.2	28.22	7,767.6	1,168.7	7,609.8	7,583.3	26.50	287.210	
4,100.0	4,079.9	3,582.5	3,565.3	15.2	12.7	28.36	7,772.5	1,181.6	7,603.4	7,576.1	27.34	278.146	
4,200.0	4,178.9	3,688.7	3,670.8	15.6	13.1	28.49	7,776.8	1,192.4	7,596.9	7,568.7	28.12	270.154	
4,300.0	4,277.9	3,819.1	3,800.6	16.0	13.6	28.64	7,781.9	1,204.4	7,590.1	7,561.1	28.99	261.781	
4,400.0	4,377.0	19,030.0	11,592.2	16.4	132.6	133.84	228.7	1,811.8	7,543.6	7,471.0	72.66	103.819	
4,500.0	4,476.0	19,030.0	11,592.2	16.8	132.6	133.84	228.7	1,811.8	7,449.3	7,376.3	73.02	102.021	
4,600.0	4,575.0	19,030.0	11,592.2	17.2	132.6	133.84	228.7	1,811.8	7,355.1	7,281.7	73.39	100.223	
4,625.7	4,600.5	19,030.0	11,592.2	17.3	132.6	133.84	228.7	1,811.8	7,330.9	7,257.4	73.48	99.761	
4,700.0	4,674.1	19,030.0	11,592.2	17.6	132.6	131.53	228.7	1,811.8	7,260.8	7,187.1	73.77	98.426	
4,800.0	4,773.6	19,030.0	11,592.2	18.0	132.6	128.16	228.7	1,811.8	7,166.2	7,092.1	74.16	96.637	
4,900.0	4,873.2	19,030.0	11,592.2	18.4	132.6	124.48	228.7	1,811.8	7,071.2	6,996.7	74.54	94.861	
5,000.0	4,973.1	19,030.0	11,592.2	18.7	132.6	120.49	228.7	1,811.8	6,975.9	6,901.0	74.93	93.100	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #007H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	19,030.0	11,592.2	19.1	132.6	116.20	228.7	1,811.8	6,880.3	6,805.0	75.32	91.353	
5,159.0	5,132.1	19,030.0	11,592.2	19.3	132.6	94.88	228.7	1,811.8	6,823.8	6,748.2	75.54	90.330	
5,200.0	5,173.0	19,030.0	11,592.2	19.4	132.6	94.88	228.7	1,811.8	6,784.5	6,708.8	75.70	89.622	
5,300.0	5,273.0	19,030.0	11,592.2	19.8	132.6	94.88	228.7	1,811.8	6,688.8	6,612.7	76.10	87.897	
5,400.0	5,373.0	19,030.0	11,592.2	20.1	132.6	94.88	228.7	1,811.8	6,593.2	6,516.7	76.51	86.176	
5,500.0	5,473.0	19,030.0	11,592.2	20.4	132.6	94.88	228.7	1,811.8	6,497.8	6,420.9	76.94	84.456	
5,600.0	5,573.0	19,030.0	11,592.2	20.8	132.6	94.88	228.7	1,811.8	6,402.5	6,325.1	77.38	82.741	
5,700.0	5,673.0	19,030.0	11,592.2	21.1	132.6	94.88	228.7	1,811.8	6,307.3	6,229.5	77.84	81.028	
5,800.0	5,773.0	19,030.0	11,592.2	21.4	132.6	94.88	228.7	1,811.8	6,212.3	6,134.0	78.32	79.320	
5,900.0	5,873.0	19,030.0	11,592.2	21.8	132.6	94.88	228.7	1,811.8	6,117.4	6,038.6	78.82	77.617	
6,000.0	5,973.0	19,030.0	11,592.2	22.1	132.6	94.88	228.7	1,811.8	6,022.8	5,943.4	79.33	75.919	
6,100.0	6,073.0	19,030.0	11,592.2	22.5	132.6	94.88	228.7	1,811.8	5,928.2	5,848.4	79.87	74.226	
6,200.0	6,173.0	19,030.0	11,592.2	22.8	132.6	94.88	228.7	1,811.8	5,833.9	5,753.5	80.42	72.540	
6,300.0	6,273.0	19,030.0	11,592.2	23.1	132.6	94.88	228.7	1,811.8	5,739.8	5,658.8	81.00	70.860	
6,400.0	6,373.0	19,030.0	11,592.2	23.5	132.6	94.88	228.7	1,811.8	5,645.8	5,564.2	81.60	69.187	
6,500.0	6,473.0	19,030.0	11,592.2	23.8	132.6	94.88	228.7	1,811.8	5,552.1	5,469.9	82.23	67.522	
6,600.0	6,573.0	19,030.0	11,592.2	24.2	132.6	94.88	228.7	1,811.8	5,458.6	5,375.7	82.87	65.866	
6,700.0	6,673.0	19,030.0	11,592.2	24.5	132.6	94.88	228.7	1,811.8	5,365.3	5,281.8	83.55	64.218	
6,800.0	6,773.0	19,030.0	11,592.2	24.9	132.6	94.88	228.7	1,811.8	5,272.3	5,188.1	84.25	62.579	
6,900.0	6,873.0	19,030.0	11,592.2	25.2	132.6	94.88	228.7	1,811.8	5,179.6	5,094.6	84.98	60.949	
7,000.0	6,973.0	19,030.0	11,592.2	25.6	132.6	94.88	228.7	1,811.8	5,087.1	5,001.3	85.74	59.331	
7,100.0	7,073.0	19,030.0	11,592.2	25.9	132.6	94.88	228.7	1,811.8	4,994.9	4,908.3	86.53	57.723	
7,200.0	7,173.0	19,030.0	11,592.2	26.3	132.6	94.88	228.7	1,811.8	4,903.0	4,815.6	87.36	56.126	
7,300.0	7,273.0	19,030.0	11,592.2	26.6	132.6	94.88	228.7	1,811.8	4,811.4	4,723.2	88.21	54.542	
7,400.0	7,373.0	19,030.0	11,592.2	26.9	132.6	94.88	228.7	1,811.8	4,720.2	4,631.1	89.11	52.971	
7,500.0	7,473.0	19,030.0	11,592.2	27.3	132.6	94.88	228.7	1,811.8	4,629.3	4,539.3	90.04	51.412	
7,600.0	7,573.0	19,030.0	11,592.2	27.6	132.6	94.88	228.7	1,811.8	4,538.8	4,447.8	91.02	49.869	
7,700.0	7,673.0	19,030.0	11,592.2	28.0	132.6	94.88	228.7	1,811.8	4,448.8	4,356.7	92.03	48.340	
7,800.0	7,773.0	19,030.0	11,592.2	28.3	132.6	94.88	228.7	1,811.8	4,359.1	4,266.0	93.09	46.826	
7,900.0	7,873.0	19,030.0	11,592.2	28.7	132.6	94.88	228.7	1,811.8	4,270.0	4,175.8	94.20	45.329	
8,000.0	7,973.0	19,030.0	11,592.2	29.0	132.6	94.88	228.7	1,811.8	4,181.3	4,085.9	95.36	43.849	
8,100.0	8,073.0	19,030.0	11,592.2	29.4	132.6	94.88	228.7	1,811.8	4,093.1	3,996.5	96.56	42.387	
8,200.0	8,173.0	19,030.0	11,592.2	29.7	132.6	94.88	228.7	1,811.8	4,005.5	3,907.7	97.83	40.944	
8,300.0	8,273.0	19,030.0	11,592.2	30.1	132.6	94.88	228.7	1,811.8	3,918.5	3,819.3	99.15	39.521	
8,400.0	8,373.0	19,030.0	11,592.2	30.4	132.6	94.88	228.7	1,811.8	3,832.1	3,731.6	100.53	38.119	
8,500.0	8,473.0	19,030.0	11,592.2	30.8	132.6	94.88	228.7	1,811.8	3,746.4	3,644.4	101.97	36.739	
8,600.0	8,573.0	19,030.0	11,592.2	31.1	132.6	94.88	228.7	1,811.8	3,661.4	3,557.9	103.49	35.381	
8,700.0	8,673.0	19,030.0	11,592.2	31.5	132.6	94.88	228.7	1,811.8	3,577.2	3,472.1	105.07	34.047	
8,800.0	8,773.0	19,030.0	11,592.2	31.8	132.6	94.88	228.7	1,811.8	3,493.8	3,387.1	106.72	32.738	
8,900.0	8,873.0	19,030.0	11,592.2	32.2	132.6	94.88	228.7	1,811.8	3,411.3	3,302.9	108.45	31.455	
9,000.0	8,973.0	19,030.0	11,592.2	32.5	132.6	94.88	228.7	1,811.8	3,329.8	3,219.6	110.26	30.200	
9,100.0	9,073.0	19,030.0	11,592.2	32.9	132.6	94.88	228.7	1,811.8	3,249.3	3,137.2	112.15	28.973	
9,200.0	9,173.0	19,030.0	11,592.2	33.2	132.6	94.88	228.7	1,811.8	3,170.0	3,055.8	114.13	27.776	
9,300.0	9,273.0	19,030.0	11,592.2	33.6	132.6	94.88	228.7	1,811.8	3,091.8	2,975.6	116.19	26.610	
9,400.0	9,373.0	19,030.0	11,592.2	33.9	132.6	94.88	228.7	1,811.8	3,014.9	2,896.6	118.34	25.476	
9,500.0	9,473.0	19,028.1	11,592.2	34.3	132.5	94.82	230.6	1,811.9	2,939.4	2,818.8	120.57	24.379	
9,600.0	9,573.0	19,026.3	11,592.3	34.6	132.5	94.77	232.4	1,812.0	2,865.4	2,742.5	122.89	23.317	
9,700.0	9,673.0	19,024.4	11,592.3	35.0	132.5	94.72	234.3	1,812.1	2,793.0	2,667.7	125.30	22.290	
9,800.0	9,773.0	19,022.5	11,592.3	35.3	132.5	94.66	236.1	1,812.2	2,722.4	2,594.6	127.80	21.302	
9,900.0	9,873.0	19,020.7	11,592.4	35.7	132.4	94.61	238.0	1,812.3	2,653.6	2,523.3	130.39	20.352	
10,000.0	9,973.0	19,018.8	11,592.4	36.0	132.4	94.55	239.9	1,812.5	2,586.9	2,453.9	133.05	19.443	
10,100.0	10,073.0	19,016.9	11,592.4	36.4	132.4	94.50	241.7	1,812.6	2,522.4	2,386.6	135.79	18.576	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #007H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	19,015.1	11,592.5	36.7	132.3	94.44	243.6	1,812.7	2,460.3	2,321.7	138.60	17.752	
10,300.0	10,273.0	19,013.2	11,592.5	37.1	132.3	94.39	245.5	1,812.8	2,400.7	2,259.3	141.45	16.972	
10,400.0	10,373.0	19,011.3	11,592.5	37.4	132.3	94.33	247.3	1,812.9	2,343.9	2,199.6	144.34	16.238	
10,500.0	10,473.0	19,009.5	11,592.6	37.8	132.3	94.28	249.2	1,813.0	2,290.0	2,142.8	147.25	15.552	
10,600.0	10,573.0	19,007.6	11,592.6	38.2	132.2	94.22	251.1	1,813.2	2,239.4	2,089.2	150.15	14.914	
10,700.0	10,673.0	19,005.7	11,592.6	38.5	132.2	94.17	252.9	1,813.3	2,192.0	2,039.0	153.02	14.325	
10,800.0	10,773.0	19,003.9	11,592.7	38.9	132.2	94.11	254.8	1,813.4	2,148.4	1,992.5	155.83	13.787	
10,900.0	10,873.0	19,002.0	11,592.7	39.2	132.1	94.06	256.6	1,813.5	2,108.5	1,950.0	158.54	13.300	
11,000.0	10,973.0	19,000.1	11,592.8	39.6	132.1	94.00	258.5	1,813.6	2,072.7	1,911.6	161.11	12.865	
11,024.0	10,997.0	19,001.0	11,592.7	39.7	132.1	94.03	257.6	1,813.6	2,064.8	1,903.1	161.71	12.768	
11,050.0	11,023.0	19,001.0	11,592.7	39.7	132.1	-79.15	257.6	1,813.6	2,056.3	1,894.0	162.35	12.666	
11,100.0	11,072.8	19,003.2	11,592.7	39.9	132.2	-80.75	255.4	1,813.4	2,040.3	1,876.8	163.55	12.475	
11,150.0	11,122.0	19,010.9	11,592.6	40.0	132.3	-82.15	247.8	1,813.0	2,024.7	1,860.0	164.75	12.289	
11,200.0	11,170.3	19,022.7	11,592.3	40.2	132.5	-83.37	235.9	1,812.2	2,009.6	1,843.7	165.94	12.111	
11,250.0	11,217.2	19,030.0	11,592.2	40.3	132.6	-84.68	228.7	1,811.8	1,995.1	1,828.1	167.04	11.944	
11,300.0	11,262.5	19,030.0	11,592.2	40.4	132.6	-86.10	228.7	1,811.8	1,981.4	1,813.3	168.03	11.791	
11,350.0	11,305.7	19,030.0	11,592.2	40.5	132.6	-87.43	228.7	1,811.8	1,968.5	1,799.5	168.96	11.651	
11,400.0	11,346.6	19,030.0	11,592.2	40.6	132.6	-88.65	228.7	1,811.8	1,956.6	1,786.8	169.80	11.523	
11,450.0	11,384.8	19,030.0	11,592.2	40.6	132.6	-89.76	228.7	1,811.8	1,945.9	1,775.3	170.57	11.408	
11,500.0	11,420.1	19,030.0	11,592.2	40.7	132.6	-90.73	228.7	1,811.8	1,936.3	1,765.1	171.23	11.308	
11,550.0	11,452.2	19,030.0	11,592.2	40.8	132.6	-91.56	228.7	1,811.8	1,928.1	1,756.3	171.81	11.222	
11,600.0	11,480.8	19,030.0	11,592.2	40.9	132.6	-92.26	228.7	1,811.8	1,921.2	1,748.9	172.28	11.152	
11,650.0	11,505.7	19,030.0	11,592.2	40.9	132.6	-92.80	228.7	1,811.8	1,915.8	1,743.1	172.64	11.097	
11,700.0	11,526.7	19,030.0	11,592.2	41.0	132.6	-93.19	228.7	1,811.8	1,911.9	1,739.0	172.90	11.058	
11,750.0	11,543.8	19,030.0	11,592.2	41.1	132.6	-93.43	228.7	1,811.8	1,909.5	1,736.5	173.05	11.035	
11,800.0	11,556.6	19,030.0	11,592.2	41.2	132.6	-93.51	228.7	1,811.8	1,908.7	1,735.6	173.09	11.027	ES, SF
11,800.2	11,556.6	19,030.0	11,592.2	41.2	132.6	-93.51	228.7	1,811.8	1,908.7	1,735.6	173.09	11.027	CC
11,850.0	11,565.2	19,030.0	11,592.2	41.2	132.6	-93.43	228.7	1,811.8	1,909.5	1,736.5	173.03	11.036	
11,900.0	11,569.5	19,030.0	11,592.2	41.3	132.6	-93.19	228.7	1,811.8	1,911.9	1,739.0	172.85	11.061	
11,924.0	11,570.0	19,030.0	11,592.2	41.4	132.6	-93.03	228.7	1,811.8	1,913.5	1,740.8	172.73	11.078	
12,000.0	11,570.0	19,030.0	11,592.2	41.5	132.6	-93.04	228.7	1,811.8	1,921.9	1,749.7	172.24	11.158	
12,100.0	11,570.0	19,030.0	11,592.2	41.8	132.6	-93.06	228.7	1,811.8	1,940.4	1,769.0	171.39	11.321	
12,200.0	11,570.0	19,030.0	11,592.2	42.1	132.6	-93.09	228.7	1,811.8	1,967.2	1,796.9	170.33	11.549	
12,292.2	11,570.0	19,030.0	11,592.2	42.5	132.6	-93.12	228.7	1,811.8	1,998.9	1,829.7	169.20	11.814	
12,300.0	11,570.0	19,030.0	11,592.2	42.5	132.6	-93.12	228.7	1,811.8	2,001.9	1,832.8	169.09	11.839	
12,400.0	11,570.0	19,030.0	11,592.2	42.9	132.6	-93.12	228.7	1,811.8	2,042.2	1,874.5	167.71	12.177	
12,500.0	11,570.0	19,030.0	11,592.2	43.4	132.6	-93.12	228.7	1,811.8	2,086.6	1,920.4	166.20	12.555	
12,600.0	11,570.0	19,030.0	11,592.2	44.0	132.6	-93.12	228.7	1,811.8	2,134.7	1,970.1	164.59	12.970	
12,700.0	11,570.0	19,030.0	11,592.2	44.6	132.6	-93.12	228.7	1,811.8	2,186.4	2,023.4	162.91	13.420	
12,800.0	11,570.0	19,030.0	11,592.2	45.3	132.6	-93.12	228.7	1,811.8	2,241.3	2,080.1	161.18	13.905	
12,900.0	11,570.0	19,030.0	11,592.2	46.0	132.6	-93.12	228.7	1,811.8	2,299.2	2,139.8	159.42	14.422	
13,000.0	11,570.0	19,030.0	11,592.2	46.7	132.6	-93.12	228.7	1,811.8	2,360.0	2,202.4	157.65	14.970	
13,100.0	11,570.0	19,030.0	11,592.2	47.6	132.6	-93.12	228.7	1,811.8	2,423.4	2,267.5	155.88	15.547	
13,200.0	11,570.0	19,030.0	11,592.2	48.4	132.6	-93.12	228.7	1,811.8	2,489.2	2,335.1	154.12	16.151	
13,300.0	11,570.0	19,030.0	11,592.2	49.3	132.6	-93.12	228.7	1,811.8	2,557.2	2,404.8	152.38	16.782	
13,400.0	11,570.0	19,030.0	11,592.2	50.2	132.6	-93.12	228.7	1,811.8	2,627.2	2,476.5	150.68	17.436	
13,500.0	11,570.0	19,030.0	11,592.2	51.2	132.6	-93.12	228.7	1,811.8	2,699.2	2,550.2	149.01	18.114	
13,600.0	11,570.0	19,030.0	11,592.2	52.2	132.6	-93.12	228.7	1,811.8	2,772.8	2,625.5	147.39	18.813	
13,700.0	11,570.0	19,030.0	11,592.2	53.2	132.6	-93.12	228.7	1,811.8	2,848.1	2,702.3	145.81	19.533	
13,800.0	11,570.0	19,030.0	11,592.2	54.3	132.6	-93.12	228.7	1,811.8	2,924.9	2,780.6	144.29	20.271	
13,900.0	11,570.0	19,030.0	11,592.2	55.4	132.6	-93.12	228.7	1,811.8	3,003.0	2,860.2	142.81	21.028	
14,000.0	11,570.0	19,030.0	11,592.2	56.5	132.6	-93.12	228.7	1,811.8	3,082.4	2,941.0	141.39	21.801	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #007H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 284-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	19,030.0	11,592.2	57.7	132.6	-93.12	228.7	1,811.8	3,163.0	3,023.0	140.02	22.590	
14,200.0	11,570.0	19,030.0	11,592.2	58.9	132.6	-93.12	228.7	1,811.8	3,244.6	3,105.9	138.70	23.393	
14,300.0	11,570.0	19,030.0	11,592.2	60.1	132.6	-93.12	228.7	1,811.8	3,327.3	3,189.8	137.43	24.210	
14,400.0	11,570.0	19,030.0	11,592.2	61.3	132.6	-93.12	228.7	1,811.8	3,410.9	3,274.6	136.22	25.040	
14,500.0	11,570.0	19,030.0	11,592.2	62.5	132.6	-93.12	228.7	1,811.8	3,495.3	3,360.3	135.05	25.882	
14,600.0	11,570.0	19,030.0	11,592.2	63.8	132.6	-93.12	228.7	1,811.8	3,580.5	3,446.6	133.93	26.735	
14,700.0	11,570.0	19,030.0	11,592.2	65.0	132.6	-93.12	228.7	1,811.8	3,666.5	3,533.7	132.85	27.599	
14,800.0	11,570.0	19,030.0	11,592.2	66.3	132.6	-93.12	228.7	1,811.8	3,753.2	3,621.4	131.82	28.472	
14,900.0	11,570.0	19,030.0	11,592.2	67.6	132.6	-93.12	228.7	1,811.8	3,840.5	3,709.7	130.84	29.354	
15,000.0	11,570.0	19,030.0	11,592.2	69.0	132.6	-93.12	228.7	1,811.8	3,928.5	3,798.6	129.89	30.245	
15,100.0	11,570.0	19,030.0	11,592.2	70.3	132.6	-93.12	228.7	1,811.8	4,017.0	3,888.0	128.98	31.143	
15,200.0	11,570.0	19,030.0	11,592.2	71.7	132.6	-93.12	228.7	1,811.8	4,106.0	3,977.9	128.12	32.049	
15,300.0	11,570.0	19,030.0	11,592.2	73.0	132.6	-93.12	228.7	1,811.8	4,195.5	4,068.2	127.29	32.962	
15,400.0	11,570.0	19,030.0	11,592.2	74.4	132.6	-93.12	228.7	1,811.8	4,285.5	4,159.0	126.49	33.880	
15,500.0	11,570.0	19,030.0	11,592.2	75.8	132.6	-93.12	228.7	1,811.8	4,375.9	4,250.2	125.73	34.805	
15,600.0	11,570.0	19,030.0	11,592.2	77.2	132.6	-93.12	228.7	1,811.8	4,466.8	4,341.8	125.00	35.735	
15,700.0	11,570.0	19,030.0	11,592.2	78.6	132.6	-93.12	228.7	1,811.8	4,558.0	4,433.7	124.30	36.670	
15,800.0	11,570.0	19,030.0	11,592.2	80.0	132.6	-93.12	228.7	1,811.8	4,649.5	4,525.9	123.63	37.610	
15,900.0	11,570.0	19,030.0	11,592.2	81.4	132.6	-93.12	228.7	1,811.8	4,741.5	4,618.5	122.98	38.553	
16,000.0	11,570.0	19,030.0	11,592.2	82.9	132.6	-93.12	228.7	1,811.8	4,833.7	4,711.3	122.37	39.501	
16,100.0	11,570.0	19,030.0	11,592.2	84.3	132.6	-93.12	228.7	1,811.8	4,926.2	4,804.5	121.78	40.452	
16,200.0	11,570.0	19,030.0	11,592.2	85.8	132.6	-93.12	228.7	1,811.8	5,019.1	4,897.8	121.21	41.407	
16,300.0	11,570.0	19,030.0	11,592.2	87.2	132.6	-93.12	228.7	1,811.8	5,112.2	4,991.5	120.67	42.365	
16,400.0	11,570.0	19,030.0	11,592.2	88.7	132.6	-93.12	228.7	1,811.8	5,205.5	5,085.4	120.15	43.325	
16,500.0	11,570.0	19,030.0	11,592.2	90.2	132.6	-93.12	228.7	1,811.8	5,299.1	5,179.4	119.65	44.288	
16,600.0	11,570.0	19,030.0	11,592.2	91.6	132.6	-93.12	228.7	1,811.8	5,392.9	5,273.7	119.17	45.253	
16,700.0	11,570.0	19,030.0	11,592.2	93.1	132.6	-93.12	228.7	1,811.8	5,487.0	5,368.2	118.71	46.220	
16,800.0	11,570.0	19,030.0	11,592.2	94.6	132.6	-93.12	228.7	1,811.8	5,581.2	5,462.9	118.27	47.189	
16,900.0	11,570.0	19,030.0	11,592.2	96.1	132.6	-93.12	228.7	1,811.8	5,675.7	5,557.8	117.85	48.159	
17,000.0	11,570.0	19,030.0	11,592.2	97.6	132.6	-93.12	228.7	1,811.8	5,770.3	5,652.8	117.45	49.131	
17,100.0	11,570.0	19,030.0	11,592.2	99.1	132.6	-93.12	228.7	1,811.8	5,865.1	5,748.0	117.06	50.104	
17,200.0	11,570.0	19,030.0	11,592.2	100.6	132.6	-93.12	228.7	1,811.8	5,960.1	5,843.4	116.69	51.078	
17,300.0	11,570.0	19,030.0	11,592.2	102.1	132.6	-93.12	228.7	1,811.8	6,055.2	5,938.9	116.33	52.053	
17,400.0	11,570.0	19,030.0	11,592.2	103.7	132.6	-93.12	228.7	1,811.8	6,150.5	6,034.5	115.98	53.029	
17,500.0	11,570.0	19,030.0	11,592.2	105.2	132.6	-93.12	228.7	1,811.8	6,246.0	6,130.3	115.65	54.006	
17,600.0	11,570.0	19,030.0	11,592.2	106.7	132.6	-93.12	228.7	1,811.8	6,341.5	6,226.2	115.34	54.982	
17,700.0	11,570.0	19,030.0	11,592.2	108.3	132.6	-93.12	228.7	1,811.8	6,437.3	6,322.2	115.03	55.960	
17,800.0	11,570.0	19,030.0	11,592.2	109.8	132.6	-93.12	228.7	1,811.8	6,533.1	6,418.4	114.74	56.937	
17,900.0	11,570.0	19,030.0	11,592.2	111.3	132.6	-93.12	228.7	1,811.8	6,629.1	6,514.6	114.46	57.915	
18,000.0	11,570.0	19,030.0	11,592.2	112.9	132.6	-93.12	228.7	1,811.8	6,725.2	6,611.0	114.19	58.892	
18,100.0	11,570.0	19,030.0	11,592.2	114.4	132.6	-93.12	228.7	1,811.8	6,821.4	6,707.4	113.94	59.870	
18,200.0	11,570.0	19,030.0	11,592.2	116.0	132.6	-93.12	228.7	1,811.8	6,917.7	6,804.0	113.69	60.847	
18,307.1	11,570.0	19,030.0	11,592.2	117.4	132.6	-93.12	228.7	1,811.8	7,021.0	6,905.0	115.96	60.546	
18,307.7	11,570.0	19,030.0	11,592.2	117.4	132.6	-93.12	228.7	1,811.8	7,021.5	6,905.5	115.96	60.551	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #010H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 211-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	7.11	7,602.0	948.8	7,661.3				
100.0	100.0	36.6	36.6	0.1	0.1	7.11	7,602.0	948.8	7,661.0	7,660.8	0.18	N/A	
200.0	200.0	152.6	152.6	0.5	0.2	7.11	7,601.8	948.8	7,660.8	7,660.1	0.72	N/A	
300.0	300.0	341.9	341.9	0.8	0.8	7.12	7,600.3	948.8	7,660.1	7,658.5	1.64	4,669.035	
400.0	400.0	456.3	456.3	1.2	1.2	7.12	7,598.5	948.7	7,658.5	7,656.1	2.41	3,179.352	
500.0	500.0	545.6	545.5	1.6	1.5	7.12	7,597.1	948.3	7,656.9	7,653.8	3.09	2,481.370	
600.0	600.0	642.8	642.8	1.9	1.9	7.11	7,595.7	948.1	7,655.5	7,651.7	3.79	2,018.684	
700.0	700.0	745.7	745.6	2.3	2.2	7.11	7,594.2	947.9	7,654.0	7,649.5	4.52	1,693.596	
800.0	800.0	842.2	842.1	2.6	2.6	7.12	7,592.7	947.8	7,652.5	7,647.2	5.22	1,464.997	
900.0	900.0	911.0	910.9	3.0	2.8	7.12	7,591.9	947.8	7,651.3	7,645.4	5.83	1,312.779	
1,000.0	1,000.0	986.5	986.4	3.4	3.1	7.12	7,591.3	947.8	7,650.4	7,644.0	6.46	1,184.776	
1,100.0	1,100.0	1,087.7	1,087.7	3.7	3.5	7.12	7,590.6	947.8	7,649.7	7,642.5	7.18	1,065.673	
1,200.0	1,200.0	1,183.1	1,183.0	4.1	3.8	7.12	7,589.9	947.9	7,649.0	7,641.1	7.88	970.915	
1,300.0	1,300.0	1,284.9	1,284.8	4.4	4.2	7.12	7,589.2	947.8	7,648.3	7,639.7	8.60	889.195	
1,400.0	1,400.0	1,375.3	1,375.2	4.8	4.5	7.12	7,588.6	947.7	7,647.7	7,638.4	9.28	823.755	
1,500.0	1,500.0	1,464.1	1,464.0	5.1	4.8	7.12	7,588.2	947.7	7,647.2	7,637.2	9.96	767.747	
1,600.0	1,600.0	1,582.7	1,582.7	5.5	5.2	25.77	7,587.6	947.6	7,645.9	7,635.2	10.74	711.682	
1,700.0	1,700.0	1,732.1	1,732.0	5.9	5.8	25.80	7,586.1	947.9	7,642.6	7,631.0	11.63	656.877	
1,800.0	1,799.9	1,839.3	1,839.1	6.2	6.2	25.85	7,584.4	949.0	7,637.3	7,624.9	12.37	617.239	
1,900.0	1,899.7	1,900.6	1,900.4	6.6	6.4	25.90	7,583.6	949.7	7,630.6	7,617.6	12.95	589.299	
2,000.0	1,999.4	1,954.0	1,953.9	6.9	6.6	25.95	7,583.3	949.8	7,622.9	7,609.4	13.50	564.820	
2,100.0	2,098.9	1,987.8	1,987.7	7.3	6.7	25.99	7,583.3	949.5	7,614.4	7,600.4	13.97	545.027	
2,200.0	2,198.3	2,048.0	2,047.8	7.7	6.9	26.05	7,584.3	948.2	7,605.3	7,590.8	14.54	523.208	
2,300.0	2,297.4	2,048.0	2,047.8	8.0	6.9	26.09	7,584.3	948.2	7,595.3	7,580.4	14.90	509.902	
2,400.0	2,396.4	2,096.2	2,096.0	8.4	7.0	26.10	7,585.8	946.5	7,585.4	7,570.0	15.42	492.029	
2,500.0	2,495.5	2,142.0	2,141.7	8.8	7.2	26.10	7,587.7	944.4	7,576.4	7,560.4	15.93	475.603	
2,600.0	2,594.5	2,232.7	2,232.1	9.2	7.5	26.09	7,592.0	938.4	7,567.8	7,551.2	16.60	455.928	
2,700.0	2,693.5	2,280.7	2,279.8	9.6	7.7	26.08	7,594.6	934.4	7,559.4	7,542.3	17.13	441.419	
2,800.0	2,792.5	2,331.0	2,329.9	10.0	7.8	26.07	7,597.6	930.3	7,551.8	7,534.2	17.66	427.601	
2,900.0	2,891.6	2,423.5	2,422.0	10.3	8.1	26.06	7,603.5	923.4	7,544.6	7,526.3	18.35	411.255	
3,000.0	2,990.6	2,495.0	2,493.1	10.7	8.4	26.05	7,608.1	918.4	7,537.6	7,518.6	18.96	397.568	
3,100.0	3,089.6	2,847.0	2,843.6	11.1	9.6	25.99	7,626.1	891.6	7,529.4	7,508.8	20.57	365.966	
3,200.0	3,188.6	3,057.4	3,053.4	11.5	10.4	25.97	7,631.1	875.7	7,518.1	7,496.4	21.70	346.520	
3,300.0	3,287.7	3,162.1	3,157.9	11.9	10.8	25.97	7,632.8	869.4	7,506.4	7,484.0	22.44	334.484	
3,400.0	3,386.7	3,260.3	3,255.9	12.3	11.1	25.97	7,634.3	864.1	7,494.7	7,471.5	23.17	323.528	
3,500.0	3,485.7	3,351.3	3,346.7	12.7	11.4	25.96	7,635.9	857.9	7,483.0	7,459.2	23.87	313.525	
3,600.0	3,584.8	3,466.4	3,461.3	13.1	11.9	25.94	7,638.1	847.9	7,471.4	7,446.7	24.66	302.979	
3,700.0	3,683.8	3,619.4	3,613.7	13.5	12.4	25.91	7,640.3	834.4	7,459.1	7,433.5	25.59	291.482	
3,800.0	3,782.8	3,753.8	3,747.6	13.9	12.9	25.88	7,641.4	823.3	7,446.4	7,419.9	26.45	281.484	
3,900.0	3,881.8	3,878.1	3,871.6	14.3	13.4	25.86	7,641.7	813.4	7,433.1	7,405.9	27.28	272.456	
4,000.0	3,980.9	3,958.7	3,951.9	14.7	13.7	25.85	7,641.9	807.3	7,419.9	7,391.9	27.96	265.421	
4,100.0	4,079.9	4,032.0	4,025.0	15.2	13.9	25.85	7,642.4	801.9	7,407.1	7,378.5	28.60	258.965	
4,200.0	4,178.9	4,105.9	4,098.7	15.6	14.2	25.84	7,643.1	796.4	7,394.6	7,365.3	29.25	252.783	
4,300.0	4,277.9	4,223.9	4,216.3	16.0	14.7	25.82	7,644.3	787.3	7,382.1	7,352.0	30.06	245.574	
4,400.0	4,377.0	18,360.8	11,611.4	16.4	123.8	138.96	584.5	774.8	7,360.9	7,298.5	62.34	118.076	
4,500.0	4,476.0	18,349.9	11,611.0	16.8	123.6	138.58	595.3	774.7	7,262.7	7,200.3	62.42	116.348	
4,600.0	4,575.0	18,339.0	11,610.6	17.2	123.4	138.19	606.2	774.5	7,164.6	7,102.1	62.51	114.608	
4,625.7	4,600.5	18,336.2	11,610.5	17.3	123.4	138.09	609.0	774.5	7,139.4	7,076.9	62.54	114.159	
4,700.0	4,674.1	18,328.9	11,610.3	17.6	123.3	133.78	616.4	774.4	7,066.4	7,003.8	62.62	112.846	
4,800.0	4,773.6	18,321.4	11,610.1	18.0	123.1	127.03	623.9	774.2	6,968.0	6,905.2	62.75	111.045	
4,900.0	4,873.2	18,316.6	11,609.9	18.4	123.1	119.12	628.7	774.2	6,869.3	6,806.4	62.90	109.213	
5,000.0	4,973.1	18,314.5	11,609.8	18.7	123.0	110.10	630.7	774.1	6,770.4	6,707.4	63.07	107.353	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #010H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 211-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	18,315.2	11,609.8	19.1	123.0	100.23	630.0	774.1	6,671.5	6,608.2	63.26	105.469	
5,159.0	5,132.1	18,316.9	11,609.9	19.3	123.1	75.56	628.4	774.2	6,613.1	6,549.7	63.38	104.347	
5,200.0	5,173.0	18,318.4	11,610.0	19.4	123.1	75.65	626.9	774.2	6,572.5	6,509.0	63.46	103.566	
5,300.0	5,273.0	18,322.0	11,610.1	19.8	123.2	75.87	623.2	774.2	6,473.5	6,409.8	63.68	101.660	
5,400.0	5,373.0	18,325.7	11,610.2	20.1	123.2	76.09	619.6	774.3	6,374.6	6,310.7	63.90	99.754	
5,500.0	5,473.0	18,329.3	11,610.3	20.4	123.3	76.30	615.9	774.4	6,275.7	6,211.5	64.14	97.848	
5,600.0	5,573.0	18,333.0	11,610.4	20.8	123.3	76.52	612.3	774.4	6,176.8	6,112.4	64.38	95.943	
5,700.0	5,673.0	18,336.6	11,610.6	21.1	123.4	76.74	608.6	774.5	6,078.0	6,013.4	64.63	94.040	
5,800.0	5,773.0	18,340.3	11,610.7	21.4	123.4	76.96	605.0	774.5	5,979.2	5,914.3	64.89	92.139	
5,900.0	5,873.0	18,344.0	11,610.8	21.8	123.5	77.18	601.3	774.6	5,880.4	5,815.3	65.16	90.240	
6,000.0	5,973.0	18,347.6	11,610.9	22.1	123.6	77.40	597.7	774.6	5,781.7	5,716.3	65.45	88.344	
6,100.0	6,073.0	18,351.3	11,611.0	22.5	123.6	77.62	594.0	774.7	5,683.0	5,617.3	65.74	86.452	
6,200.0	6,173.0	18,354.9	11,611.2	22.8	123.7	77.84	590.3	774.7	5,584.4	5,518.4	66.04	84.563	
6,300.0	6,273.0	18,358.6	11,611.3	23.1	123.7	78.06	586.7	774.8	5,485.8	5,419.5	66.35	82.679	
6,400.0	6,373.0	18,362.2	11,611.4	23.5	123.8	78.28	583.0	774.8	5,387.3	5,320.6	66.67	80.800	
6,500.0	6,473.0	18,365.9	11,611.5	23.8	123.8	78.51	579.4	774.9	5,288.8	5,221.8	67.01	78.926	
6,600.0	6,573.0	18,369.5	11,611.7	24.2	123.9	78.73	575.7	774.9	5,190.4	5,123.0	67.36	77.058	
6,700.0	6,673.0	18,373.2	11,611.8	24.5	124.0	78.95	572.1	775.0	5,092.0	5,024.3	67.72	75.195	
6,800.0	6,773.0	18,376.8	11,611.9	24.9	124.0	79.17	568.4	775.0	4,993.7	4,925.6	68.09	73.339	
6,900.0	6,873.0	18,380.5	11,612.0	25.2	124.1	79.40	564.8	775.0	4,895.5	4,827.0	68.48	71.490	
7,000.0	6,973.0	18,390.2	11,612.3	25.6	124.2	79.99	555.0	775.1	4,797.3	4,728.4	68.93	69.593	
7,100.0	7,073.0	18,400.0	11,612.6	25.9	124.4	80.59	545.3	775.3	4,699.2	4,629.8	69.41	67.707	
7,200.0	7,173.0	18,408.9	11,612.9	26.3	124.5	81.14	536.4	775.4	4,601.2	4,531.3	69.89	65.838	
7,300.0	7,273.0	18,417.0	11,613.1	26.6	124.6	81.64	528.3	775.5	4,503.2	4,432.9	70.38	63.986	
7,400.0	7,373.0	18,424.4	11,613.3	26.9	124.8	82.10	520.9	775.6	4,405.4	4,334.5	70.88	62.150	
7,500.0	7,473.0	18,431.2	11,613.5	27.3	124.9	82.52	514.1	775.6	4,307.6	4,236.2	71.40	60.328	
7,600.0	7,573.0	18,437.5	11,613.7	27.6	125.0	82.91	507.8	775.7	4,210.0	4,138.0	71.94	58.521	
7,700.0	7,673.0	18,443.4	11,613.8	28.0	125.1	83.27	501.9	775.8	4,112.4	4,039.9	72.50	56.726	
7,800.0	7,773.0	18,448.8	11,613.9	28.3	125.1	83.61	496.5	775.9	4,015.0	3,941.9	73.07	54.945	
7,900.0	7,873.0	18,453.8	11,614.1	28.7	125.2	83.93	491.5	776.0	3,917.7	3,844.0	73.67	53.177	
8,000.0	7,973.0	18,458.5	11,614.2	29.0	125.3	84.22	486.8	776.0	3,820.5	3,746.2	74.30	51.422	
8,100.0	8,073.0	18,462.9	11,614.2	29.4	125.4	84.49	482.4	776.1	3,723.5	3,648.5	74.95	49.679	
8,200.0	8,173.0	18,467.1	11,614.3	29.7	125.4	84.75	478.3	776.1	3,626.6	3,551.0	75.64	47.949	
8,300.0	8,273.0	18,470.9	11,614.4	30.1	125.5	85.00	474.4	776.2	3,529.9	3,453.6	76.35	46.231	
8,400.0	8,373.0	18,474.6	11,614.5	30.4	125.6	85.22	470.7	776.3	3,433.4	3,356.3	77.11	44.527	
8,500.0	8,473.0	18,478.0	11,614.5	30.8	125.6	85.44	467.3	776.3	3,337.1	3,259.2	77.91	42.835	
8,600.0	8,573.0	18,481.3	11,614.6	31.1	125.7	85.64	464.0	776.4	3,241.1	3,162.3	78.75	41.157	
8,700.0	8,673.0	18,484.4	11,614.6	31.5	125.7	85.84	461.0	776.4	3,145.2	3,065.6	79.64	39.492	
8,800.0	8,773.0	18,487.3	11,614.7	31.8	125.8	86.02	458.1	776.5	3,049.7	2,969.1	80.59	37.842	
8,900.0	8,873.0	18,490.0	11,614.7	32.2	125.8	86.19	455.3	776.5	2,954.4	2,872.8	81.60	36.207	
9,000.0	8,973.0	18,492.6	11,614.8	32.5	125.8	86.36	452.7	776.5	2,859.4	2,776.8	82.67	34.587	
9,100.0	9,073.0	18,486.5	11,614.7	32.9	125.7	85.97	458.8	776.4	2,764.9	2,681.1	83.74	33.019	
9,200.0	9,173.0	18,488.2	11,614.7	33.2	125.8	86.08	457.1	776.5	2,670.7	2,585.7	84.96	31.434	
9,300.0	9,273.0	18,489.9	11,614.8	33.6	125.8	86.18	455.4	776.5	2,576.9	2,490.6	86.28	29.866	
9,400.0	9,373.0	18,491.6	11,614.8	33.9	125.8	86.29	453.7	776.5	2,483.6	2,395.9	87.70	28.318	
9,500.0	9,473.0	18,493.3	11,614.8	34.3	125.8	86.40	452.0	776.6	2,390.9	2,301.6	89.24	26.791	
9,600.0	9,573.0	18,495.0	11,614.9	34.6	125.9	86.50	450.3	776.6	2,298.7	2,207.8	90.91	25.286	
9,700.0	9,673.0	18,496.7	11,614.9	35.0	125.9	86.61	448.6	776.6	2,207.3	2,114.6	92.72	23.805	
9,800.0	9,773.0	18,498.4	11,614.9	35.3	125.9	86.72	446.9	776.7	2,116.6	2,021.9	94.70	22.351	
9,900.0	9,873.0	18,500.1	11,615.0	35.7	126.0	86.82	445.2	776.7	2,026.8	1,930.0	96.85	20.927	
10,000.0	9,973.0	18,501.8	11,615.0	36.0	126.0	86.93	443.5	776.7	1,938.0	1,838.8	99.21	19.534	
10,100.0	10,073.0	18,503.5	11,615.0	36.4	126.0	87.04	441.8	776.7	1,850.4	1,748.6	101.79	18.178	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #010H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 211-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	18,505.2	11,615.0	36.7	126.0	87.15	440.1	776.8	1,764.0	1,659.4	104.63	16.860	
10,300.0	10,273.0	18,506.9	11,615.1	37.1	126.1	87.25	438.4	776.8	1,679.2	1,571.4	107.74	15.586	
10,400.0	10,373.0	18,508.7	11,615.1	37.4	126.1	87.36	436.7	776.8	1,596.1	1,484.9	111.15	14.360	
10,500.0	10,473.0	18,510.4	11,615.1	37.8	126.1	87.47	435.0	776.9	1,515.1	1,400.2	114.90	13.186	
10,600.0	10,573.0	18,512.1	11,615.2	38.2	126.1	87.58	433.2	776.9	1,436.4	1,317.4	119.00	12.071	
10,700.0	10,673.0	18,513.8	11,615.2	38.5	126.2	87.69	431.5	776.9	1,360.6	1,237.1	123.47	11.020	
10,800.0	10,773.0	18,515.5	11,615.2	38.9	126.2	87.79	429.8	777.0	1,288.0	1,159.7	128.30	10.039	
10,900.0	10,873.0	18,517.3	11,615.3	39.2	126.2	87.90	428.1	777.0	1,219.4	1,085.9	133.48	9.135	
11,000.0	10,973.0	18,519.0	11,615.3	39.6	126.3	88.01	426.3	777.0	1,155.3	1,016.4	138.94	8.315	
11,024.0	10,997.0	18,519.4	11,615.3	39.7	126.3	88.04	425.9	777.0	1,140.7	1,000.4	140.28	8.132	
11,050.0	11,023.0	18,520.4	11,615.3	39.7	126.3	-86.13	425.0	777.1	1,125.2	983.4	141.74	7.938	
11,100.0	11,072.8	18,525.3	11,615.4	39.9	126.4	-89.36	420.1	777.2	1,096.3	951.7	144.57	7.583	
11,150.0	11,122.0	18,534.1	11,615.6	40.0	126.5	-92.09	411.3	777.4	1,068.9	921.5	147.40	7.252	
11,200.0	11,170.3	18,546.7	11,615.8	40.2	126.7	-94.33	398.6	777.6	1,043.2	893.0	150.19	6.946	
11,250.0	11,217.2	18,563.1	11,616.2	40.3	126.9	-96.09	382.3	778.0	1,019.3	866.4	152.90	6.667	
11,300.0	11,262.5	18,583.1	11,616.5	40.4	127.3	-97.40	362.2	778.5	997.5	842.0	155.49	6.415	
11,350.0	11,305.7	18,602.7	11,616.9	40.5	127.6	-98.51	342.7	779.1	977.7	819.8	157.86	6.193	
11,400.0	11,346.6	18,623.6	11,617.3	40.6	127.9	-99.33	321.8	779.9	960.2	800.2	160.02	6.000	
11,450.0	11,384.8	18,646.8	11,617.7	40.6	128.3	-99.85	298.6	781.0	944.9	783.0	161.96	5.834	
11,500.0	11,420.1	18,675.6	11,618.3	40.7	128.7	-99.97	269.9	782.7	931.9	768.1	163.77	5.690	
11,550.0	11,452.2	18,714.2	11,619.0	40.8	129.3	-99.62	231.4	785.1	920.7	755.2	165.56	5.561	
11,600.0	11,480.8	18,794.6	11,620.6	40.9	130.6	-97.94	151.1	788.7	910.6	742.6	168.04	5.419	
11,650.0	11,505.7	18,837.9	11,621.4	40.9	131.3	-97.68	107.8	789.5	900.5	731.0	169.49	5.313	
11,700.0	11,526.7	18,850.0	11,621.7	41.0	131.5	-98.21	95.7	789.7	892.1	722.0	170.07	5.245	
11,750.0	11,543.8	18,850.0	11,621.7	41.1	131.5	-98.73	95.7	789.7	886.9	716.9	169.95	5.219	SF
11,799.5	11,556.5	18,850.0	11,621.7	41.1	131.5	-98.89	95.7	789.7	885.2	715.8	169.35	5.227	CC, ES
11,800.0	11,556.6	18,850.0	11,621.7	41.2	131.5	-98.89	95.7	789.7	885.2	715.8	169.34	5.227	
11,850.0	11,565.2	18,850.0	11,621.7	41.2	131.5	-98.72	95.7	789.7	887.0	718.7	168.26	5.271	
11,900.0	11,569.5	18,850.0	11,621.7	41.3	131.5	-98.20	95.7	789.7	892.2	725.5	166.73	5.351	
11,924.0	11,570.0	18,850.0	11,621.7	41.4	131.5	-97.83	95.7	789.7	895.9	730.1	165.85	5.402	
12,000.0	11,570.0	18,850.0	11,621.7	41.5	131.5	-97.87	95.7	789.7	912.9	750.3	162.62	5.614	
12,100.0	11,570.0	18,850.0	11,621.7	41.8	131.5	-97.97	95.7	789.7	947.0	789.3	157.73	6.004	
12,200.0	11,570.0	18,850.0	11,621.7	42.1	131.5	-98.12	95.7	789.7	993.1	840.7	152.46	6.514	
12,292.2	11,570.0	18,850.0	11,621.7	42.5	131.5	-98.30	95.7	789.7	1,044.9	897.2	147.62	7.078	
12,300.0	11,570.0	18,850.0	11,621.7	42.5	131.5	-98.30	95.7	789.7	1,049.6	902.4	147.22	7.130	
12,400.0	11,570.0	18,850.0	11,621.7	42.9	131.5	-98.30	95.7	789.7	1,113.3	971.1	142.16	7.831	
12,500.0	11,570.0	18,850.0	11,621.7	43.4	131.5	-98.30	95.7	789.7	1,182.0	1,044.6	137.38	8.604	
12,600.0	11,570.0	18,850.0	11,621.7	44.0	131.5	-98.30	95.7	789.7	1,255.0	1,122.0	132.94	9.440	
12,700.0	11,570.0	18,850.0	11,621.7	44.6	131.5	-98.30	95.7	789.7	1,331.4	1,202.6	128.86	10.332	
12,800.0	11,570.0	18,850.0	11,621.7	45.3	131.5	-98.30	95.7	789.7	1,410.8	1,285.7	125.16	11.272	
12,900.0	11,570.0	18,850.0	11,621.7	46.0	131.5	-98.30	95.7	789.7	1,492.7	1,370.9	121.81	12.255	
13,000.0	11,570.0	18,850.0	11,621.7	46.7	131.5	-98.30	95.7	789.7	1,576.7	1,457.9	118.79	13.273	
13,100.0	11,570.0	18,850.0	11,621.7	47.6	131.5	-98.30	95.7	789.7	1,662.4	1,546.4	116.07	14.323	
13,200.0	11,570.0	18,850.0	11,621.7	48.4	131.5	-98.30	95.7	789.7	1,749.7	1,636.1	113.62	15.399	
13,300.0	11,570.0	18,850.0	11,621.7	49.3	131.5	-98.30	95.7	789.7	1,838.3	1,726.9	111.42	16.498	
13,400.0	11,570.0	18,850.0	11,621.7	50.2	131.5	-98.30	95.7	789.7	1,928.0	1,818.5	109.44	17.616	
13,500.0	11,570.0	18,850.0	11,621.7	51.2	131.5	-98.30	95.7	789.7	2,018.6	1,910.9	107.66	18.749	
13,600.0	11,570.0	18,850.0	11,621.7	52.2	131.5	-98.30	95.7	789.7	2,110.1	2,004.1	106.05	19.896	
13,700.0	11,570.0	18,850.0	11,621.7	53.2	131.5	-98.30	95.7	789.7	2,202.3	2,097.7	104.60	21.054	
13,800.0	11,570.0	18,850.0	11,621.7	54.3	131.5	-98.30	95.7	789.7	2,295.2	2,191.9	103.29	22.221	
13,900.0	11,570.0	18,850.0	11,621.7	55.4	131.5	-98.30	95.7	789.7	2,388.7	2,286.6	102.10	23.395	
14,000.0	11,570.0	18,850.0	11,621.7	56.5	131.5	-98.30	95.7	789.7	2,482.7	2,381.6	101.03	24.575	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #010H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 211-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	18,850.0	11,621.7	57.7	131.5	-98.30	95.7	789.7	2,577.1	2,477.0	100.05	25.759	
14,200.0	11,570.0	18,850.0	11,621.7	58.9	131.5	-98.30	95.7	789.7	2,671.9	2,572.8	99.16	26.946	
14,300.0	11,570.0	18,850.0	11,621.7	60.1	131.5	-98.30	95.7	789.7	2,767.1	2,668.8	98.35	28.136	
14,400.0	11,570.0	18,850.0	11,621.7	61.3	131.5	-98.30	95.7	789.7	2,862.6	2,765.0	97.61	29.328	
14,500.0	11,570.0	18,850.0	11,621.7	62.5	131.5	-98.30	95.7	789.7	2,958.5	2,861.5	96.93	30.521	
14,600.0	11,570.0	18,850.0	11,621.7	63.8	131.5	-98.30	95.7	789.7	3,054.5	2,958.2	96.32	31.714	
14,700.0	11,570.0	18,850.0	11,621.7	65.0	131.5	-98.30	95.7	789.7	3,150.9	3,055.1	95.75	32.907	
14,800.0	11,570.0	18,850.0	11,621.7	66.3	131.5	-98.30	95.7	789.7	3,247.4	3,152.2	95.23	34.099	
14,900.0	11,570.0	18,850.0	11,621.7	67.6	131.5	-98.30	95.7	789.7	3,344.2	3,249.4	94.76	35.291	
15,000.0	11,570.0	18,850.0	11,621.7	69.0	131.5	-98.30	95.7	789.7	3,441.1	3,346.8	94.32	36.482	
15,100.0	11,570.0	18,850.0	11,621.7	70.3	131.5	-98.30	95.7	789.7	3,538.2	3,444.3	93.92	37.671	
15,200.0	11,570.0	18,850.0	11,621.7	71.7	131.5	-98.30	95.7	789.7	3,635.5	3,541.9	93.56	38.859	
15,300.0	11,570.0	18,850.0	11,621.7	73.0	131.5	-98.30	95.7	789.7	3,732.9	3,639.7	93.22	40.044	
15,400.0	11,570.0	18,850.0	11,621.7	74.4	131.5	-98.30	95.7	789.7	3,830.4	3,737.5	92.91	41.228	
15,500.0	11,570.0	18,850.0	11,621.7	75.8	131.5	-98.30	95.7	789.7	3,928.1	3,835.5	92.62	42.410	
15,600.0	11,570.0	18,850.0	11,621.7	77.2	131.5	-98.30	95.7	789.7	4,025.9	3,933.5	92.36	43.589	
15,700.0	11,570.0	18,850.0	11,621.7	78.6	131.5	-98.30	95.7	789.7	4,123.8	4,031.7	92.12	44.767	
15,800.0	11,570.0	18,850.0	11,621.7	80.0	131.5	-98.30	95.7	789.7	4,221.8	4,129.9	91.89	45.941	
15,900.0	11,570.0	18,850.0	11,621.7	81.4	131.5	-98.30	95.7	789.7	4,319.9	4,228.2	91.69	47.114	
16,000.0	11,570.0	18,850.0	11,621.7	82.9	131.5	-98.30	95.7	789.7	4,418.0	4,326.5	91.50	48.283	
16,100.0	11,570.0	18,850.0	11,621.7	84.3	131.5	-98.30	95.7	789.7	4,516.3	4,424.9	91.33	49.451	
16,200.0	11,570.0	18,850.0	11,621.7	85.8	131.5	-98.30	95.7	789.7	4,614.6	4,523.4	91.17	50.615	
16,300.0	11,570.0	18,850.0	11,621.7	87.2	131.5	-98.30	95.7	789.7	4,713.0	4,622.0	91.02	51.777	
16,400.0	11,570.0	18,850.0	11,621.7	88.7	131.5	-98.30	95.7	789.7	4,811.4	4,720.5	90.89	52.936	
16,500.0	11,570.0	18,850.0	11,621.7	90.2	131.5	-98.30	95.7	789.7	4,910.0	4,819.2	90.77	54.093	
16,600.0	11,570.0	18,850.0	11,621.7	91.6	131.5	-98.30	95.7	789.7	5,008.5	4,917.9	90.66	55.246	
16,700.0	11,570.0	18,850.0	11,621.7	93.1	131.5	-98.30	95.7	789.7	5,107.2	5,016.6	90.56	56.397	
16,800.0	11,570.0	18,850.0	11,621.7	94.6	131.5	-98.30	95.7	789.7	5,205.9	5,115.4	90.47	57.545	
16,900.0	11,570.0	18,850.0	11,621.7	96.1	131.5	-98.30	95.7	789.7	5,304.6	5,214.2	90.38	58.691	
17,000.0	11,570.0	18,850.0	11,621.7	97.6	131.5	-98.30	95.7	789.7	5,403.4	5,313.1	90.31	59.833	
17,100.0	11,570.0	18,850.0	11,621.7	99.1	131.5	-98.30	95.7	789.7	5,502.2	5,412.0	90.24	60.973	
17,200.0	11,570.0	18,850.0	11,621.7	100.6	131.5	-98.30	95.7	789.7	5,601.1	5,510.9	90.18	62.110	
17,300.0	11,570.0	18,850.0	11,621.7	102.1	131.5	-98.30	95.7	789.7	5,700.0	5,609.9	90.13	63.244	
17,400.0	11,570.0	18,850.0	11,621.7	103.7	131.5	-98.30	95.7	789.7	5,798.9	5,708.8	90.08	64.375	
17,500.0	11,570.0	18,850.0	11,621.7	105.2	131.5	-98.30	95.7	789.7	5,897.9	5,807.9	90.04	65.503	
17,600.0	11,570.0	18,850.0	11,621.7	106.7	131.5	-98.30	95.7	789.7	5,996.9	5,906.9	90.01	66.628	
17,700.0	11,570.0	18,850.0	11,621.7	108.3	131.5	-98.30	95.7	789.7	6,096.0	6,006.0	89.98	67.751	
17,800.0	11,570.0	18,850.0	11,621.7	109.8	131.5	-98.30	95.7	789.7	6,195.0	6,105.1	89.95	68.870	
17,900.0	11,570.0	18,850.0	11,621.7	111.3	131.5	-98.30	95.7	789.7	6,294.2	6,204.2	89.93	69.987	
18,000.0	11,570.0	18,850.0	11,621.7	112.9	131.5	-98.30	95.7	789.7	6,393.3	6,303.4	89.92	71.101	
18,100.0	11,570.0	18,850.0	11,621.7	114.4	131.5	-98.30	95.7	789.7	6,492.4	6,402.5	89.91	72.211	
18,200.0	11,570.0	18,850.0	11,621.7	116.0	131.5	-98.30	95.7	789.7	6,591.6	6,501.7	89.90	73.319	
18,307.1	11,570.0	18,850.0	11,621.7	117.4	131.5	-98.30	95.7	789.7	6,697.9	6,604.9	92.99	72.032	
18,307.7	11,570.0	18,850.0	11,621.7	117.4	131.5	-98.30	95.7	789.7	6,698.4	6,605.5	92.99	72.037	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #016H - Wellbore #1 - Actual

Offset Site Error: 0.0 usft

Survey Program: 284-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	7.56	7,602.4	1,008.6	7,669.3				
100.0	100.0	44.5	44.5	0.1	0.1	7.56	7,602.4	1,008.6	7,669.0	7,668.8	0.20	N/A	
200.0	200.0	185.9	185.9	0.5	0.3	7.56	7,601.8	1,008.4	7,668.5	7,667.8	0.78	9,770.037	
300.0	300.0	327.3	327.3	0.8	0.5	7.55	7,600.4	1,008.0	7,667.6	7,666.2	1.37	5,597.592	
400.0	400.0	420.4	420.4	1.2	0.9	7.55	7,599.5	1,007.8	7,666.6	7,664.4	2.15	3,570.739	
500.0	500.0	554.6	554.6	1.6	1.4	7.56	7,597.6	1,007.9	7,665.1	7,662.2	2.99	2,567.283	
600.0	600.0	638.9	638.9	1.9	1.7	7.56	7,596.3	1,007.9	7,663.6	7,660.0	3.65	2,102.221	
700.0	700.0	769.9	769.9	2.3	2.2	7.56	7,594.3	1,008.0	7,662.1	7,657.7	4.47	1,712.708	
800.0	800.0	903.8	903.7	2.6	2.7	7.56	7,591.4	1,007.8	7,660.0	7,654.7	5.31	1,441.922	
900.0	900.0	995.7	995.6	3.0	3.0	7.57	7,589.4	1,008.0	7,657.8	7,651.8	6.00	1,276.329	
1,000.0	1,000.0	1,117.3	1,117.2	3.4	3.5	7.57	7,586.6	1,008.3	7,655.5	7,648.7	6.79	1,126.771	
1,100.0	1,100.0	1,171.8	1,171.7	3.7	3.6	7.57	7,585.4	1,008.7	7,653.4	7,646.1	7.35	1,041.823	
1,200.0	1,200.0	1,266.8	1,266.6	4.1	4.0	7.58	7,583.6	1,009.8	7,651.7	7,643.7	8.04	951.346	
1,300.0	1,300.0	1,371.8	1,371.6	4.4	4.4	7.59	7,581.6	1,010.6	7,649.9	7,641.1	8.78	871.612	
1,400.0	1,400.0	1,464.4	1,464.2	4.8	4.7	7.60	7,579.7	1,011.7	7,648.1	7,638.7	9.47	808.024	
1,500.0	1,500.0	1,551.9	1,551.6	5.1	5.0	7.62	7,578.0	1,013.7	7,646.5	7,636.3	10.13	754.554	
1,600.0	1,600.0	1,633.0	1,632.7	5.5	5.3	26.30	7,576.5	1,016.4	7,644.2	7,633.4	10.78	709.237	
1,700.0	1,700.0	1,710.1	1,709.7	5.9	5.6	26.34	7,575.1	1,019.5	7,640.7	7,629.3	11.41	669.766	
1,800.0	1,799.9	1,784.5	1,784.0	6.2	5.8	26.41	7,573.8	1,024.4	7,635.9	7,623.9	12.03	634.816	
1,900.0	1,899.7	1,865.2	1,864.3	6.6	6.1	26.51	7,572.4	1,031.9	7,629.9	7,617.2	12.67	602.050	
2,000.0	1,999.4	1,956.5	1,955.1	6.9	6.4	26.64	7,570.7	1,041.4	7,622.5	7,609.2	13.36	570.545	
2,100.0	2,098.9	1,990.1	1,988.5	7.3	6.6	26.72	7,570.2	1,045.0	7,614.1	7,600.2	13.84	550.134	
2,200.0	2,198.3	2,022.7	2,020.8	7.7	6.7	26.80	7,570.1	1,048.5	7,604.9	7,590.6	14.32	531.161	
2,300.0	2,297.4	2,052.0	2,050.0	8.0	6.8	26.88	7,570.1	1,051.8	7,595.1	7,580.3	14.78	513.748	
2,400.0	2,396.4	2,088.4	2,086.2	8.4	6.9	26.93	7,570.5	1,056.1	7,585.4	7,570.1	15.28	496.519	
2,500.0	2,495.5	2,147.0	2,144.3	8.8	7.1	27.01	7,571.8	1,063.4	7,576.7	7,560.9	15.85	477.943	
2,600.0	2,594.5	2,167.9	2,164.9	9.2	7.2	27.04	7,572.4	1,066.0	7,568.6	7,552.4	16.29	464.587	
2,700.0	2,693.5	2,240.0	2,236.4	9.6	7.5	27.14	7,574.5	1,075.3	7,561.1	7,544.2	16.92	446.830	
2,800.0	2,792.5	2,299.4	2,295.4	10.0	7.7	27.23	7,576.5	1,082.9	7,554.0	7,536.5	17.51	431.479	
2,900.0	2,891.6	2,335.0	2,330.6	10.3	7.8	27.28	7,578.0	1,087.4	7,547.6	7,529.6	18.00	419.240	
3,000.0	2,990.6	2,398.4	2,393.5	10.7	8.0	27.36	7,580.9	1,095.4	7,541.9	7,523.3	18.61	405.351	
3,100.0	3,089.6	2,460.8	2,455.3	11.1	8.3	27.45	7,584.3	1,103.2	7,536.8	7,517.6	19.21	392.423	
3,200.0	3,188.6	2,544.8	2,538.4	11.5	8.6	27.57	7,589.0	1,114.1	7,532.0	7,512.1	19.89	378.657	
3,300.0	3,287.7	2,624.1	2,616.9	11.9	8.9	27.68	7,593.6	1,124.7	7,527.5	7,507.0	20.56	366.080	
3,400.0	3,386.7	2,716.6	2,708.2	12.3	9.2	27.81	7,599.0	1,137.6	7,523.2	7,502.0	21.29	353.378	
3,500.0	3,485.7	2,785.7	2,776.6	12.7	9.5	27.92	7,603.2	1,147.5	7,519.2	7,497.3	21.93	342.910	
3,600.0	3,584.8	2,896.4	2,885.9	13.1	9.9	28.08	7,610.0	1,163.3	7,515.4	7,492.7	22.73	330.576	
3,700.0	3,683.8	2,984.3	2,972.8	13.5	10.3	28.21	7,615.4	1,176.0	7,511.6	7,488.2	23.45	320.284	
3,800.0	3,782.8	3,224.2	3,209.8	13.9	11.2	28.57	7,628.1	1,210.0	7,507.2	7,482.4	24.79	302.808	
3,900.0	3,881.8	3,357.3	3,341.7	14.3	11.8	28.76	7,633.8	1,227.3	7,501.4	7,475.7	25.70	291.940	
4,000.0	3,980.9	3,471.2	3,454.8	14.7	12.2	28.92	7,638.5	1,240.5	7,495.4	7,468.8	26.52	282.666	
4,100.0	4,079.9	3,588.3	3,571.0	15.2	12.7	29.06	7,643.3	1,253.0	7,489.1	7,461.8	27.35	273.867	
4,200.0	4,178.9	3,699.0	3,681.0	15.6	13.1	29.20	7,647.8	1,264.3	7,482.8	7,454.6	28.15	265.837	
4,300.0	4,277.9	3,831.2	3,812.7	16.0	13.6	29.35	7,652.9	1,276.3	7,476.1	7,447.1	29.03	257.545	
4,400.0	4,377.0	3,918.6	3,899.6	16.4	14.0	29.45	7,656.2	1,283.9	7,469.3	7,439.6	29.74	251.189	
4,500.0	4,476.0	19,030.0	11,592.2	16.8	132.6	135.71	99.3	1,882.6	7,461.4	7,387.9	73.55	101.451	
4,600.0	4,575.0	19,030.0	11,592.2	17.2	132.6	135.71	99.3	1,882.6	7,367.8	7,293.8	73.93	99.656	
4,625.7	4,600.5	19,028.7	11,592.2	17.3	132.6	135.68	100.6	1,882.7	7,343.7	7,269.7	74.02	99.209	
4,700.0	4,674.1	19,018.4	11,592.4	17.6	132.4	133.34	110.9	1,883.3	7,274.1	7,199.8	74.24	97.984	
4,800.0	4,773.6	18,922.6	11,593.5	18.0	130.9	128.02	206.4	1,889.4	7,179.8	7,105.9	73.88	97.181	
4,900.0	4,873.2	18,912.0	11,593.6	18.4	130.8	124.21	217.1	1,890.0	7,085.2	7,011.0	74.20	95.490	
5,000.0	4,973.1	18,904.6	11,593.7	18.7	130.6	120.16	224.4	1,890.5	6,990.2	6,915.7	74.54	93.777	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #016H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,073.0	18,900.4	11,593.7	19.1	130.6	115.91	228.6	1,890.8	6,894.9	6,820.0	74.91	92.045	
5,159.0	5,132.1	18,899.4	11,593.7	19.3	130.6	94.66	229.6	1,890.8	6,838.6	6,763.5	75.14	91.014	
5,200.0	5,173.0	18,899.1	11,593.7	19.4	130.6	94.65	229.9	1,890.9	6,799.5	6,724.2	75.30	90.298	
5,300.0	5,273.0	18,898.3	11,593.7	19.8	130.5	94.63	230.7	1,890.9	6,704.1	6,628.4	75.71	88.553	
5,400.0	5,373.0	18,897.6	11,593.7	20.1	130.5	94.61	231.4	1,891.0	6,608.9	6,532.8	76.13	86.812	
5,500.0	5,473.0	18,896.8	11,593.7	20.4	130.5	94.59	232.2	1,891.0	6,513.8	6,437.2	76.57	85.073	
5,600.0	5,573.0	18,896.1	11,593.7	20.8	130.5	94.57	232.9	1,891.0	6,418.9	6,341.8	77.02	83.337	
5,700.0	5,673.0	18,895.4	11,593.7	21.1	130.5	94.55	233.6	1,891.1	6,324.1	6,246.6	77.50	81.606	
5,800.0	5,773.0	18,894.7	11,593.7	21.4	130.5	94.53	234.3	1,891.1	6,229.5	6,151.5	77.99	79.879	
5,900.0	5,873.0	18,894.0	11,593.7	21.8	130.5	94.51	235.0	1,891.2	6,135.0	6,056.5	78.50	78.157	
6,000.0	5,973.0	18,893.3	11,593.7	22.1	130.5	94.49	235.7	1,891.2	6,040.7	5,961.7	79.03	76.440	
6,100.0	6,073.0	18,892.6	11,593.7	22.5	130.5	94.47	236.4	1,891.3	5,946.6	5,867.1	79.58	74.730	
6,200.0	6,173.0	18,891.9	11,593.7	22.8	130.4	94.45	237.1	1,891.3	5,852.8	5,772.6	80.15	73.026	
6,300.0	6,273.0	18,891.2	11,593.7	23.1	130.4	94.43	237.8	1,891.4	5,759.1	5,678.3	80.74	71.329	
6,400.0	6,373.0	18,890.5	11,593.7	23.5	130.4	94.41	238.5	1,891.4	5,665.6	5,584.2	81.36	69.639	
6,500.0	6,473.0	18,889.8	11,593.7	23.8	130.4	94.39	239.1	1,891.4	5,572.4	5,490.4	82.00	67.958	
6,600.0	6,573.0	18,889.2	11,593.7	24.2	130.4	94.38	239.8	1,891.5	5,479.4	5,396.7	82.66	66.286	
6,700.0	6,673.0	18,888.5	11,593.8	24.5	130.4	94.36	240.5	1,891.5	5,386.6	5,303.2	83.35	64.623	
6,800.0	6,773.0	18,887.8	11,593.8	24.9	130.4	94.34	241.1	1,891.6	5,294.1	5,210.0	84.07	62.969	
6,900.0	6,873.0	18,887.2	11,593.8	25.2	130.4	94.32	241.8	1,891.6	5,201.9	5,117.1	84.82	61.327	
7,000.0	6,973.0	18,886.5	11,593.8	25.6	130.4	94.30	242.4	1,891.6	5,110.0	5,024.4	85.60	59.695	
7,100.0	7,073.0	18,885.9	11,593.8	25.9	130.4	94.28	243.1	1,891.7	5,018.4	4,932.0	86.41	58.075	
7,200.0	7,173.0	18,885.2	11,593.8	26.3	130.3	94.27	243.7	1,891.7	4,927.1	4,839.8	87.26	56.467	
7,300.0	7,273.0	18,884.6	11,593.8	26.6	130.3	94.25	244.4	1,891.8	4,836.2	4,748.0	88.14	54.872	
7,400.0	7,373.0	18,884.0	11,593.8	26.9	130.3	94.23	245.0	1,891.8	4,745.6	4,656.5	89.05	53.290	
7,500.0	7,473.0	18,883.4	11,593.8	27.3	130.3	94.21	245.6	1,891.8	4,655.4	4,565.4	90.01	51.723	
7,600.0	7,573.0	18,882.7	11,593.8	27.6	130.3	94.19	246.2	1,891.9	4,565.6	4,474.6	91.00	50.171	
7,700.0	7,673.0	18,882.1	11,593.8	28.0	130.3	94.18	246.9	1,891.9	4,476.3	4,384.2	92.04	48.635	
7,800.0	7,773.0	18,881.5	11,593.8	28.3	130.3	94.16	247.5	1,892.0	4,387.4	4,294.3	93.12	47.116	
7,900.0	7,873.0	18,880.9	11,593.8	28.7	130.3	94.14	248.1	1,892.0	4,299.0	4,204.7	94.25	45.613	
8,000.0	7,973.0	18,880.3	11,593.8	29.0	130.3	94.13	248.7	1,892.0	4,211.1	4,115.7	95.43	44.129	
8,100.0	8,073.0	18,879.7	11,593.8	29.4	130.3	94.11	249.3	1,892.1	4,123.8	4,027.1	96.66	42.664	
8,200.0	8,173.0	18,879.1	11,593.8	29.7	130.2	94.09	249.9	1,892.1	4,037.1	3,939.1	97.94	41.220	
8,300.0	8,273.0	18,878.5	11,593.8	30.1	130.2	94.07	250.5	1,892.1	3,950.9	3,851.7	99.28	39.796	
8,400.0	8,373.0	18,877.9	11,593.8	30.4	130.2	94.06	251.0	1,892.2	3,865.5	3,764.8	100.68	38.393	
8,500.0	8,473.0	18,877.3	11,593.8	30.8	130.2	94.04	251.6	1,892.2	3,780.8	3,678.6	102.14	37.014	
8,600.0	8,573.0	18,876.8	11,593.8	31.1	130.2	94.03	252.2	1,892.3	3,696.8	3,593.1	103.67	35.659	
8,700.0	8,673.0	18,876.2	11,593.8	31.5	130.2	94.01	252.8	1,892.3	3,613.7	3,508.4	105.27	34.329	
8,800.0	8,773.0	18,875.6	11,593.8	31.8	130.2	93.99	253.3	1,892.3	3,531.4	3,424.4	106.93	33.024	
8,900.0	8,873.0	18,875.0	11,593.8	32.2	130.2	93.98	253.9	1,892.4	3,450.0	3,341.4	108.67	31.747	
9,000.0	8,973.0	18,874.5	11,593.8	32.5	130.2	93.96	254.5	1,892.4	3,369.7	3,259.2	110.49	30.499	
9,100.0	9,073.0	18,873.9	11,593.8	32.9	130.2	93.95	255.0	1,892.4	3,290.5	3,178.1	112.38	29.280	
9,200.0	9,173.0	18,873.4	11,593.8	33.2	130.2	93.93	255.6	1,892.5	3,212.4	3,098.0	114.35	28.091	
9,300.0	9,273.0	18,872.8	11,593.8	33.6	130.2	93.91	256.1	1,892.5	3,135.5	3,019.1	116.41	26.935	
9,400.0	9,373.0	18,872.3	11,593.8	33.9	130.1	93.90	256.7	1,892.5	3,060.0	2,941.4	118.55	25.812	
9,500.0	9,473.0	18,871.7	11,593.8	34.3	130.1	93.88	257.2	1,892.6	2,985.9	2,865.1	120.77	24.724	
9,600.0	9,573.0	18,871.2	11,593.8	34.6	130.1	93.87	257.8	1,892.6	2,913.4	2,790.3	123.07	23.672	
9,700.0	9,673.0	18,870.7	11,593.8	35.0	130.1	93.85	258.3	1,892.6	2,842.5	2,717.1	125.46	22.656	
9,800.0	9,773.0	18,870.2	11,593.8	35.3	130.1	93.84	258.8	1,892.7	2,773.5	2,645.5	127.93	21.680	
9,900.0	9,873.0	18,869.7	11,593.8	35.7	130.1	93.83	259.3	1,892.7	2,706.3	2,575.9	130.47	20.743	
10,000.0	9,973.0	18,869.2	11,593.9	36.0	130.1	93.81	259.8	1,892.7	2,641.3	2,508.2	133.08	19.847	
10,100.0	10,073.0	18,868.7	11,593.9	36.4	130.1	93.80	260.2	1,892.8	2,578.5	2,442.7	135.75	18.994	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #016H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,173.0	18,868.2	11,593.9	36.7	130.1	93.78	260.7	1,892.8	2,518.1	2,379.6	138.48	18.184	
10,300.0	10,273.0	18,867.7	11,593.9	37.1	130.1	93.77	261.2	1,892.8	2,460.2	2,319.0	141.24	17.419	
10,400.0	10,373.0	18,867.2	11,593.9	37.4	130.1	93.76	261.7	1,892.9	2,405.2	2,261.2	144.02	16.700	
10,500.0	10,473.0	18,866.7	11,593.9	37.8	130.1	93.74	262.2	1,892.9	2,353.1	2,206.3	146.81	16.028	
10,600.0	10,573.0	18,866.2	11,593.9	38.2	130.0	93.73	262.7	1,892.9	2,304.2	2,154.6	149.58	15.404	
10,700.0	10,673.0	18,865.7	11,593.9	38.5	130.0	93.71	263.2	1,892.9	2,258.6	2,106.3	152.31	14.829	
10,800.0	10,773.0	18,865.3	11,593.9	38.9	130.0	93.70	263.7	1,893.0	2,216.6	2,061.7	154.96	14.304	
10,900.0	10,873.0	18,864.8	11,593.9	39.2	130.0	93.69	264.2	1,893.0	2,178.4	2,020.9	157.52	13.830	
11,000.0	10,973.0	18,864.3	11,593.9	39.6	130.0	93.67	264.6	1,893.0	2,144.2	1,984.3	159.94	13.407	
11,024.0	10,997.0	18,864.2	11,593.9	39.7	130.0	93.67	264.8	1,893.0	2,136.6	1,976.1	160.49	13.313	
11,050.0	11,023.0	18,864.6	11,593.9	39.7	130.0	-79.45	264.3	1,893.0	2,128.6	1,967.5	161.09	13.214	
11,100.0	11,072.8	18,868.8	11,593.9	39.9	130.1	-80.91	260.2	1,892.8	2,113.3	1,951.1	162.22	13.027	
11,150.0	11,122.0	18,877.4	11,593.8	40.0	130.2	-82.21	251.6	1,892.2	2,098.4	1,935.1	163.35	12.846	
11,200.0	11,170.3	18,890.4	11,593.7	40.2	130.4	-83.34	238.6	1,891.4	2,084.0	1,919.6	164.46	12.672	
11,250.0	11,217.2	18,907.6	11,593.6	40.3	130.7	-84.32	221.4	1,890.3	2,070.2	1,904.6	165.56	12.504	
11,300.0	11,262.5	18,928.9	11,593.5	40.4	131.0	-85.14	200.2	1,889.0	2,056.8	1,890.2	166.63	12.344	
11,350.0	11,305.7	18,954.1	11,593.3	40.5	131.4	-85.84	175.1	1,887.4	2,044.0	1,876.3	167.67	12.190	
11,400.0	11,346.6	18,984.0	11,593.0	40.6	131.9	-86.40	145.2	1,885.5	2,031.6	1,862.9	168.70	12.043	
11,450.0	11,384.8	19,015.8	11,592.5	40.6	132.4	-86.91	113.4	1,883.5	2,019.7	1,850.0	169.70	11.902	
11,500.0	11,420.1	19,030.0	11,592.2	40.7	132.6	-87.78	99.3	1,882.6	2,008.3	1,837.8	170.53	11.777	
11,550.0	11,452.2	19,030.0	11,592.2	40.8	132.6	-88.84	99.3	1,882.6	1,997.9	1,826.7	171.21	11.669	
11,600.0	11,480.8	19,030.0	11,592.2	40.9	132.6	-89.79	99.3	1,882.6	1,988.5	1,816.7	171.80	11.575	
11,650.0	11,505.7	19,030.0	11,592.2	40.9	132.6	-90.61	99.3	1,882.6	1,980.4	1,808.1	172.31	11.493	
11,700.0	11,526.7	19,030.0	11,592.2	41.0	132.6	-91.30	99.3	1,882.6	1,973.6	1,800.9	172.74	11.426	
11,750.0	11,543.8	19,030.0	11,592.2	41.1	132.6	-91.85	99.3	1,882.6	1,968.1	1,795.0	173.07	11.372	
11,800.0	11,556.6	19,030.0	11,592.2	41.2	132.6	-92.26	99.3	1,882.6	1,964.0	1,790.7	173.31	11.332	
11,850.0	11,565.2	19,030.0	11,592.2	41.2	132.6	-92.53	99.3	1,882.6	1,961.4	1,787.9	173.46	11.308	
11,900.0	11,569.5	19,030.0	11,592.2	41.3	132.6	-92.65	99.3	1,882.6	1,960.2	1,786.7	173.50	11.298	
11,915.3	11,569.9	19,030.0	11,592.2	41.3	132.6	-92.66	99.3	1,882.6	1,960.1	1,786.6	173.50	11.297	CC, ES, SF
11,924.0	11,570.0	19,030.0	11,592.2	41.4	132.6	-92.65	99.3	1,882.6	1,960.1	1,786.6	173.49	11.298	
12,000.0	11,570.0	19,030.0	11,592.2	41.5	132.6	-92.66	99.3	1,882.6	1,963.0	1,789.7	173.35	11.324	
12,100.0	11,570.0	19,030.0	11,592.2	41.8	132.6	-92.67	99.3	1,882.6	1,974.3	1,801.3	172.95	11.415	
12,200.0	11,570.0	19,030.0	11,592.2	42.1	132.6	-92.69	99.3	1,882.6	1,994.0	1,821.6	172.32	11.571	
12,292.2	11,570.0	19,030.0	11,592.2	42.5	132.6	-92.71	99.3	1,882.6	2,019.3	1,847.7	171.56	11.770	
12,300.0	11,570.0	19,030.0	11,592.2	42.5	132.6	-92.71	99.3	1,882.6	2,021.7	1,850.2	171.48	11.790	
12,400.0	11,570.0	19,030.0	11,592.2	42.9	132.6	-92.71	99.3	1,882.6	2,055.4	1,884.9	170.46	12.058	
12,500.0	11,570.0	19,030.0	11,592.2	43.4	132.6	-92.71	99.3	1,882.6	2,093.3	1,924.0	169.28	12.366	
12,600.0	11,570.0	19,030.0	11,592.2	44.0	132.6	-92.71	99.3	1,882.6	2,135.2	1,967.2	167.96	12.712	
12,700.0	11,570.0	19,030.0	11,592.2	44.6	132.6	-92.71	99.3	1,882.6	2,180.9	2,014.3	166.54	13.095	
12,800.0	11,570.0	19,030.0	11,592.2	45.3	132.6	-92.71	99.3	1,882.6	2,230.1	2,065.1	165.02	13.514	
12,900.0	11,570.0	19,030.0	11,592.2	46.0	132.6	-92.71	99.3	1,882.6	2,282.7	2,119.2	163.43	13.967	
13,000.0	11,570.0	19,030.0	11,592.2	46.7	132.6	-92.71	99.3	1,882.6	2,338.3	2,176.5	161.80	14.452	
13,100.0	11,570.0	19,030.0	11,592.2	47.6	132.6	-92.71	99.3	1,882.6	2,396.9	2,236.7	160.13	14.968	
13,200.0	11,570.0	19,030.0	11,592.2	48.4	132.6	-92.71	99.3	1,882.6	2,458.1	2,299.6	158.45	15.513	
13,300.0	11,570.0	19,030.0	11,592.2	49.3	132.6	-92.71	99.3	1,882.6	2,521.8	2,365.0	156.77	16.086	
13,400.0	11,570.0	19,030.0	11,592.2	50.2	132.6	-92.71	99.3	1,882.6	2,587.8	2,432.7	155.10	16.684	
13,500.0	11,570.0	19,030.0	11,592.2	51.2	132.6	-92.71	99.3	1,882.6	2,655.9	2,502.4	153.45	17.308	
13,600.0	11,570.0	19,030.0	11,592.2	52.2	132.6	-92.71	99.3	1,882.6	2,726.0	2,574.2	151.83	17.955	
13,700.0	11,570.0	19,030.0	11,592.2	53.2	132.6	-92.71	99.3	1,882.6	2,797.9	2,647.6	150.23	18.624	
13,800.0	11,570.0	19,030.0	11,592.2	54.3	132.6	-92.71	99.3	1,882.6	2,871.5	2,722.8	148.68	19.313	
13,900.0	11,570.0	19,030.0	11,592.2	55.4	132.6	-92.71	99.3	1,882.6	2,946.6	2,799.4	147.17	20.022	
14,000.0	11,570.0	19,030.0	11,592.2	56.5	132.6	-92.71	99.3	1,882.6	3,023.2	2,877.5	145.70	20.750	

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

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Big Game - Minis 1 Federal Com #016H - Wellbore #1 - Actual — **Offset Site Error:** 0.0 usft

Survey Program: 284-MWD — **Offset Well Error:** 0.0 usft

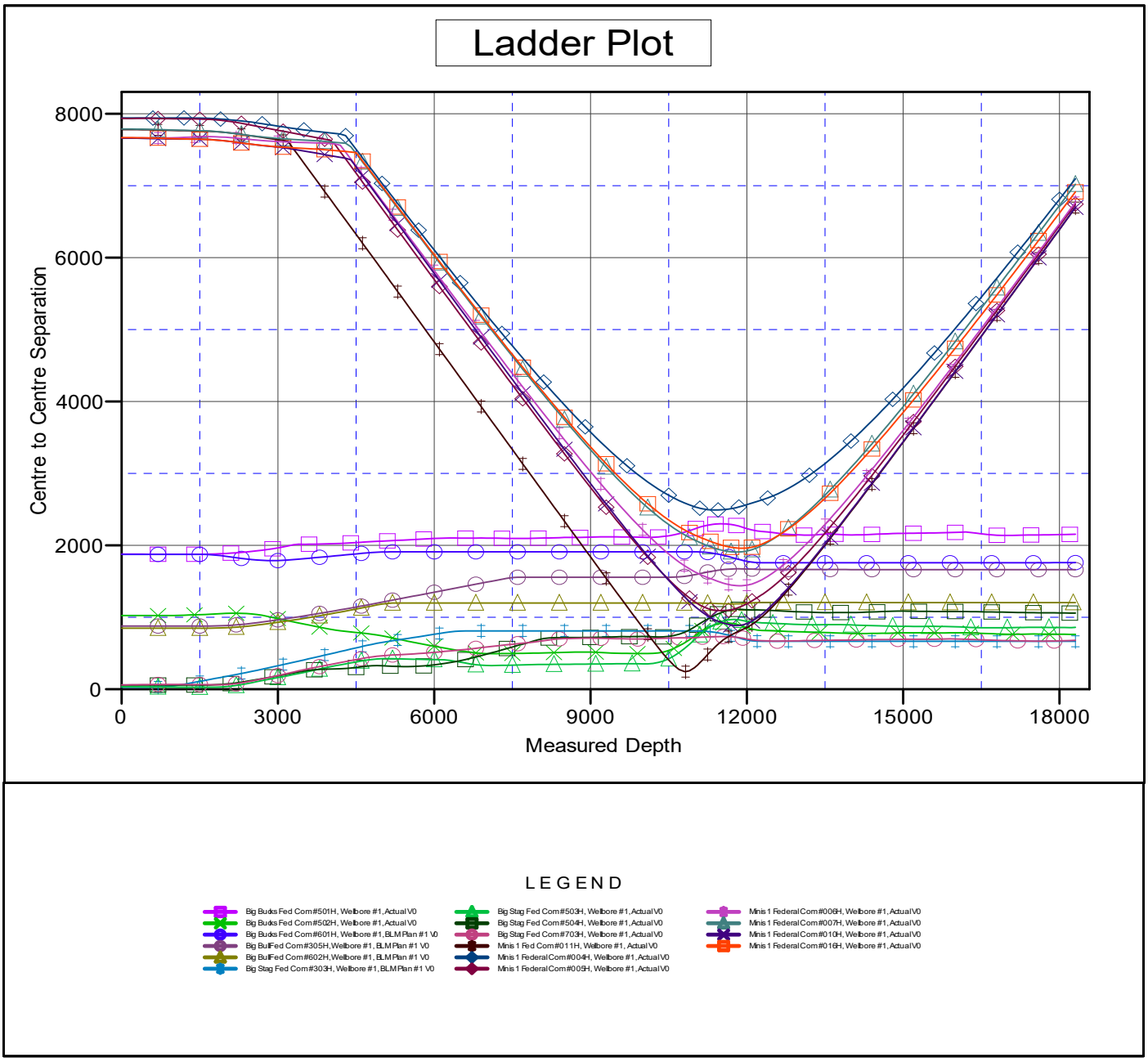
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.0	11,570.0	19,030.0	11,592.2	57.7	132.6	-92.71	99.3	1,882.6	3,101.1	2,956.8	144.27	21.495	
14,200.0	11,570.0	19,030.0	11,592.2	58.9	132.6	-92.71	99.3	1,882.6	3,180.3	3,037.4	142.90	22.256	
14,300.0	11,570.0	19,030.0	11,592.2	60.1	132.6	-92.71	99.3	1,882.6	3,260.6	3,119.0	141.57	23.032	
14,400.0	11,570.0	19,030.0	11,592.2	61.3	132.6	-92.71	99.3	1,882.6	3,341.9	3,201.6	140.29	23.822	
14,500.0	11,570.0	19,030.0	11,592.2	62.5	132.6	-92.71	99.3	1,882.6	3,424.3	3,285.2	139.05	24.626	
14,600.0	11,570.0	19,030.0	11,592.2	63.8	132.6	-92.71	99.3	1,882.6	3,507.6	3,369.7	137.86	25.442	
14,700.0	11,570.0	19,030.0	11,592.2	65.0	132.6	-92.71	99.3	1,882.6	3,591.7	3,455.0	136.72	26.270	
14,800.0	11,570.0	19,030.0	11,592.2	66.3	132.6	-92.71	99.3	1,882.6	3,676.6	3,541.0	135.62	27.109	
14,900.0	11,570.0	19,030.0	11,592.2	67.6	132.6	-92.71	99.3	1,882.6	3,762.3	3,627.7	134.57	27.959	
15,000.0	11,570.0	19,030.0	11,592.2	69.0	132.6	-92.71	99.3	1,882.6	3,848.6	3,715.1	133.55	28.817	
15,100.0	11,570.0	19,030.0	11,592.2	70.3	132.6	-92.71	99.3	1,882.6	3,935.6	3,803.0	132.58	29.685	
15,200.0	11,570.0	19,030.0	11,592.2	71.7	132.6	-92.71	99.3	1,882.6	4,023.2	3,891.6	131.64	30.561	
15,300.0	11,570.0	19,030.0	11,592.2	73.0	132.6	-92.71	99.3	1,882.6	4,111.4	3,980.6	130.75	31.445	
15,400.0	11,570.0	19,030.0	11,592.2	74.4	132.6	-92.71	99.3	1,882.6	4,200.1	4,070.2	129.89	32.337	
15,500.0	11,570.0	19,030.0	11,592.2	75.8	132.6	-92.71	99.3	1,882.6	4,289.3	4,160.2	129.06	33.235	
15,600.0	11,570.0	19,030.0	11,592.2	77.2	132.6	-92.71	99.3	1,882.6	4,378.9	4,250.7	128.27	34.139	
15,700.0	11,570.0	19,030.0	11,592.2	78.6	132.6	-92.71	99.3	1,882.6	4,469.0	4,341.5	127.51	35.049	
15,800.0	11,570.0	19,030.0	11,592.2	80.0	132.6	-92.71	99.3	1,882.6	4,559.5	4,432.8	126.78	35.965	
15,900.0	11,570.0	19,030.0	11,592.2	81.4	132.6	-92.71	99.3	1,882.6	4,650.4	4,524.4	126.08	36.886	
16,000.0	11,570.0	19,030.0	11,592.2	82.9	132.6	-92.71	99.3	1,882.6	4,741.7	4,616.3	125.40	37.811	
16,100.0	11,570.0	19,030.0	11,592.2	84.3	132.6	-92.71	99.3	1,882.6	4,833.3	4,708.6	124.76	38.741	
16,200.0	11,570.0	19,030.0	11,592.2	85.8	132.6	-92.71	99.3	1,882.6	4,925.3	4,801.1	124.14	39.675	
16,300.0	11,570.0	19,030.0	11,592.2	87.2	132.6	-92.71	99.3	1,882.6	5,017.5	4,894.0	123.55	40.612	
16,400.0	11,570.0	19,030.0	11,592.2	88.7	132.6	-92.71	99.3	1,882.6	5,110.0	4,987.1	122.98	41.553	
16,500.0	11,570.0	19,030.0	11,592.2	90.2	132.6	-92.71	99.3	1,882.6	5,202.9	5,080.4	122.43	42.497	
16,600.0	11,570.0	19,030.0	11,592.2	91.6	132.6	-92.71	99.3	1,882.6	5,295.9	5,174.0	121.90	43.443	
16,700.0	11,570.0	19,030.0	11,592.2	93.1	132.6	-92.71	99.3	1,882.6	5,389.3	5,267.9	121.40	44.393	
16,800.0	11,570.0	19,030.0	11,592.2	94.6	132.6	-92.71	99.3	1,882.6	5,482.8	5,361.9	120.91	45.345	
16,900.0	11,570.0	19,030.0	11,592.2	96.1	132.6	-92.71	99.3	1,882.6	5,576.6	5,456.2	120.45	46.298	
17,000.0	11,570.0	19,030.0	11,592.2	97.6	132.6	-92.71	99.3	1,882.6	5,670.6	5,550.6	120.00	47.254	
17,100.0	11,570.0	19,030.0	11,592.2	99.1	132.6	-92.71	99.3	1,882.6	5,764.8	5,645.2	119.57	48.212	
17,200.0	11,570.0	19,030.0	11,592.2	100.6	132.6	-92.71	99.3	1,882.6	5,859.2	5,740.0	119.16	49.171	
17,300.0	11,570.0	19,030.0	11,592.2	102.1	132.6	-92.71	99.3	1,882.6	5,953.8	5,835.0	118.76	50.131	
17,400.0	11,570.0	19,030.0	11,592.2	103.7	132.6	-92.71	99.3	1,882.6	6,048.5	5,930.1	118.38	51.093	
17,500.0	11,570.0	19,030.0	11,592.2	105.2	132.6	-92.71	99.3	1,882.6	6,143.4	6,025.4	118.02	52.056	
17,600.0	11,570.0	19,030.0	11,592.2	106.7	132.6	-92.71	99.3	1,882.6	6,238.5	6,120.8	117.67	53.019	
17,700.0	11,570.0	19,030.0	11,592.2	108.3	132.6	-92.71	99.3	1,882.6	6,333.7	6,216.4	117.33	53.983	
17,800.0	11,570.0	19,030.0	11,592.2	109.8	132.6	-92.71	99.3	1,882.6	6,429.1	6,312.1	117.00	54.948	
17,900.0	11,570.0	19,030.0	11,592.2	111.3	132.6	-92.71	99.3	1,882.6	6,524.6	6,407.9	116.69	55.914	
18,000.0	11,570.0	19,030.0	11,592.2	112.9	132.6	-92.71	99.3	1,882.6	6,620.3	6,503.9	116.39	56.879	
18,100.0	11,570.0	19,030.0	11,592.2	114.4	132.6	-92.71	99.3	1,882.6	6,716.0	6,599.9	116.10	57.845	
18,200.0	11,570.0	19,030.0	11,592.2	116.0	132.6	-92.71	99.3	1,882.6	6,811.9	6,696.1	115.83	58.811	
18,307.1	11,570.0	19,030.0	11,592.2	117.4	132.6	-92.71	99.3	1,882.6	6,914.8	6,796.8	118.00	58.599	
18,307.7	11,570.0	19,030.0	11,592.2	117.4	132.6	-92.71	99.3	1,882.6	6,915.3	6,797.3	118.00	58.604	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3821.5usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Big Stag Fed Com #304H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.38°

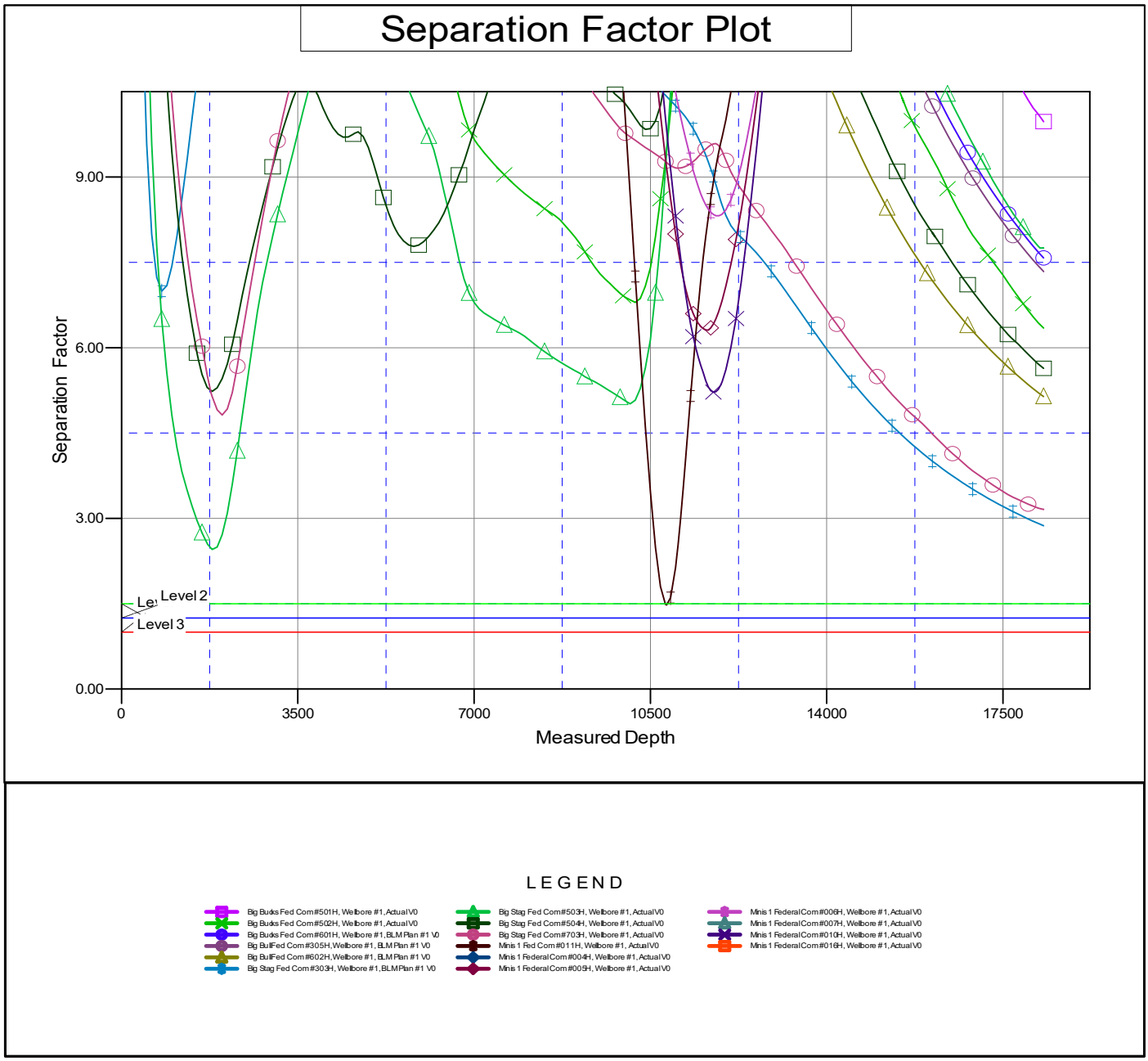


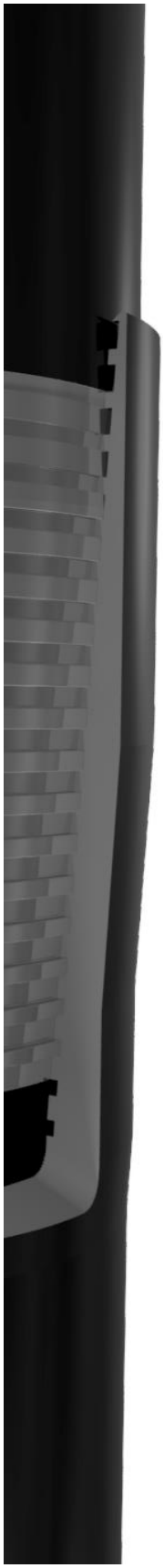
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Big Stag Fed Com #304H
Project:	Ranger/Arrowhead	**TVD Reference:**	KB @ 3821.5usft
Reference Site:	Big Game	**MD Reference:**	KB @ 3821.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Big Stag Fed Com #304H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.14 Server
Reference Design:	BLM Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3821.5usft	Coordinates are relative to: Big Stag Fed Com #304H
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: 0.38°





Issued on: 08 Jul. 2020 by Wesley Ott

VAM® SPRINT-SF
Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift:	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110EC	4.653 in.	VAM® SPRINT-SF

PIPE PROPERTIES		
Nominal OD	5.500	in.
Nominal ID	4.778	in.
Nominal Cross Section Area	5.828	sqin.
Grade Type	High Yield	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

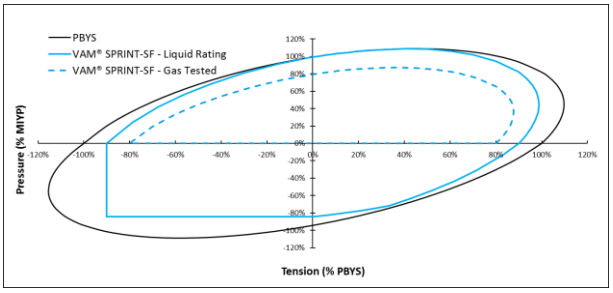
CONNECTION PROPERTIES		
Connection Type	Semi-Premium Integral Semi-Flush	
Connection OD (nom):	5.783	in.
Connection ID (nom):	4.717	in.
Make-Up Loss	5.965	in.
Critical Cross Section	5.244	sqin.
Tension Efficiency	90.0	% of pipe
Compression Efficiency	90.0	% of pipe
Internal Pressure Efficiency	100	% of pipe
External Pressure Efficiency	100	% of pipe

CONNECTION PERFORMANCES		
Tensile Yield Strength	656	klb
Compression Resistance	656	klb
Internal Yield Pressure	14,360	psi
Collapse Resistance	12,080	psi
Max. Structural Bending	89	°/100ft
Max. Bending with ISO/API Sealability	30	°/100ft

* 87.5% RBW

TORQUE VALUES		
Min. Make-up torque	20,000	ft.lb
Opt. Make-up torque	22,500	ft.lb
Max. Make-up torque	25,000	ft.lb
Max. Torque with Sealability (MTS)	40,000	ft.lb

VAM® SPRINT-SF is a semi-flush connection innovatively designed for extreme shale applications. Its high tension rating and ultra high torque capacity make it ideal to run a fill string length as production casing in shale wells with extended horizontal sections and tight clearance requirements.



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

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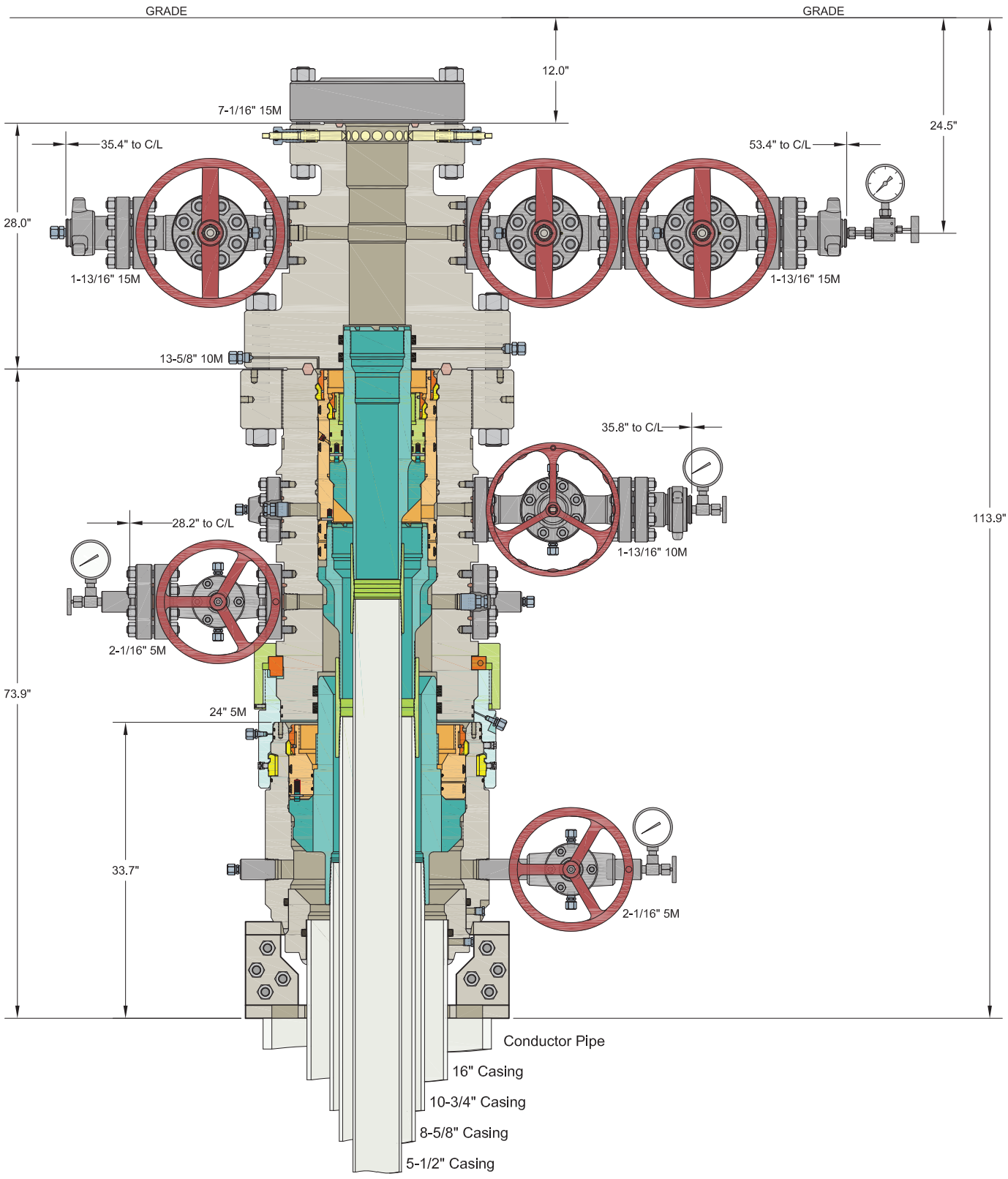
Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

VAM USA



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	MATADOR PRODUCTION COMPANY WEST TEXAS
16" x 10-3/4" x 8-5/8" x 5-1/2" CRC / MBU-3T-CFL Wellhead With 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS-SB Tubing Head And 10-3/4", 8-5/8" & 5-1/2" Mandrel Casing Hangers	DRAWN DLE 08JUL22 APPRV DRAWING NO. HBE0000778

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025		

[4] Property Code	[5] Property Name	[6] Well Number
	BIG STAG FED COM	304H

[7] OGRID No.	[8] Operator Name	[9] Elevation
228937	MATADOR PRODUCTION COMPANY	3,793'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	1	21 S	32 E		5	SOUTH	2,276	EAST	LEA

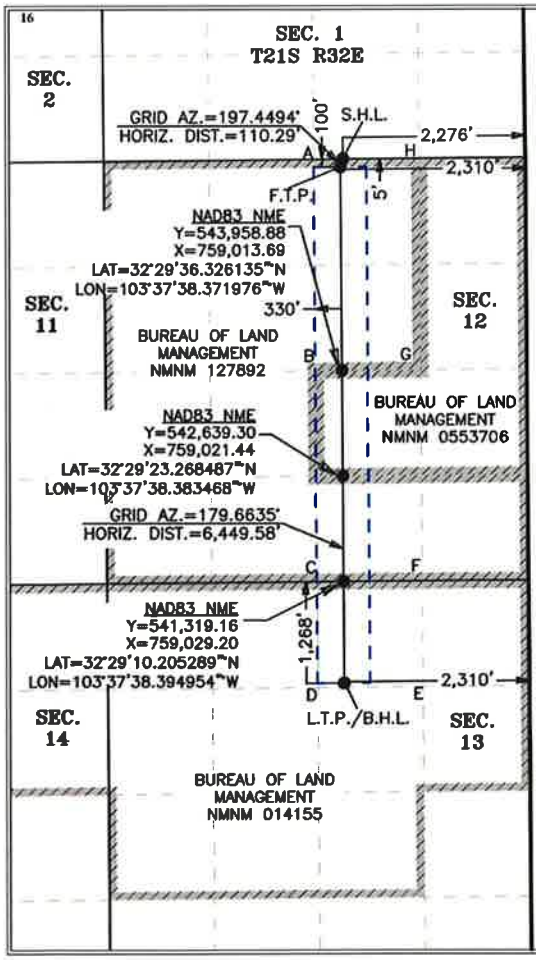
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	13	21 S	32 E		1,268	NORTH	2,310	EAST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
200			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]



SHL (NAD83 NME)		LTP (NAD83 NME)	
Y =	546,605.9	Y =	540,051.2
X =	759,031.8	X =	759,036.6
LAT. =	32.500699 °N	LAT. =	32.482683 °N
LONG. =	103.627210 °W	LONG. =	103.627335 °W
FTP (NAD83 NME)		BHL (NAD83 NME)	
Y =	546,500.6	Y =	540,051.2
X =	758,998.8	X =	759,036.6
LAT. =	32.500410 °N	LAT. =	32.482683 °N
LONG. =	103.627319 °W	LONG. =	103.627335 °W

CORNER COORDINATES (NAD83 NME)		
A - Y =	546,597.8 N ,	X = 758,674.7 E
B - Y =	543,956.2 N ,	X = 758,690.6 E
C - Y =	541,317.0 N ,	X = 758,706.4 E
D - Y =	539,996.6 N ,	X = 758,714.8 E
E - Y =	540,007.9 N ,	X = 760,030.6 E
F - Y =	541,325.6 N ,	X = 760,022.1 E
G - Y =	543,967.1 N ,	X = 760,005.4 E
H - Y =	546,609.4 N ,	X = 759,991.5 E

SHL (NAD27 NME)		LTP (NAD27 NME)	
Y =	546,545.1	Y =	539,990.5
X =	717,850.5	X =	717,855.1
LAT. =	32.500579 °N	LAT. =	32.482562 °N
LONG. =	103.626719 °W	LONG. =	103.626845 °W
FTP (NAD27 NME)		BHL (NAD27 NME)	
Y =	546,439.9	Y =	539,990.5
X =	717,817.5	X =	717,855.1
LAT. =	32.500290 °N	LAT. =	32.482562 °N
LONG. =	103.626829 °W	LONG. =	103.626845 °W

CORNER COORDINATES (NAD27 NME)		
A - Y =	546,537.0 N ,	X = 717,493.4 E
B - Y =	543,895.5 N ,	X = 717,509.2 E
C - Y =	541,256.4 N ,	X = 717,524.9 E
D - Y =	539,935.9 N ,	X = 717,533.3 E
E - Y =	539,947.2 N ,	X = 718,849.2 E
F - Y =	541,264.9 N ,	X = 718,840.7 E
G - Y =	543,906.4 N ,	X = 718,824.1 E
H - Y =	546,548.6 N ,	X = 718,810.3 E

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Cassie Hahn 10/24/22
Signature Date

Cassie Hahn
Printed Name

chahn@matadorresources.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

10-24-2022
Date of Survey

Signature and Seal of Professional Surveyor:

MARK DILLON HARP 23786
Certificate Number

AW 2022101654

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 226351

CONDITIONS

Operator: MATADOR PRODUCTION COMPANY One Lincoln Centre Dallas, TX 75240	OGRID: 228937
	Action Number: 226351
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	7/12/2023