APD Package Report

Date Printed: 06/10/2020 04:45 PM

APD ID:	10400045486	Well Status:	AAPD
APD Received Date:	08/19/2019 12:59 PM	Well Name:	VONI FED COM
Operator:	MATADOR PRODUCTION COMPAI	Well Number:	024H

APD Package Report Contents

- Form 3160-3

- Operator Certification Report

- Application Report
- Application Attachments
  -- Well Plat: 1 file(s)

- Drilling Plan Report
- Drilling Plan Attachments
  -- Blowout Prevention Choke Diagram Attachment: 1 file(s)
  -- Blowout Prevention BOP Diagram Attachment: 2 file(s)
  -- Casing Spec Documents: 1 file(s)
  -- Casing Design Assumptions and Worksheet(s): 3 file(s)
  -- Proposed horizontal/directional/multi-lateral plan submission: 2 file(s)
  -- Other Facets: 5 file(s)

- SUPO Report
- SUPO Attachments
  -- Existing Road Map: 10 file(s)
  -- New Road Map: 2 file(s)
  -- Attach Well map: 2 file(s)
  -- Production Facilities map: 4 file(s)
  -- Water source and transportation map: 1 file(s)
  -- Construction Materials source location attachment: 1 file(s)
  -- Well Site Layout Diagram: 2 file(s)
  -- Recontouring attachment: 1 file(s)
  -- Other SUPO Attachment: 4 file(s)

- PWD Report
- PWD Attachments
  -- None

- Bond Report
- Bond Attachments
  -- None

Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM138866

6. If Indian, Allotee or Tribe Name:

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other

1c. Type of Completion: [ ] Hydraulic Fracturing [✓] Single Zone [ ] Multiple Zone

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

8. Lease Name and Well No.: VONI FED COM 024H

2. Name of Operator: MATADOR PRODUCTION COMPANY

9. API Well No.: 30-015-47216

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

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

10. Field and Pool, or Exploratory: BIG SINKS DELAWARE, SOUTHEAST/B

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

At surface: NWNE / 290 FNL / 1348 FEL / LAT 32.0346685 / LONG -103.7790237

At proposed prod. zone: LOT 1 / 100 FSL / 660 FEL / LAT 32.0004582 / LONG -103.776685

11. Sec., T. R. M. or Blk. and Survey or Area: SEC 21/T26S/R31E/NMP

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

12. County or Parish: EDDY

13. State: NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 290 feet

16. No of acres in lease: 640

17. Spacing Unit dedicated to this well: 385.22

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

19. Proposed Depth: 7648 feet / 20129 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3193 feet

22. Approximate date work will start*: 12/01/2019

23. Estimated duration: 60 days

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature: (Electronic Submission)

Name *(Printed/Typed)*: LARA THOMPSON / Ph: (972) 371-5200

Date: 08/19/2019

Title: Project Manager

Approved by *(Signature)*: (Electronic Submission)

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

Date: 06/04/2020

Title: Assistant Field Manager Lands & Minerals

Office: Carlsbad Field Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

APPROVED WITH CONDITIONS

RWP 6/24/2020

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 06/04/2020

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

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

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

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

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

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

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

(Continued on page 3)

Additional Operator Remarks

Location of Well

0. SHL: NWNE / 290 FNL / 1348 FEL / TWSP: 26S / RANGE: 31E / SECTION: 21 / LAT: 32.0346685 / LONG: -103.7790237 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 0 FNL / 679 FEL / TWSP: 26S / RANGE: 31E / SECTION: 28 / LAT: 32.0208275 / LONG: -103.776754 (TVD: 7650 feet, MD: 12700 feet)

PPP: NENE / 100 FNL / 660 FEL / TWSP: 26S / RANGE: 31E / SECTION: 21 / LAT: 32.0351942 / LONG: -103.7768061 (TVD: 6291 feet, MD: 6291 feet)

BHL: LOT 1 / 100 FSL / 660 FEL / TWSP: 26S / RANGE: 31E / SECTION: 33 / LAT: 32.0004582 / LONG: -103.776685 (TVD: 7648 feet, MD: 20129 feet)

BLM Point of Contact

Name: Sophia Cwiklinski
Title: LIE
Phone: (575) 234-5972
Email: scwiklinkski@blm.gov

Review and Appeal Rights

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 021H
SURFACE HOLE FOOTAGE:	400'/N & 624'/W
BOTTOM HOLE FOOTAGE	100'/S & 660'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 101H
SURFACE HOLE FOOTAGE:	300'/N & 374'/W
BOTTOM HOLE FOOTAGE	100'/S & 339'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 105H
SURFACE HOLE FOOTAGE:	350'/N & 484'/W
BOTTOM HOLE FOOTAGE	100'/S & 990'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 111H
SURFACE HOLE FOOTAGE:	350'/N & 454'/W
BOTTOM HOLE FOOTAGE	100'/S & 339'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 121H
SURFACE HOLE FOOTAGE:	320'/N & 454'/W
BOTTOM HOLE FOOTAGE	100'/S & 660'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 131H
SURFACE HOLE FOOTAGE:	350'/N & 564'/W
BOTTOM HOLE FOOTAGE	100'/S & 660'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 201H
SURFACE HOLE FOOTAGE:	350'/N & 344'/W
BOTTOM HOLE FOOTAGE	240'/S & 338'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

Approval Date: 06/04/2020

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 215H
SURFACE HOLE FOOTAGE:	320'/N & 374'/W
BOTTOM HOLE FOOTAGE	240'/S & 990'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 221H
SURFACE HOLE FOOTAGE:	320'/N & 344'/W
BOTTOM HOLE FOOTAGE	240'/S & 338'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 225H
SURFACE HOLE FOOTAGE:	350'/N & 594'/W
BOTTOM HOLE FOOTAGE	240'/S & 990'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 241H
SURFACE HOLE FOOTAGE:	320'/N & 564'/W
BOTTOM HOLE FOOTAGE	240'/S & 660'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 022H
SURFACE HOLE FOOTAGE:	350'/N & 2240'/W
BOTTOM HOLE FOOTAGE	100'/S & 1980'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 102H
SURFACE HOLE FOOTAGE:	350'/N & 2130'/W
BOTTOM HOLE FOOTAGE	100'/S & 1650'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 106H
SURFACE HOLE FOOTAGE:	320'/N & 2240'/W
BOTTOM HOLE FOOTAGE	100'/S & 2310'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

Approval Date: 06/04/2020

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 112H
SURFACE HOLE FOOTAGE:	350'/N & 2210'/W
BOTTOM HOLE FOOTAGE	100'/S & 1650'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 122H
SURFACE HOLE FOOTAGE:	320'/N & 2210'/W
BOTTOM HOLE FOOTAGE	100'/S & 1980'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 132H
SURFACE HOLE FOOTAGE:	350'/N & 2320'/W
BOTTOM HOLE FOOTAGE	100'/S & 1980'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 202H
SURFACE HOLE FOOTAGE:	350'/N & 2100'/W
BOTTOM HOLE FOOTAGE	240'/S & 1650'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 216H
SURFACE HOLE FOOTAGE:	320'/N & 2130'/W
BOTTOM HOLE FOOTAGE	240'/S & 2310'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 222H
SURFACE HOLE FOOTAGE:	320'/N & 2100'/W
BOTTOM HOLE FOOTAGE	240'/S & 1650'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 226H
SURFACE HOLE FOOTAGE:	350'/N & 2350'/W
BOTTOM HOLE FOOTAGE	240'/S & 2310'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 242H
SURFACE HOLE FOOTAGE:	320'/N & 2320'/W
BOTTOM HOLE FOOTAGE	240'/S & 1980'/W
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 023H
SURFACE HOLE FOOTAGE:	320'/N & 2056'/E
BOTTOM HOLE FOOTAGE	100'/S & 1980'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 103H
SURFACE HOLE FOOTAGE:	350'/N & 2166'/E
BOTTOM HOLE FOOTAGE	100'/S & 2310'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 107H
SURFACE HOLE FOOTAGE:	350'/N & 2056'/E
BOTTOM HOLE FOOTAGE	100'/S & 1661'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 113H
SURFACE HOLE FOOTAGE:	350'/N & 2086'/E
BOTTOM HOLE FOOTAGE	100'/S & 2310'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 106H
SURFACE HOLE FOOTAGE:	320'/N & 2086'/E
BOTTOM HOLE FOOTAGE	100'/S & 1980'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 133H
SURFACE HOLE FOOTAGE:	350'/N & 1976'/E
BOTTOM HOLE FOOTAGE	100'/S & 1980'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

Approval Date: 06/04/2020

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 203H
SURFACE HOLE FOOTAGE:	350'/N & 2196'/E
BOTTOM HOLE FOOTAGE	240'/S & 2310'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 217H
SURFACE HOLE FOOTAGE:	320'/N & 2166'/E
BOTTOM HOLE FOOTAGE	240'/S & 1650'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 223H
SURFACE HOLE FOOTAGE:	320'/N & 2196'/E
BOTTOM HOLE FOOTAGE	240'/S & 2310'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 227H
SURFACE HOLE FOOTAGE:	350'/N & 1946'/E
BOTTOM HOLE FOOTAGE	240'/S & 1650'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 243H
SURFACE HOLE FOOTAGE:	320'/N & 1976'/E
BOTTOM HOLE FOOTAGE	240'/S & 1980'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 024H
SURFACE HOLE FOOTAGE:	260'/N & 1238'/E
BOTTOM HOLE FOOTAGE	100'/S & 660'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 104H
SURFACE HOLE FOOTAGE:	260'/N & 1128'/E
BOTTOM HOLE FOOTAGE	100'/S & 990'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

Approval Date: 06/04/2020

OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 108H
SURFACE HOLE FOOTAGE:	290'/N & 1238'/E
BOTTOM HOLE FOOTAGE	100'/S & 330'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 114H
SURFACE HOLE FOOTAGE:	290'/N & 1208'/E
BOTTOM HOLE FOOTAGE	100'/S & 990'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 124H
SURFACE HOLE FOOTAGE:	260'/N & 1208'/E
BOTTOM HOLE FOOTAGE	100'/S & 660'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 134H
SURFACE HOLE FOOTAGE:	260'/N & 1318'/E
BOTTOM HOLE FOOTAGE	100'/S & 660'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 204H
SURFACE HOLE FOOTAGE:	260'/N & 1098'/E
BOTTOM HOLE FOOTAGE	240'/S & 990'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
OPERATOR'S NAME:	Matador Production Company
WELL NAME & NO.:	Voni Federal 218H
SURFACE HOLE FOOTAGE:	290'/N & 1098'/E
BOTTOM HOLE FOOTAGE	240'/S & 330'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

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

☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Hydrological Features
- Phantom Banks SMA
- Karst Features
- Range Stipulations
- Special Status Plant Species

☒ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads

☐ **Road Section Diagram**
☒ **Production (Post Drilling)**
- Well Structures & Facilities
- Pipelines
- Electric Lines
- Access Roads
- Frac Pond

☒ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

The flowlines/facility pad and road/flowline that go to the flare-pad were analyzed but were not approved for construction by archaeology until new files are submitted via Sundry to confirm their proposed location.

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

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. Only If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during

construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 6 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Phantom Banks SMA

Surface disturbance will not be allowed within 660 feet of active heronries or by delaying activity for up to 120 days, or a combination of both. Exhaust noise from engines must be muffled or otherwise controlled so as not to exceed 75 decibels measured at 30 feet from the source of the noise.

Hydrology Stipulations / Conditions of Approval

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

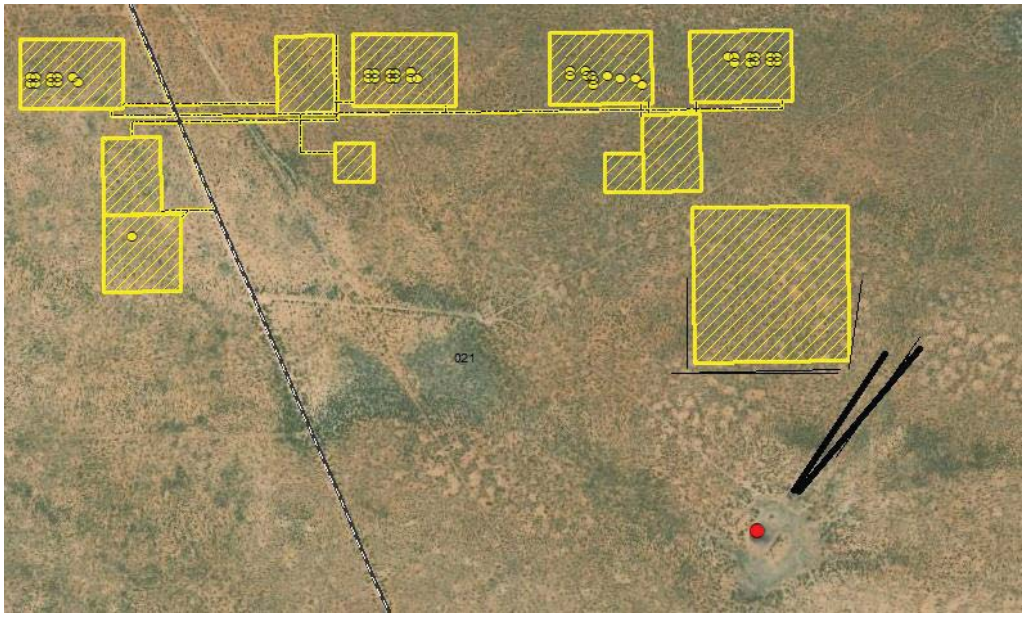
Hydrology – Fresh Water Frac Pond:

Energy dissipation and filtration devices (e.g., certified weed-free hay/straw bales and silt fence) will be used to reduce the velocity of the discharged water and thereby reduce potential for erosion.

Matador agreed to place straw wattles around the perimeter of the proposed frac pond to minimize the risk of erosion and runoff. Matador also agreed to take additional measures to protect the heronry habitat located south of the proposed frac pond by meeting with a BLM Resource Representative prior to construction of the frac pond to place hay wattles

along the draw to the southeast. BLM and Matador agree that the frac pond's current dimension are not to exceed 800x800 feet. Furthermore, a request for expansion will not be granted due to maintaining the relevance, importance and functionality of the nearby resources.

Matador agrees to protect the critical habitat located south of the proposed Frac Pond throughout the life on the proposed project until finalization of the reclamation. To best protect this resource Matador proposes to meet with a BLM Resource Representative at the proposed site prior to construction of the Frac Pond to accurately place hay wattles along the draw at the BLM Resource Representative's direction. This will provide for the most effective protection of the resource. Please see the map below.



Range Stipulations / Conditions of Approval

Cattleguards

Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Livestock Watering Requirement

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Karst Stipulations / Conditions of Approval

CONSTRUCTION IMPACT ANAYLSIS

The construction of roads, pipelines, compressor station pads and utilities can impact bedrock integrity and reroute, impede, focus, or erode natural surface drainage systems. Increased silting and sedimentation from construction can plug downstream sinkholes, caves, springs, and other components of aquifer recharge systems and result in adverse impacts to aquifer quality and cave environments. Any contaminants released into the environment during or after construction can impact aquifers and cave systems. A possibility exists for slow subsidence or sudden surface collapse during construction operations due to collapse of underlying cave passages and voids. This would cause associated safety hazards to the operator and the potential for increased environmental impact. Subsidence processes can be triggered by blasting, intense vibrations, rerouting of surface drainages, focusing of surface drainage, and general surface disturbance.

Blasting fractures in bedrock can serve as direct conduits for transfer of contaminants into cave and groundwater systems. Blasting also creates an expanded volume of rock rubble that cannot be reclaimed to natural contours, soil condition, or native vegetative condition. As such, surface and subsurface disruptions from blasting procedures can lead to permanent changes in vegetation, rainfall percolation, silting/erosion factors, aquifer recharge, and freshwater quality and can increase the risk of contaminant migration from drilling/production facilities built atop the blast are additional or special Conditions of Approval may apply at that time.

CONSTRUCTION MITIGATION

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

- In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
- No Blasting to prevent geologic structure instabilities.
- Pad Berming to minimize effects of any spilled contaminates.

DRILLING IMPACT ANALYSIS

During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and groundwater quality. Drilling operations can also lead to sudden collapse of underground voids. Cementing operations may plug or alter groundwater flow, potentially reducing the water quantity at springs and water wells. Inadequate subsurface cementing, casing, and cave/aquifer protection measures can lead to the migration of oil, gas, drilling fluids, and produced saltwater into cave systems and freshwater aquifers.

DRILLING MITIGATION

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

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

- Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional Drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost Circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

PRODUCTION IMPACT ANALYSIS

Production facilities such as tank batteries, pump-jacks, compressors, transfer stations, and pipe may fail and allow contaminants to enter caves and freshwater systems. Downhole casing and cementing failures can allow migration of fluids and/or gas between formations and aquifers. Facilities may also be subject to slow subsidence or sudden collapse of the underlying bedrock.

PRODUCTION MITIGATION

In order to mitigate the impacts from production activities and due to the nature of karst terrain, the following Conditions of Approval will apply to this APD:

- Tank battery liners and berms to minimize the impact resulting from leaks.
- Leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of line failures used in production or drilling.

RESIDUAL AND CUMULATIVE IMPACT ANALYSIS

Any industrial activities that take place upon or within karst terrains or freshwater aquifer zones have the potential to create both short-term and long-term negative impacts to freshwater aquifers and cave systems. While a number of mitigation measures can be implemented to mitigate many impacts, it is still possible for impacts to occur from containment failures, well blowouts, accidents, spills, and structural collapses. It is therefore necessary to implement long-term monitoring studies to determine if current mitigations measures are sufficient enough to prevent long-term or cumulative impacts.

RESIDUAL AND CUMULATIVE MITIGATION

- Nontoxic fluorescent dyes will be added to the drilling fluid when the hole is spudded and will be circulated to the bottom of the karst layers. This provides data as part of a long-term monitoring study.

- Annual pressure monitoring will be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

PLUGGING AND ABANDONMENT IMPACT ANALYSIS

Failure of a plugged and abandoned well can lead to migration of contaminants to karst resources and fresh water aquifers. While this action does not specifically approve plugging and abandonment procedures, the operator should be made aware that additional or special Conditions of Approval may apply at that time.

PLUGGING AND ABANDONMENT MITIGATION

Abandonment Cementing: Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

MITIGATING MEASURES for ROADS:

- Roads will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer.

- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to increase or decrease the natural flow of water into or out of cave or karst features.

- Special restoration stipulations or realignment may be required.

MITIGATING MEASURES FOR POWERLINES:

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.

- No further construction will be done until clearance has been issued by the Authorized Officer.

- Special restoration stipulations or realignment may be required.

MITIGATING MEASURES for BURIED PIPELINES AND CABLES:

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.

- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.

- Special restoration stipulations or realignment may be required at such intersections, if any.

- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.

MITIGATING MEASURES for SURFACE FLOWLINES:

- Flowlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize the possibility of leaks and spills from entering karst systems.

- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.

- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.

- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

Special Status Plans Species Stipulations

For projects with potential for direct impacts but not direct displacement

No blading would be authorized within proposed project. Occupied habitat areas at high risk for habitat degradation and/or displacement of special status plant species individuals would be barricaded from project-related activities, as specified in the Conditions of Approval or by a BLM Authorized Officer. All surface disturbance within 50 meters of known special status plant species locations will be mulched after construction, as specified in the Conditions of Approval or by a BLM Authorized Officer.

To prevent direct impacts to the Tharp's Blue Star individuals that were observed during field surveys, the individuals will be visibly marked and barricaded to impede accidental pedestrian, vehicle or equipment travel over the individual. Project participants will be briefed about the avoidance area and trained in Tharp's Blue Star identification prior to initiating any ground disturbing activities, including vehicle travel. Upon project completion, the barricade and visible markings will be removed, and the condition of the individual will be documented and reported to the Authorized Officer and BLM Botanist.

To limit any impacts to vegetation and to protect any special status plant species that were not observed during field surveys, vehicles and equipment would be kept on existing roads and approved surfaces and would avoid travel across undisturbed surfaces;

workers would be instructed not to park off roads or in undisturbed areas more than 20 meters from fenceline.

Blading of vegetation within undisturbed areas will not be allowed: maximum width of blading operations will not exceed 0 feet. The fenceline is included in this area. (Blading is defined as the complete removal of brush and ground vegetation).

BLM special status plant surveys would be required for subsequent actions tiered from this analysis when the impacts effects zones of the proposed actions intersect SSPS potential habitat that has not been surveyed within three years prior to the notice of application for the proposed action. If occupied habitat is observed within the impacts effects zones for the proposed action(s), the proposed action(s) would avoid occupied habitat and mitigate anticipated impacts as determined appropriate for the conservation of the species by the Authorized Officer in coordination with a BLM biologist.

Vehicles and equipment will be kept on existing roads and approved surfaces only, and will avoid travel across undisturbed surfaces; workers will be instructed not to park off the roads or in undisturbed areas. Alterations to project design and additions of project components will require SSPS surveys and re-analysis of impacts if those project elements intersect SSPS suitable habitat.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

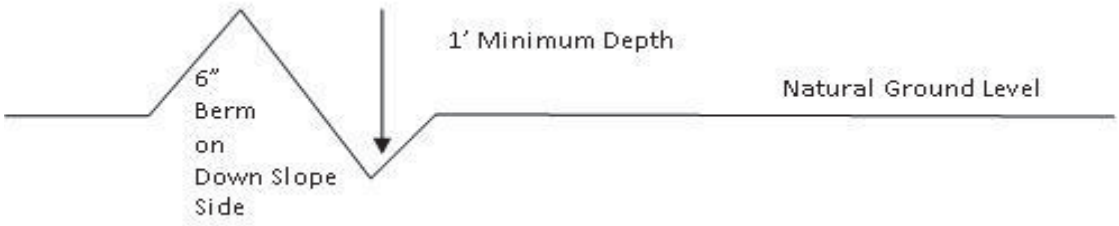
Ditching
Ditching shall be required on both sides of the road.

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

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

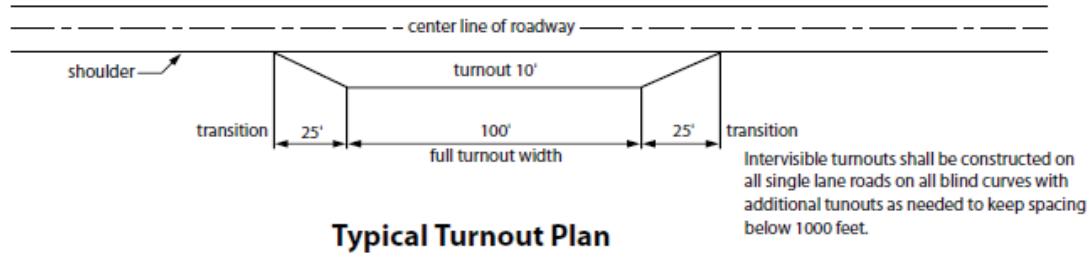
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

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

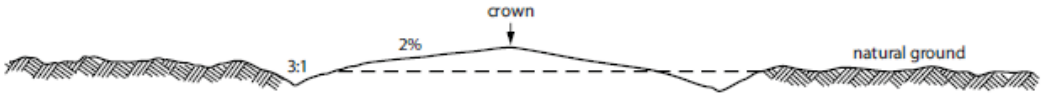
Construction Steps

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

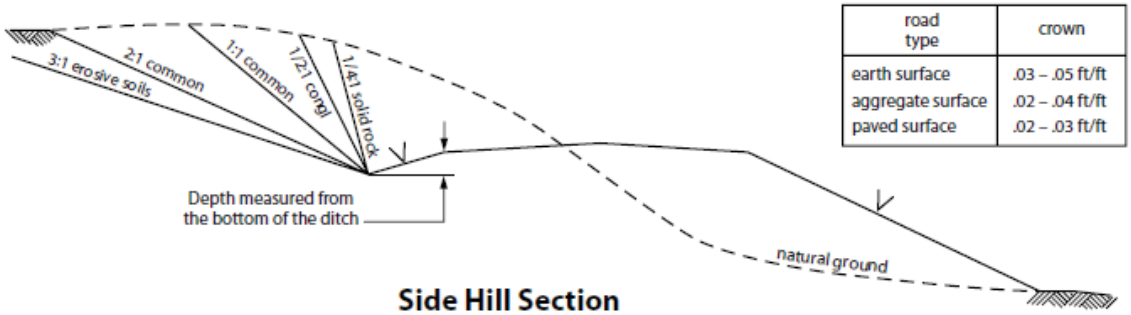


Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional tunouts as needed to keep spacing below 1000 feet.

Typical Turnout Plan

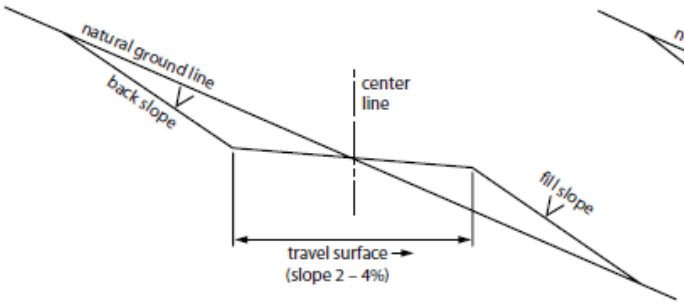


Level Ground Section

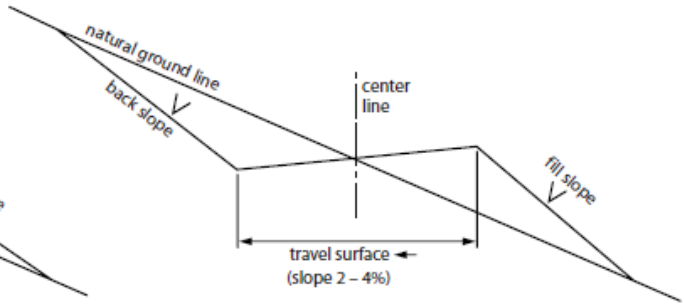


road type	crown
earth surface	.03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

Side Hill Section



Typical Outsloped Section



Typical Inslope Section

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

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

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

B. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

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

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

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

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

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

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

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

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

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

( ) seed mixture 1	(X) seed mixture 3
(X) seed mixture 2	( ) seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

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

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

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

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

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

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

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

19. Special Stipulations:

Hydrology Stipulations / Conditions of Approval

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Karst Stipulations / Conditions of Approval

The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.

If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.

Special restoration stipulations or realignment may be required at such intersections, if any.

A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

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

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

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the

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

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

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

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

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

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

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

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

service to an active, adjoining facility or facilities.

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

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

Hydrology Stipulations / Conditions of Approval

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

Karst Stipulations / Conditions of Approval

MITIGATING MEASURES FOR POWERLINES:

Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.

The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.

No further construction will be done until clearance has been issued by the Authorized Officer.

D. FRAC POND STIPULATIONS

FRAC POND CONDITIONS OF APPROVAL

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

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

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this permit.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated.

3. Required Standard Conditions of Approval:

- Contact the Supervisory Environmental Protection Specialist, Jim Amos, at 575-234-5909 at least 24 hours prior to starting construction.

- The frac pond will only be authorized to contain freshwater and testing of water quality is required. Additives are not allowed without consent of the authorized officer.

- If at any time the water in the frac pond becomes polluted with salts or other contaminants, use of the frac pond will cease and desist, and all liquids will be removed from the frac pond and disposed of properly.

- Confine all construction and maintenance activity to the authorized area.

- Temporary pipelines flowing from the frac pond to the target well will be laid along existing roadways unless an exception has been granted by the authorized officer.

- Mineral materials extracted during construction of the frac pond will be stored on-location and/or used for constructing the frac pond.

- The frac pond will be lined.

- The operator shall stockpile topsoil approximately 25 feet outside the bermed perimeter of the pond in a low profile manner, reasonably protected from wind and water erosion

- Topsoil shall not be used for constructing the frac pond. The topsoil will be used for final reclamation purposes only.

- The frac pond shall be fenced on all sides.

- Install earthen erosion-control structures as are suitable for the specific terrain and soil conditions.

- The plastic lining will be removed prior to final abandonment

- Reclamation efforts will commence immediately after the frac pond is no longer needed for the purpose of completing wells.

- Within 3 months of completion of frac operations on associated wells, all earthwork and final reclamation must be completed. This includes reclaiming and/or removal of:

  Any roads approved for use with the pond

  Surface water lines

  Tanks, pumps, fencing etc.

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

Requirements for Operations and Final Reclamation:

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

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

6. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized

Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

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

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

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

( ) seed mixture 1	(X) seed mixture 3
(X) seed mixture 2	( ) seed mixture 4
( ) LPC mixture	( ) Aplomado Falcon mix

10. Special Stipulations:

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

E. OIL AND GAS RELATES SITES

STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES

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

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

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

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

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

4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife

habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

7. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.

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

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

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

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site and access roads must undergo "final" reclamation so that the character and productivity of the land are restored. Earthwork for final reclamation must be completed within six (6) months of the abandonment of the site. All pads and facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact. After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

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

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

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

( ) seed mixture 1	(X) seed mixture 3
(X) seed mixture 2	( ) seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

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

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

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

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

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

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

19. Special Stipulations:

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

SPECIAL STATUS PLANT SPECIES (SSPS) HABITAT

Vehicles and equipment will be kept on existing roads and approved surfaces only, and will avoid travel across undisturbed surfaces; workers will be instructed not to park off the roads or in undisturbed areas. Alterations to project design and additions of project components will require SSPS surveys and re-analysis of impacts if those design project elements intersect SSPS suitable habitat. Blading, mowing, and chemical control of vegetation within undisturbed areas will not be allowed.

Sub Pad and Final Pad Stipulations / Conditions of Approval

Only the sub pad will be built for beginning production. The 400'x400' sub pad may be extended to the full 600'x600' length when needed to advance production. Only the 400'x400' sub pad may be graded until the additional 200' expansion is needed to advance production.

Hydrology Stipulations / Conditions of Approval

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

Karst Stipulations / Conditions of Approval

CONSTRUCTION IMPACT ANAYLSIS

The construction of roads, pipelines, compressor station pads and utilities can impact bedrock integrity and reroute, impede, focus, or erode natural surface drainage systems. Increased silting and sedimentation from construction can plug downstream sinkholes, caves, springs, and other components of aquifer recharge systems and result in adverse impacts to aquifer quality and cave environments. Any contaminants released into the environment during or after construction can impact aquifers and cave systems. A possibility exists for slow subsidence or sudden surface collapse during construction operations due to collapse of underlying cave passages and voids. This would cause associated safety hazards to the operator and the potential for increased environmental impact. Subsidence processes can be triggered by blasting, intense vibrations, rerouting of surface drainages, focusing of surface drainage, and general surface disturbance.

Blasting fractures in bedrock can serve as direct conduits for transfer of contaminants into cave and groundwater systems. Blasting also creates an expanded volume of rock rubble that cannot be reclaimed to natural contours, soil condition, or native vegetative condition. As such, surface and subsurface disruptions from blasting procedures can lead to permanent changes in vegetation, rainfall percolation, silting/erosion factors, aquifer recharge, and freshwater quality

and can increase the risk of contaminant migration from drilling/production facilities built atop the blast are additional or special Conditions of Approval may apply at that time.

CONSTRUCTION MITIGATION

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

- In the event that any underground voids are encountered during construction activities, construction activities will be halted and the BLM will be notified immediately.
- No Blasting to prevent geologic structure instabilities.
- Pad Berming to minimize effects of any spilled contaminates.

DRILLING IMPACT ANALYSIS

During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and groundwater quality. Drilling operations can also lead to sudden collapse of underground voids. Cementing operations may plug or alter groundwater flow, potentially reducing the water quantity at springs and water wells. Inadequate subsurface cementing, casing, and cave/aquifer protection measures can lead to the migration of oil, gas, drilling fluids, and produced saltwater into cave systems and freshwater aquifers.

DRILLING MITIGATION

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

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

- Closed Mud System Using Steel Tanks with All Fluids and Cuttings Hauled Off.
- Rotary drilling with fresh water where cave or karst features are expected to prevent contamination of freshwater aquifers.
- Directional Drilling allowed after at least 100 feet below the cave occurrence zone to prevent additional impacts resulting from directional drilling.
- Lost Circulation zones logged and reported in the drilling report so BLM can assess the situation and work with the operator on corrective actions.
- Additional drilling, casing, and cementing procedures to protect cave zones and fresh water aquifers. See Drilling COAs.

PRODUCTION IMPACT ANALYSIS

Production facilities such as tank batteries, pump-jacks, compressors, transfer stations, and pipe may fail and allow contaminants to enter caves and freshwater systems. Downhole casing and cementing failures can allow migration of fluids and/or gas between formations and aquifers. Facilities may also be subject to slow subsidence or sudden collapse of the underlying bedrock.

PRODUCTION MITIGATION

In order to mitigate the impacts from production activities and due to the nature of karst terrain, the following Conditions of Approval will apply to this APD:

- Tank battery liners and berms to minimize the impact resulting from leaks.
- Leak detection system to provide an early alert to operators when a leak has occurred.
- Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of line failures used in production or drilling.

RESIDUAL AND CUMULATIVE IMPACT ANALYSIS

Any industrial activities that take place upon or within karst terrains or freshwater aquifer zones have the potential to create both short-term and long-term negative impacts to freshwater aquifers and cave systems. While a number of mitigation measures can be implemented to mitigate many impacts, it is still possible for impacts to occur from containment failures, well blowouts, accidents, spills, and structural collapses. It is therefore necessary to implement long-term monitoring studies to determine if current mitigations measures are sufficient enough to prevent long-term or cumulative impacts.

RESIDUAL AND CUMULATIVE MITIGATION

- Nontoxic fluorescent dyes will be added to the drilling fluid when the hole is spudded and will be circulated to the bottom of the karst layers. This provides data as part of a long-term monitoring study.
- Annual pressure monitoring will be performed by the operator. If the test results indicate a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

PLUGGING AND ABANDONMENT IMPACT ANALYSIS

Failure of a plugged and abandoned well can lead to migration of contaminants to karst resources and fresh water aquifers. While this action does not specifically approve plugging and abandonment procedures, the operator should be made aware that additional or special Conditions of Approval may apply at that time.

PLUGGING AND ABANDONMENT MITIGATION

Abandonment Cementing: Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

MITIGATING MEASURES for ROADS:

- Roads will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems.
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction and no further construction will be done until clearance has been issued by the Authorized Officer.
- Turnout ditches and drainage leadoffs will not be constructed in such a manner as to increase or decrease the natural flow of water into or out of cave or karst features.
- Special restoration stipulations or realignment may be required.

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture 2, for Sandy Sites

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

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

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

Seed Mixture 3, for Shallow Sites

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

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

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

Species	lb/acre
Plains Bristlegrass (*Setaria macrostachya*)	1.0
Green Sprangletop (*Leptochloa dubia*)	2.0
Sideoats Grama (*Bouteloua curtipendula)*	5.0

*Pounds of pure live seed:

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MATADOR PRODUCTION COMPANY
LEASE NO.:	NMNM138866
WELL NAME & NO.:	VONI FEDERAL / 024H
SURFACE HOLE FOOTAGE:	290'/N & 1348'/E
BOTTOM HOLE FOOTAGE	100'/S & 660'/E
LOCATION:	Section 21, T.26 S., R.31 E., NMPM
COUNTY:	Eddy 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
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

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

B. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **1092** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch intermediate casing shall be set at approximately **4077** feet. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

Option 2:

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

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

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

❖ In **High Cave/Karst 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.

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

Option 1 (Single Stage):

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

Option 2:

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

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

b. Second stage above DV tool:

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

C. PRESSURE CONTROL

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

2.

Option 1:

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

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

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.

d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

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

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

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. 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 when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

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

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

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

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

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

NMK04162020

Operator Certification Data Report

06/10/2020

Operator Certification

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

NAME: Lara Thompson **Signed on:** 08/06/2019

Title: Project Manager

Street Address: 5647 Jefferson Street NE

City: Albuquerque **State:** NM **Zip:** 87109

Phone: (505)431-2678

Email address: Lara.Thompson@swca.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

APD ID: 10400045486 **Submission Date:** 08/19/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400045486 **Tie to previous NOS?** N **Submission Date:** 08/19/2019

BLM Office: CARLSBAD **User:** Lara Thompson **Title:** Project Manager

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM138866 **Lease Acres:** 640

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? Y

Permitting Agent? NO **APD Operator:** MATADOR PRODUCTION COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: MATADOR PRODUCTION COMPANY

Operator Address: 5400 LBJ Freeway, Suite 1500 **Zip:** 75240

Operator PO Box:

Operator City: Dallas **State:** TX

Operator Phone: (972)371-5200

Operator Internet Address: amonroe@matadorresources.com

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? EXISTING **Master SUPO name:** Voni Federal Master SUPO

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: VONI FED COM **Well Number:** 024H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** BIG SINKS DELAWARE, SOUTHEAST **Pool Name:** BIG SINKS DELAWARE, SOUTHEAST

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

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

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

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** N **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** Slot 4 **Number:** 11

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: **Distance to nearest well:** 30 FT **Distance to lease line:** 290 FT

Reservoir well spacing assigned acres Measurement: 385.22 Acres

Well plat: Voni_Fed_Com_024H_Signed_C_102_20200403152217.pdf

Well work start Date: 12/01/2019 **Duration:** 60 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:** GROUND LEVEL

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
SHL Leg #1	290	FNL	1348	FEL	26S	31E	21	Aliquot NWNE	32.0346685	-103.7790237	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138866	3193	0	0	Y
KOP Leg #1	290	FNL	1348	FEL	26S	31E	21	Aliquot NWNE	32.0346685	-103.7790237	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138866	-3882	7115	7075	Y
PPP Leg #1-1	100	FNL	660	FEL	26S	31E	21	Aliquot NENE	32.0351942	-103.7768061	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138866	-3098	6291	6291	Y

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this lease?
PPP Leg #1-2	0	FNL	679	FEL	26S	31E	28	Aliquot NENE	32.0208275	-103.776754	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138867	-4457	12700	7650	Y
EXIT Leg #1	100	FSL	660	FEL	26S	31E	33	Lot 1	32.0004582	-103.776685	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138867	-4455	20129	7648	Y
BHL Leg #1	100	FSL	660	FEL	26S	31E	33	Lot 1	32.0004582	-103.776685	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 138867	-4455	20129	7648	Y

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
30-015-47216	96411	Big Sinks Delaware, Southeast

[4] Property Code	[5] Property Name	[6] Well Number
328098	VONI FED COM	024H

[7] OGRID No.	[8] Operator Name	[9] Elevation
228937	MATADOR PRODUCTION COMPANY	3193'

[10] Surface Location

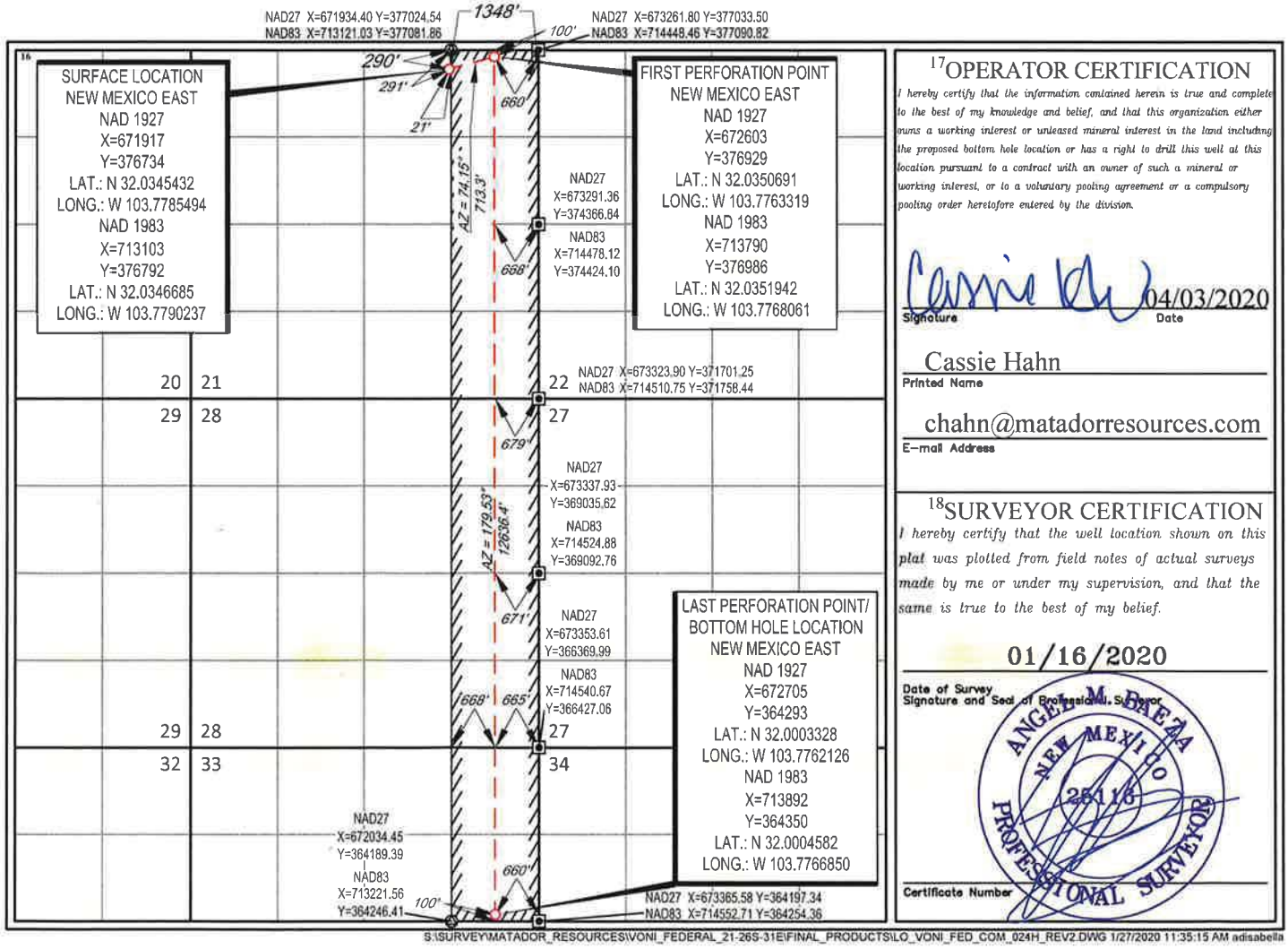
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	21	26-S	31-E	-	290'	NORTH	1348'	EAST	EDDY

[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
1	33	26-S	31-E	-	100'	SOUTH	660'	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
385.22			

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.



[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.

Signature — Date: 04/03/2020

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 to the best of my belief.

01/16/2020
Date of Survey
Signature and Seal of Professional Surveyor

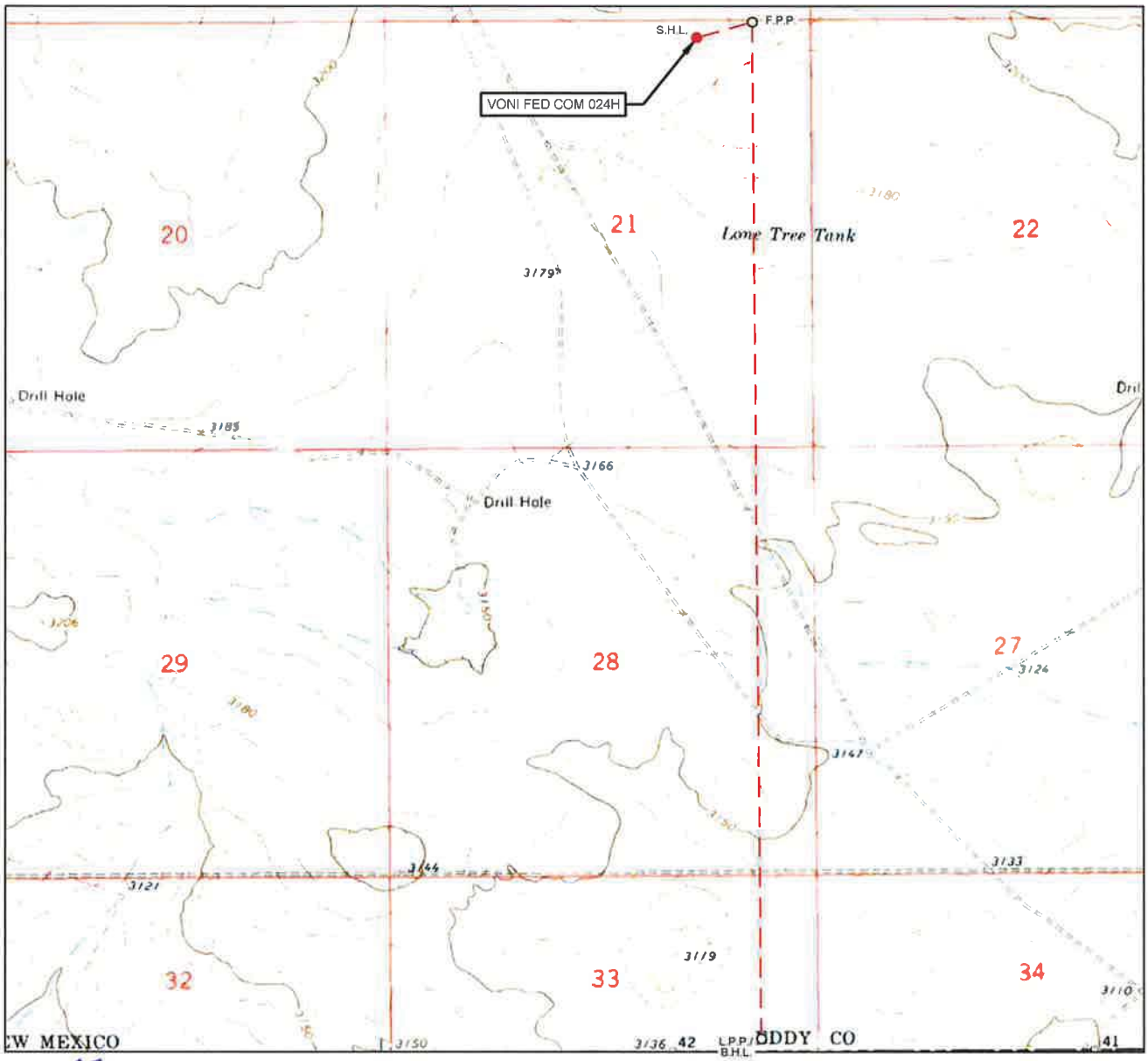
ANGEL M. BAEZA
NEW MEXICO
25116
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\MATADOR_RESOURCES\VONI_FEDERAL_21-26S-31E\FINAL_PRODUCTS\LO_VONI_FED_COM_024H_REV2.DWG 1/27/2020 11:35:15 AM adisabella

RWP 6/24/2020

LOCATION & ELEVATION VERIFICATION MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: VONI FED COM 024H

SECTION 21 TWP 26-S RGE 31-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3193'
DESCRIPTION 290' FNL & 1348' FEL

LATITUDE N 32.0346685 LONGITUDE W 103.7790237

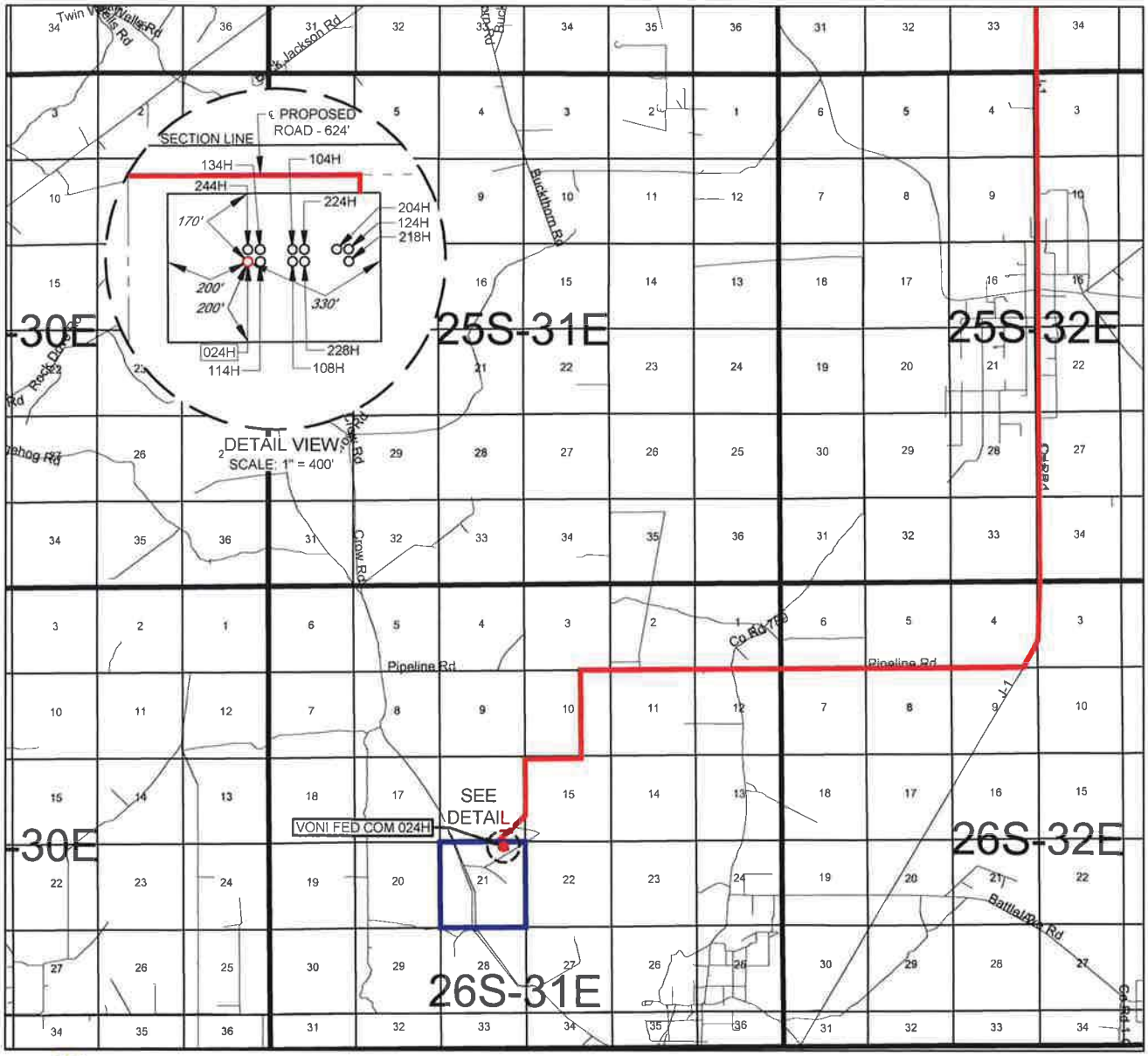
SCALE: 1" = 2000'
0' 1000' 2000'

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

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

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

VICINITY MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: VONI FED COM 024H

SECTION 21 TWP 26-S RGE 31-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 290' FNL & 1348' FEL

DISTANCE & DIRECTION

FROM INT. OF NM128. & J-1/ORLA RD., GO SOUTH ON J-1/ORLA RD. ±10.5 MILES, THENCE WEST (RIGHT) ON PIPELINE RD ±5.2 MILES, THENCE SOUTH (LEFT) ON PROPOSED RD. ±1.0 MILES, THENCE WEST (RIGHT) ON PROPOSED RD. ±1.8 MILES, THENCE EAST (LEFT) ON PROPOSED RD. ±624 FEET,TO A POINT ±328 FEET NORTHEAST OF THE LOCATION.

SCALE: 1" = 10000'

0' 5000' 10000'

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

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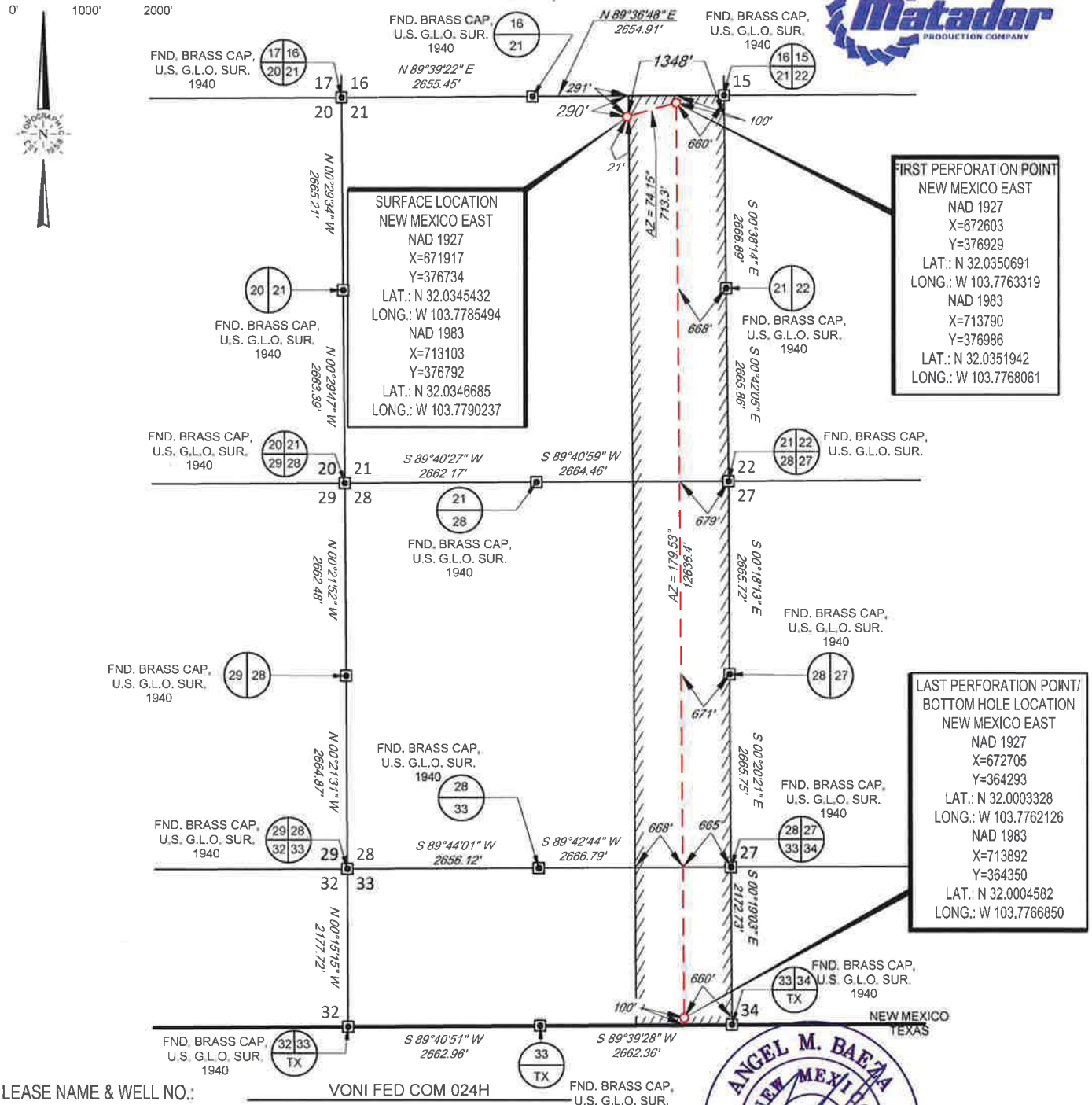
SCALE: 1" = 2000'

0' 1000' 2000'

SECTION 21, TOWNSHIP 26-S, RANGE 31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: VONI FED COM 024H

SECTION 21 TWP 26-S RGE 31-E SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 290' FNL & 1348' FEL

DISTANCE & DIRECTION

FROM INT. OF NM128. & J-1/ORLA RD., GO SOUTH ON J-1/ORLA RD. ±10.5 MILES, THENCE WEST (RIGHT) ON PIPELINE RD ±5.2 MILES, THENCE SOUTH (LEFT) ON PROPOSED RD. ±1.0 MILES, THENCE WEST (RIGHT) ON PROPOSED RD. ±1.8 MILES, THENCE EAST (LEFT) ON PROPOSED RD. ±624 FEET,TO A POINT ±328 FEET NORTHEAST OF THE LOCATION.

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

ANGEL M. BAEZA NEW MEXICO 25116 PROFESSIONAL SURVEYOR

Angel M. Baeza, P.S. No. 25116

January 23, 2020

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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LEGEND

SECTION LINE

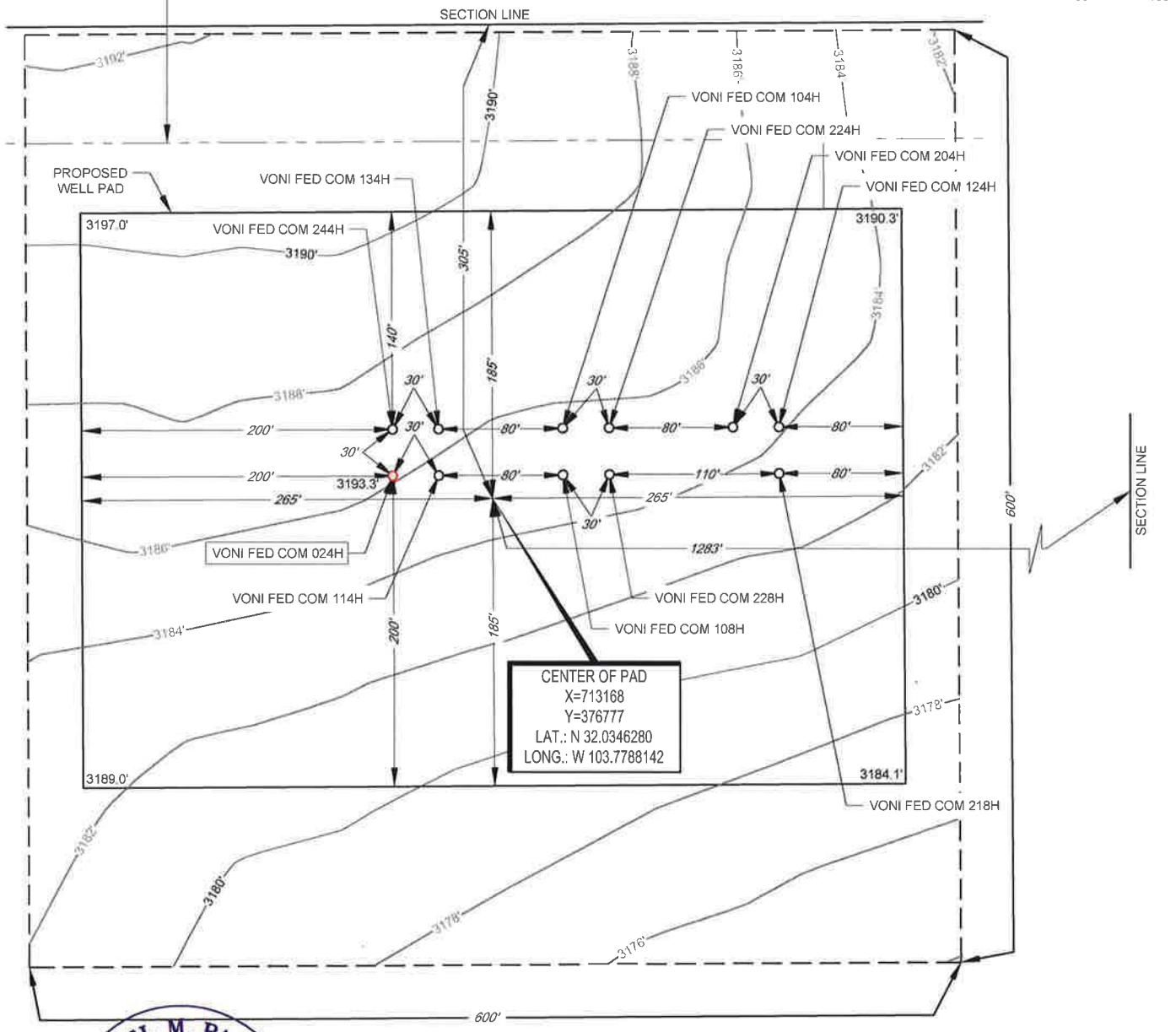
PROPOSED ROAD

Matador PRODUCTION COMPANY

SECTION 21, TOWNSHIP 26-S, RANGE 31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

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



LEASE NAME & WELL NO.: VONI FED COM 024H

024H LATITUDE N 32.0346685 024H LONGITUDE W 103.7790237

CENTER OF PAD IS 305' FNL & 1283' FEL

ANGEL M. BAEZA NEW MEXICO 25116 PROFESSIONAL SURVEYOR

Angel M. Baeza, P.S. No. 25116

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LOYALTY INNOVATION LEGACY
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ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET. ELEVATIONS USED ARE NAVD88, OBTAINED THROUGH AN OPUS SOLUTION.

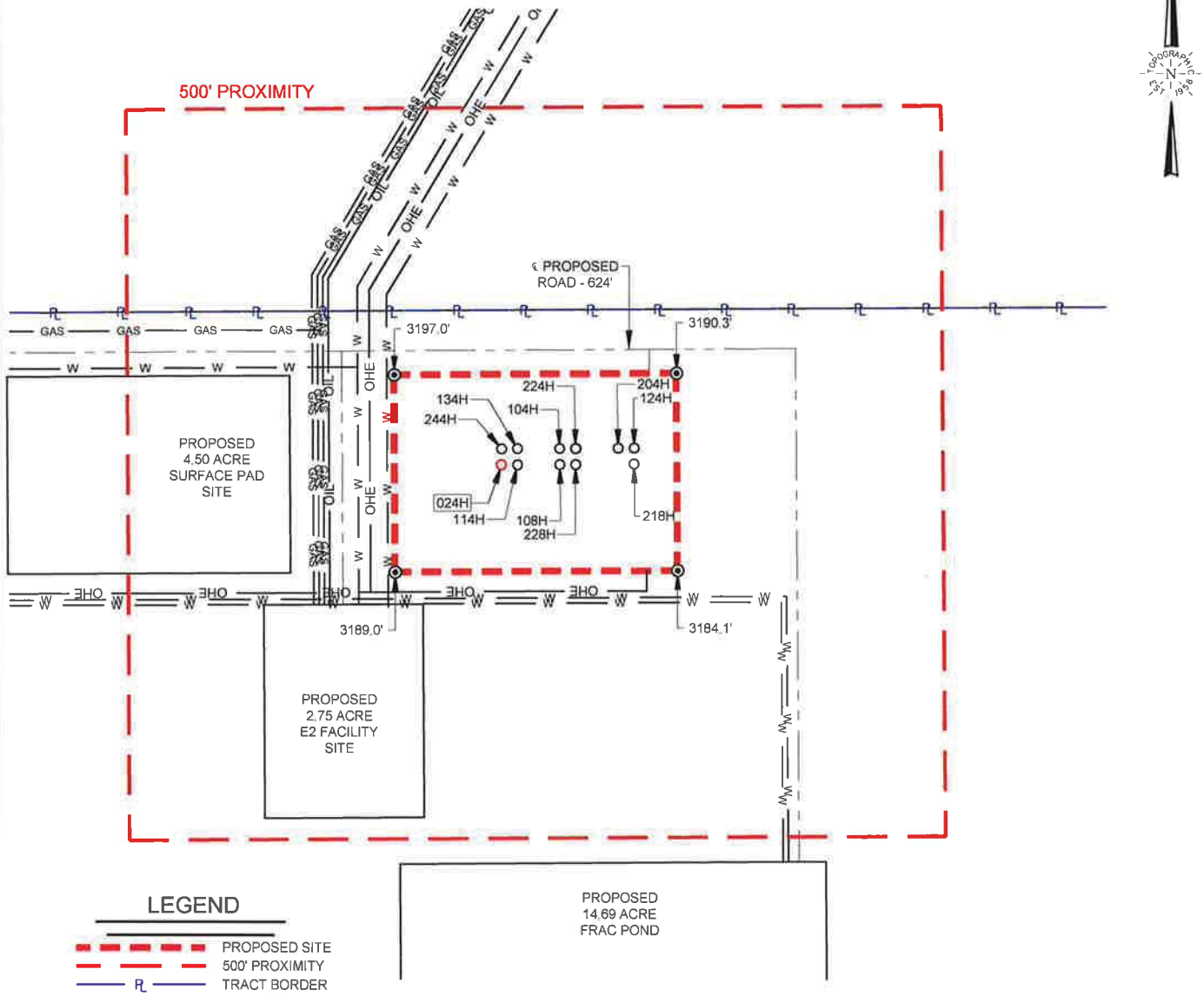
THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY THE DATA SHOWN ABOVE IS BEING CERTIFIED TO, ALL OTHER INFORMATION WAS INTENTIONALLY OMITTED. THIS PLAT IS ONLY INTENDED TO BE USED FOR A PERMIT AND IS NOT A BOUNDARY SURVEY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

SCALE: 1" = 300'

0' 150' 300'

SECTION 21, TOWNSHIP 26-S, RANGE 31-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEGEND

- PROPOSED SITE
- 500' PROXIMITY
- TRACT BORDER
- PROPOSED ROAD
- PROPOSED GAS TAKEAWAY
- PROPOSED ELECTRIC
- PROPOSED WATERLINE
- SECTION LINE
- IRON ROD SET

ANGEL M. BAEZA NEW MEXICO 25116 PROFESSIONAL SURVEYOR

Matador PRODUCTION COMPANY

TOPOGRAPHIC
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WWW.TOPOGRAPHIC.COM

Angel M. Baeza, P.S. No. 25116
January 23, 2020

VONI FED COM 024H PROXIMITY MAP	REVISION:	
	EAH	02/04/19
	IMU	01/23/20
DATE: 01/28/19		
FILE: LO_VONI_FED_COM_024H_REV2		
DRAWN BY: EAH		
SHEET: 6 OF 6		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

S:\SURVEY\MATADOR_RESOURCES\VONI_FEDERAL_21-26S-31E\FINAL_PRODUCTS\LO_VONI_FED_COM_024H_REV2.DWG 1/27/2020 11:35:19 AM adisabella

Drilling Plan Data Report

06/10/2020

APD ID: 10400045486 **Submission Date:** 08/19/2019

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
509412	RUSTLER	3192	893	893	ANHYDRITE	NONE	N
509413	SALADO	1618	1574	1574	SALT	NONE	N
509425	CASTILE	-199	3391	3391	SALT	NONE	N
509414	LAMAR	-833	4025	4025	SALT	NONE	N
509415	BELL CANYON	-860	4052	4052	SANDSTONE	NATURAL GAS, OIL	N
509416	CHERRY CANYON	-1950	5142	5142	SANDSTONE	NATURAL GAS, OIL	N
509417	BRUSHY CANYON	-3099	6291	6291	SANDSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 12000

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

Variance request: Matador requests a variance to have the option of running a multi-bowl wellhead assembly for setting the Intermediate 1 and Production Strings. The BOPs will not be tested again unless any flanges are separated. Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used. Matador requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, the wellbore will be secured with a blind flange of like pressure. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test. Matador request a variance to utilize a surface setting rig. If this is used, Matador request the option to drill either 17.5" or 20" surface hole.
Testing Procedure: BOP will be inspected and operated as required in Onshore Order #2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs. After setting surface casing, a minimum 5M BOPE system will be installed. Test pressures will be 250 psi low and 5000 psi high with the annular preventer being tested to 250 psi low and 2500 psi high before drilling below surface shoe. In the event that the rig drills multiple wells on the pad and any seal subject to test pressures are broken, a full BOP test will be performed when the rig returns and the 5M BOPE system is re-installed.

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Choke Diagram Attachment:

Voni_Fed_Com_024H_5M_Choke_Manifold_Arrangement_20200403121918.pdf

BOP Diagram Attachment:

Voni_Fed_Com_024H_5M_BOP_20200403121936.pdf

Voni_Fed_Com_024H_Co_Flex_Certs_20200403121936.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	918	0	918	3193	2275	918	J-55	54.5	BUTT	1.125	1.125	BUOY	1.8	BUOY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4077	0	4077	3194	-884	4077	J-55	40	BUTT	1.125	1.125	BUOY	1.8	BUOY	1.8
3	PRODUCTION	8.75	5.5	NEW	NON API	N	0	20129	0	7648	3194	-4455	20129	P-110	20	OTHER - Hunting TLW	1.125	1.125	BUOY	1.8	BUOY	1.8

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Voni_Fed_Com_024H_BLM_Casing_Design_Assumptions_3_string_20200403122225.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Voni_Fed_Com_024H_BLM_Casing_Design_Assumptions_3_string_20200403122315.pdf

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

Inspection Document:

Spec Document:

Voni_Fed_Com_024H_Casing_Specs_5.5in_20lb_Hunting_TLW_SC_20200403122520.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Voni_Fed_Com_024H_BLM_Casing_Design_Assumptions_3_string_20200403122617.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	618	420	1.72	12.5	716	50	C	5% NaCl + LCM
SURFACE	Tail		618	918	250	1.38	14.8	347	50	C	5% NaCl + LCM
INTERMEDIATE	Lead		0	3262	750	2.13	12.6	1601	50	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		3262	4077	300	1.38	14.8	417	50	C	5% NaCl + LCM
PRODUCTION	Lead		3877	6615	380	2.22	11.5	854	25	H	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		6615	20129	3170	1.35	13.2	4277	25	H	Fluid Loss + Dispersant + Retarder + LCM

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

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

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

Describe what will be on location to control well or mitigate other conditions: All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.
Describe the mud monitoring system utilized: An electronic Pason mud monitoring system complying with Onshore Order 2 will be used.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	918	SPUD MUD	8.4	8.8							
918	4077	OTHER : Brine/OBM	9.5	10.2							
4077	7648	OTHER : Cut Brine/OBM	8.6	9.4							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: VONI FED COM **Well Number:** 024H

Section 6 - Test, Logging, Coring

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

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

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

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

CEMENT BOND LOG,GAMMA RAY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No core or drill stem test is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 3739 **Anticipated Surface Pressure:** 2055

Anticipated Bottom Hole Temperature(F): 144

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? NO

Hydrogen sulfide drilling operations plan:

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Voni_Fed_Com_024H_Directional_Well_Plan_v2_20200403124706.pdf
Voni_Fed_Com_024H_Directional_AC_Report_v2_20200403124706.pdf

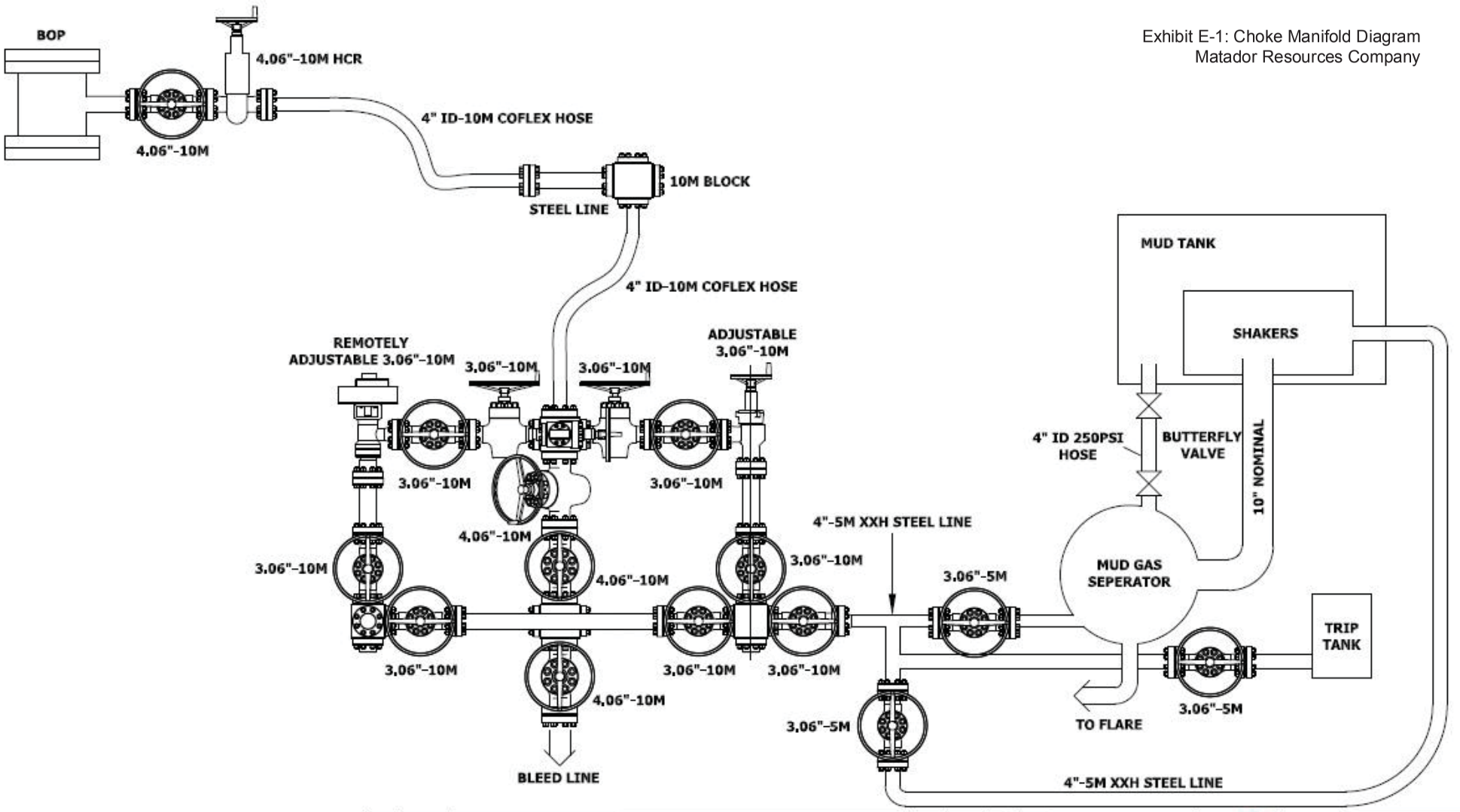
Other proposed operations facets description:

Other proposed operations facets attachment:

Gas_Capture_Plan___Voni_Federal_Com_Slot_4_20200403124822.pdf
H2S_Plan_20200403124822.pdf
Voni_Fed_Com_024H_Drill_Plan_20200403124822.pdf
Voni_Fed_Com_024H_Closed_Loop_System_20200403124822.pdf
Voni_Fed_Com_024H_3_String_Wellhead_Diagram_20200403124822.pdf

Other Variance attachment:

Exhibit E-1: Choke Manifold Diagram
Matador Resources Company



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED,

GENERAL WELDING NOTE:
ALL ACCESSIBLE CONTACT SURFACES SHALL BE JOINED WITH CONTINOUS 45 DEGREE FILLET WELDS, WELD SIZE TO BE 1/16 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 5/16 INCH THICKNESS AND 1/8 INCH SMALLER THAN THINNER MEMBER JOINED UP TO 3/4 INCH THICKNESS
WELDMENT TOLERANCES ■ +/- 1/16

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

REV	DATE	DESCRIPTION	DRWN BY	CHK BY	APRVD ENGR.
02	8-3-15	ISSUED FOR INFORMATION	CP	CSL	
01	7-9-15	ISSUED FOR INFORMATION	CSL		

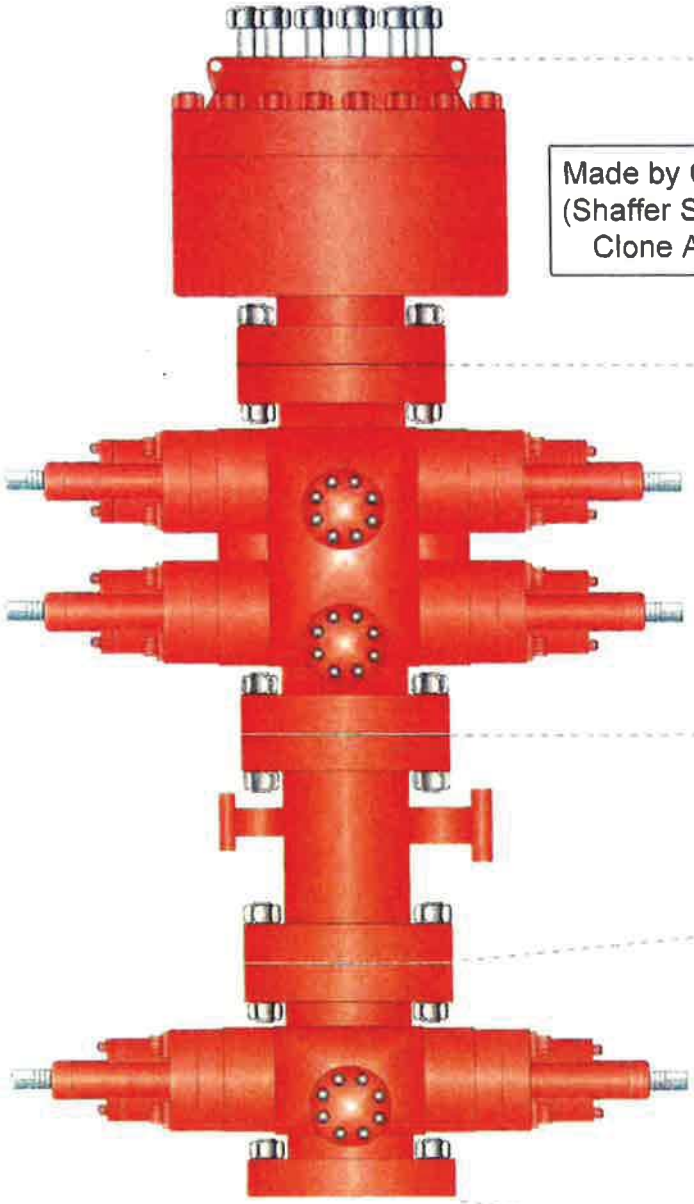
PATTERSON-UTI DRILLING COMPANY LLC

CHOKE MANIFOLD
10M CHOKE ARRANGEMENT
RIG 297

DWG No. R0297-D.001.LAY.09 | SHT 1 OF 1 | REV. 02

PATTERSON-UTI
Well Control

RIG: 297



Made by Cameron (Shaffer Spherical) Clone Annular

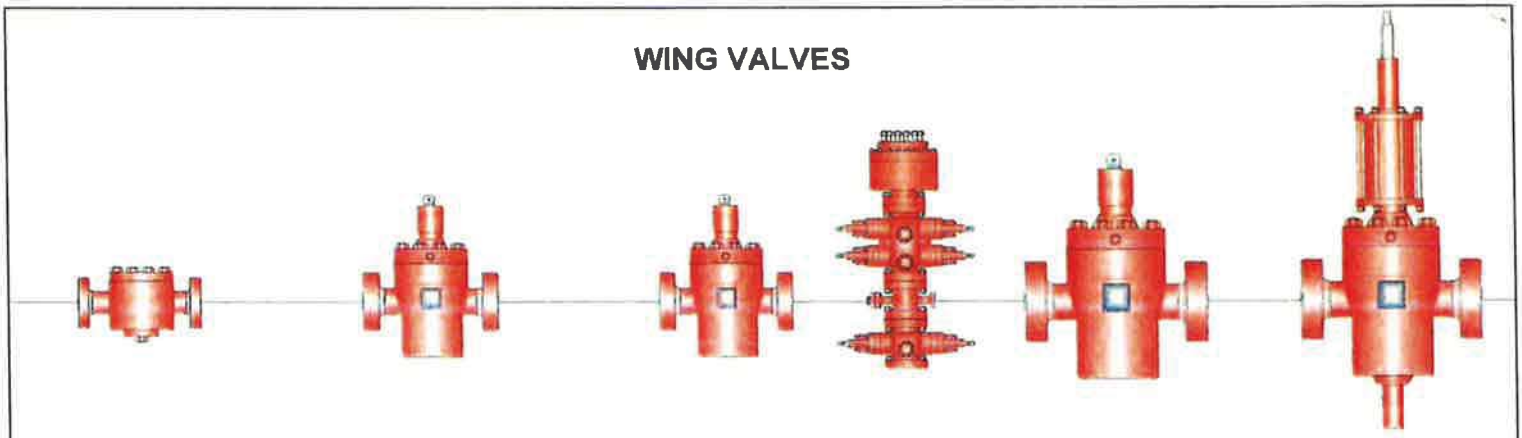
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

PATTERSON-UTI # PC2-128
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: TOP 5" Pipe BTM Blinds
HEIGHT: 66 5/8" **WEIGHT:** 24,000 lbs

Length 40" **Outlets** 4" 10M
DSA 4" 10M x 2" 10M

PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" **WEIGHT:** 13,000 lbs

WING VALVES



2" Check Valve | 2" Manual Valve | 2" Manual Valve | 4" Manual Valve | 4" Hydraulic Valve

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

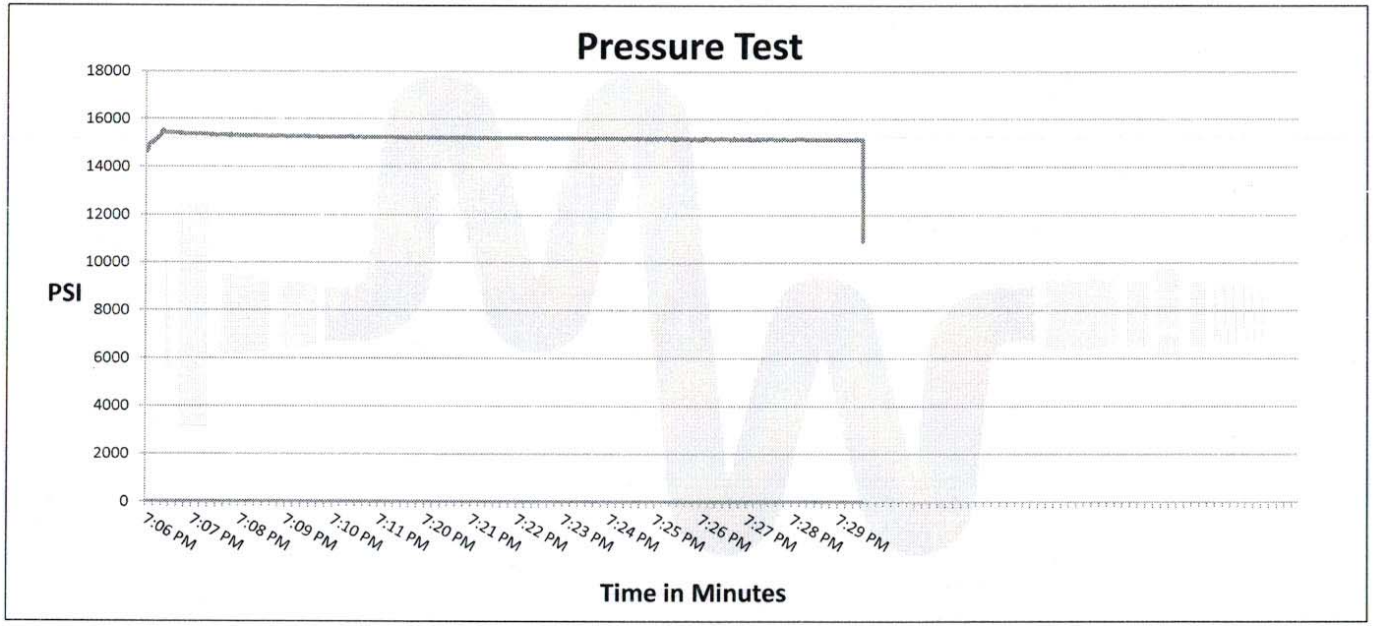
Pick Ticket #: 284918

Hose Specifications

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

Verification

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



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15732 PSI

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

Tested By: *Tyler Hill*

x

Approved By: *Ryan Adams*

x

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-2	Hose O.D. (Inches)	5.30"
Hose Assembly Length	10'	Armor (yes/no)	YES

Fittings

End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	91996	Stem (Heat #)	91996
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements

Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	15 1/2	

Date Tested	Tested By	Approved By
12/8/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-2**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

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

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	***Date***
Ryan Adams	**12/9/2014**

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

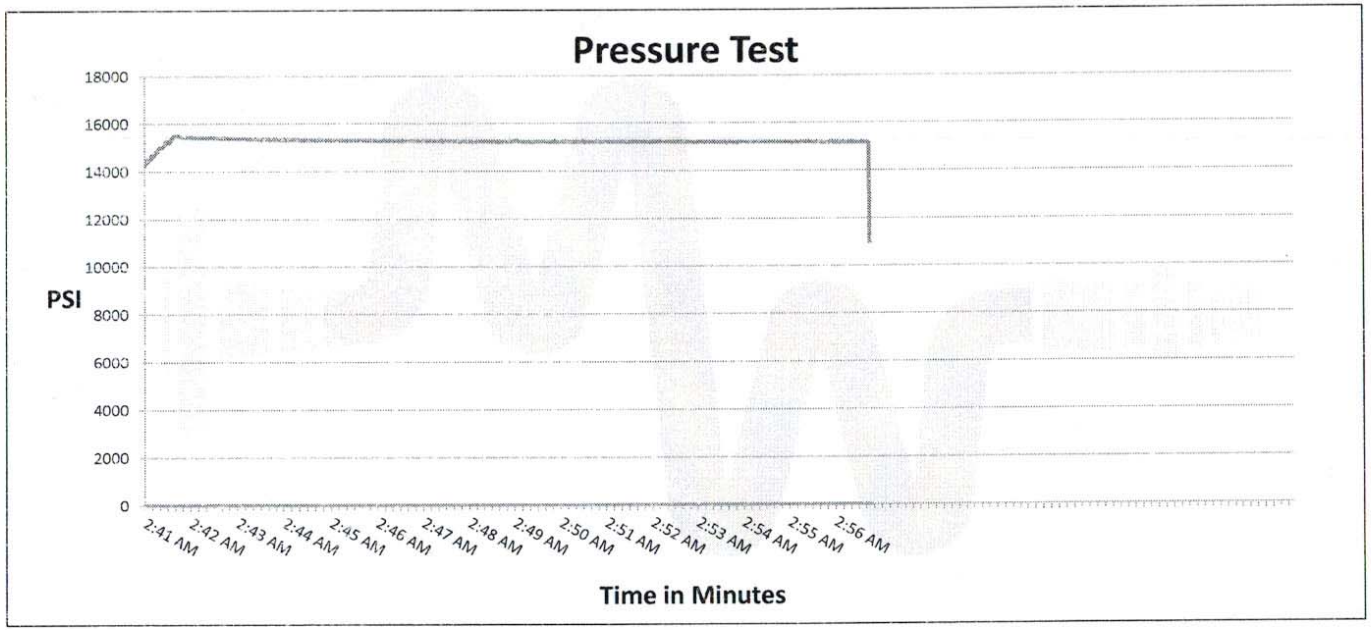
R297

Hose Specifications

Hose Type	Length
Ck	20'
I.D.	**O.D.**
3"	4.77"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4-1/16 10K	Swage
Die Size	**Final O.D.**
5.37"	5.40"
Hose Serial #	**Hose Assembly Serial #**
10490	284918-1



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15893 PSI

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

Tested By: *Tyler Hill*

x

Approved By: *Ryan Adams*

x

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-1	Hose O.D. (Inches)	5.30"
Hose Assembly Length	20'	Armor (yes/no)	YES

Fittings

End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)	V3579	Connection (Heat #)	V3579
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements

Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	15 1/2	

Date Tested	Tested By	Approved By
12/9/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-1**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

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

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	***Date***
Ryan Adams	**12/9/2014**

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

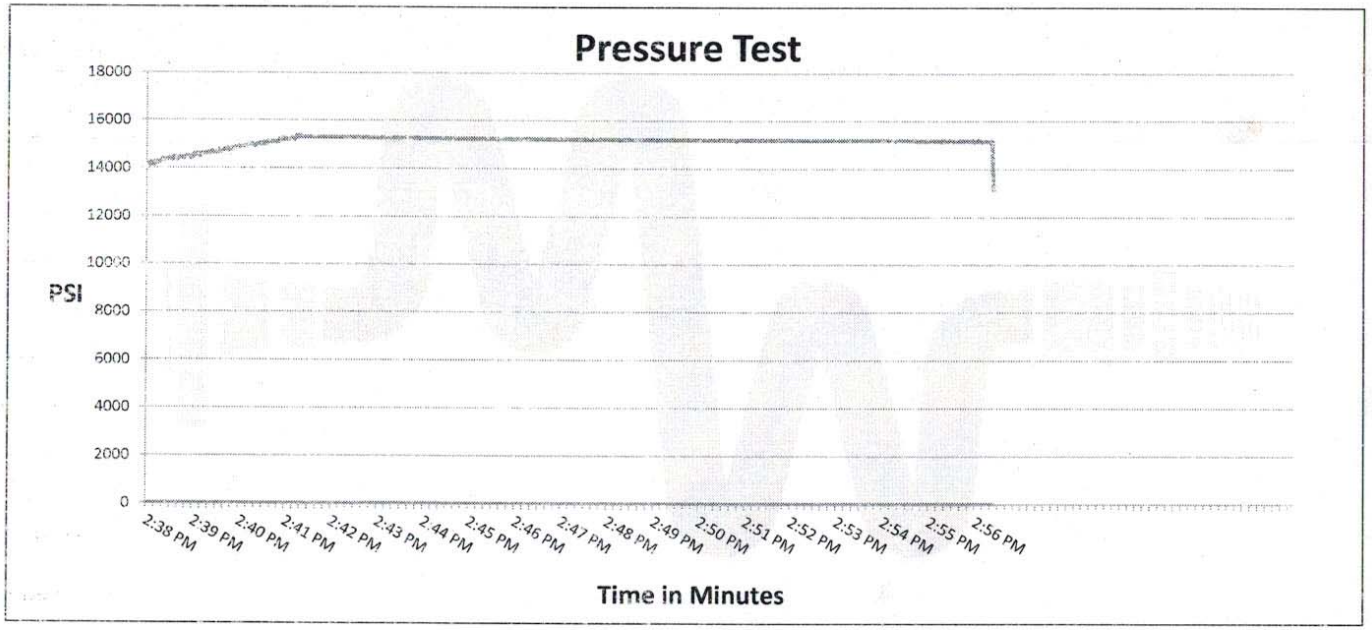
Pick Ticket #: 284918

Hose Specifications

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

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
5.37"	5.37"
Hose Serial #	**Hose Assembly Serial #**
10490	284918-3



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 3/4 Minutes		15410 PSI

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

Tested By: *Tyler Hill*

x

Approved By: *Ryan Adams*

x

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	16 3/4	

Date Tested	Tested By	Approved By
12/9/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-3**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

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

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	***Date***
Ryan Adams	**12/9/2014**

TEC-LOCK WEDGE

5.500" 20 LB/FT (.361"Wall) with 5.875" SPECIAL CLEARANCE OD
BEN P110 CY

Pipe Body Data

Nominal OD:	5.500	in
Nominal Wall:	.361	in
Nominal Weight:	20.00	lb/ft
Plain End Weight:	19.83	lb/ft
Material Grade:	P110 CY	
Mill/Specification:	BEN	
Yield Strength:	125,000	psi
Tensile Strength:	135,000	psi
Nominal ID:	4.778	in
API Drift Diameter:	4.653	in
Special Drift Diameter:	None	in
RBW:	87.5 %	
Body Yield:	729,000	lbf
Burst:	14,360	psi
Collapse:	13,010	psi

Connection Data

Standard OD:	5.875	in
Pin Bored ID:	4.778	in
Critical Section Area:	5.656	in^2
Tensile Efficiency:	97 %	
Compressive Efficiency:	100 %	
Longitudinal Yield Strength:	707,000	lbf
Compressive Limit:	729,000	lbf
Internal Pressure Rating:	14,360	psi
External Pressure Rating:	13,010	psi
Maximum Bend:	101.2	°/100ft

Operational Data

Minimum Makeup Torque:	15,000	ft*lbf
Optimum Makeup Torque:	18,700	ft*lbf
Maximum Makeup Torque:	41,200	ft*lbf
Minimum Yield:	45,800	ft*lbf
Makeup Loss:	5.97	in

Notes

Operational Torque is equivalent to the Maximum Make-Up Torque

HUNTING

Generated on Sep 03, 2019

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

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

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

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

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

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

Burst: DF_b=1.125

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

Tensile: DF_t=1.8

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

Company: Matador Production Company
Well: Voni Fed Com #024H
County: Eddy County, New Mexico
Wellbore: Wellbore #1
Plan: BLM Plan #1
Date: 1/23/20

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 6.46°
To convert a Magnetic Direction to a True Direction, Add 6.75° East
To convert a True Direction to a Grid Direction, Subtract 0.29°

T G M

Azimuths to Grid North
True North: -0.29°
Magnetic North: 6.46°

Magnetic Field
Strength: 47539.4snT
Dip Angle: 59.82°
Date: 1/21/2020
Model: IGRF2015

SURVEY PROGRAM

Depth From	Depth To	Survey/Plan	Tool
0.0	20139.1	BLM Plan #1 (Wellbore #1)	MWD

WELL DETAILS: Voni Fed Com #024H

GL @ 3194.0 KB @ 3222.5usft

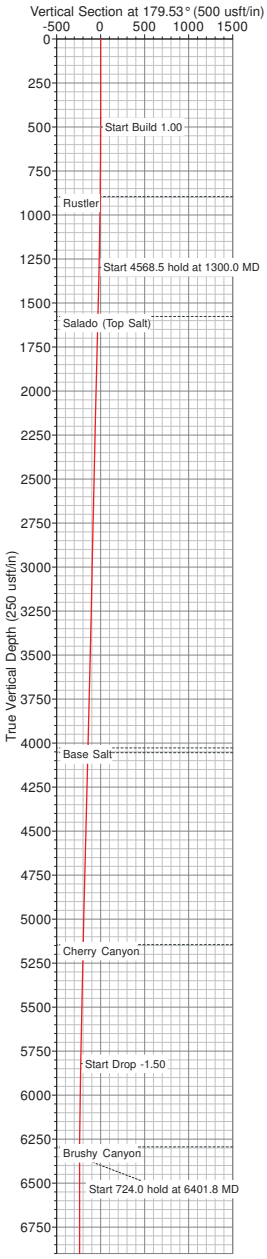
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	376734.43	671916.62	32° 2' 4.358 N	103° 46' 42.779 W	

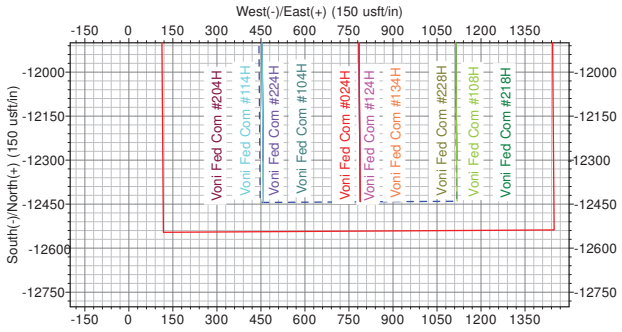
DESIGN TARGET DETAILS

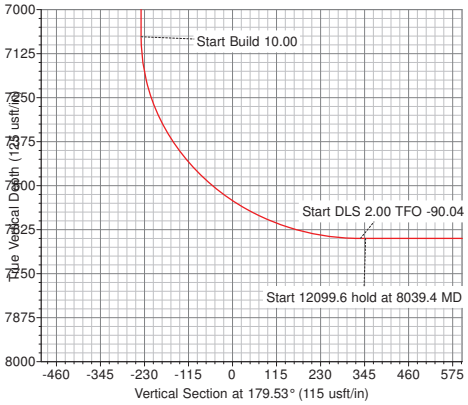
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP - Voni Fed Com #024H	7077.0	244.6	686.5	376979.00	672603.00	32° 2' 6.743 N	103° 46' 34.791 W
BHL - Voni Fed Com #024H	7650.0	-12441.2	788.4	364293.39	672705.04	32° 0' 1.198 N	103° 46' 34.365 W

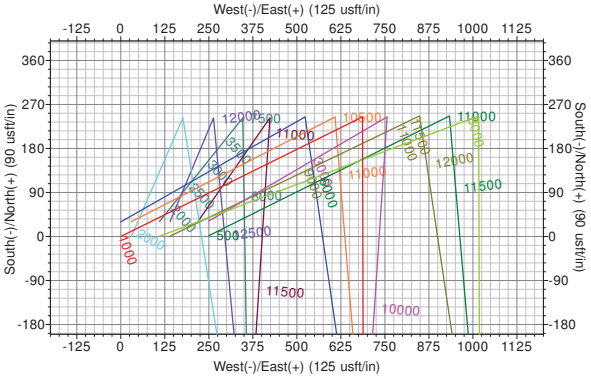
SECTION DETAILS

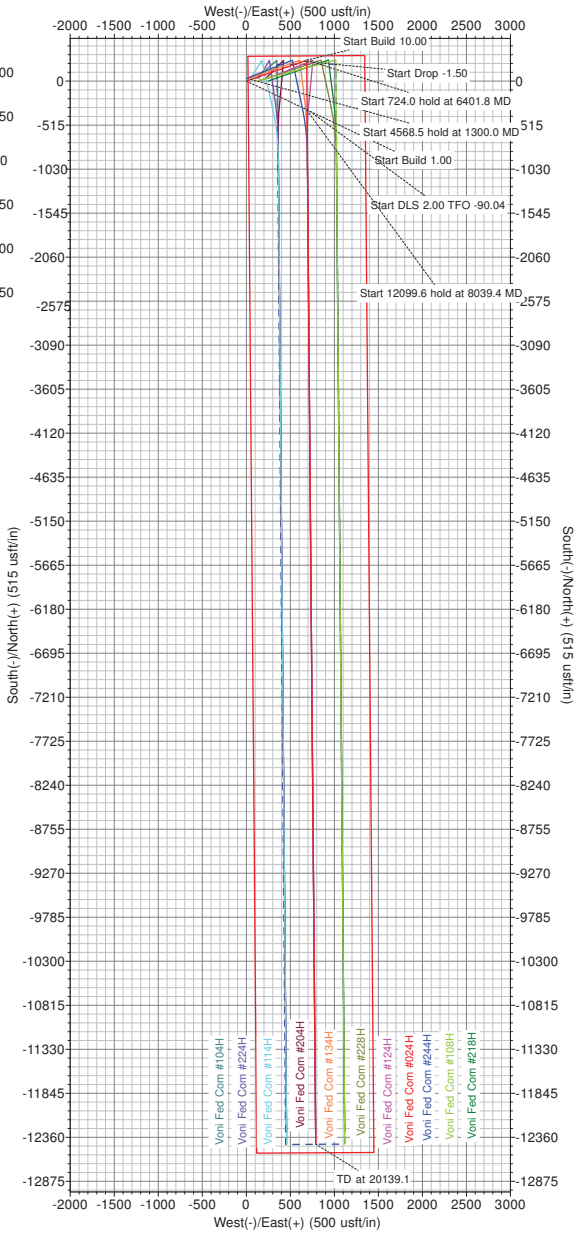
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	Start Build 1.00
1300.0	8.00	70.39	1297.4	18.7	52.5	1.00	70.39	-18.3	Start 4568.5 hold at 1300.0 MD
5868.5	8.00	70.39	5821.4	232.1	651.4	0.00	0.00	-226.8	Start Drop -1.50
6401.8	0.00	0.00	6353.0	244.6	686.5	1.50	180.00	-239.0	Start 724.0 hold at 6401.8 MD
7125.8	0.00	0.00	7077.0	244.6	686.5	0.00	0.00	-239.0	Start Build 10.00
8025.8	90.00	179.80	7650.0	-328.3	688.5	10.00	179.80	334.0	Start DLS 2.00 TFO -90.04
8039.4	90.00	179.53	7650.0	-342.0	688.5	2.00	-90.04	347.6	Start 12099.6 hold at 8039.4 MD
20139.1	90.00	179.53	7650.0	-12441.2	788.4	0.00	0.00	12447.3	TD at 20139.1

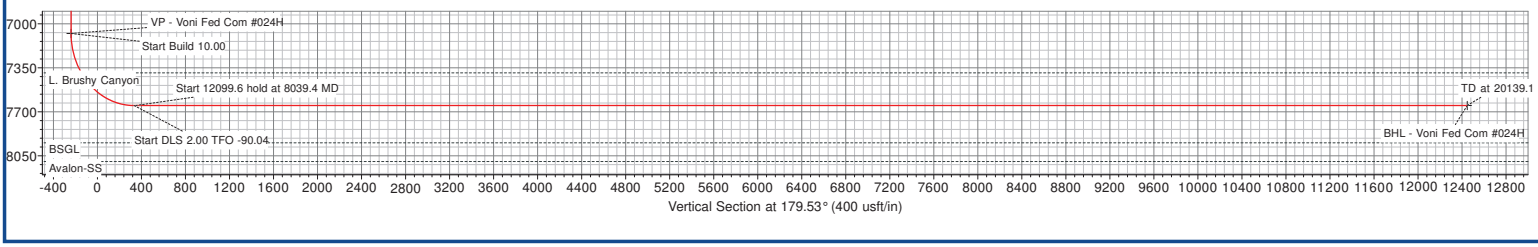












Matador Production Company

Rustler Breaks
Voni
Voni Fed Com #024H

Wellbore #1

Plan: BLM Plan #1

Standard Planning Report

21 January, 2020

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

Project Rustler Breaks

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 Voni

Site Position:		**Northing:**	376,651.72 usft	**Latitude:**	32° 2' 3.721 N
From:	Lat/Long	**Easting:**	668,298.64 usft	**Longitude:**	103° 47' 24.814 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.29 °

Well Voni Fed Com #024H

Well Position	**+N/-S**	82.7 usft	**Northing:**	376,734.42 usft	**Latitude:**	32° 2' 4.358 N
	+E/-W	3,618.2 usft	**Easting:**	671,916.62 usft	**Longitude:**	103° 46' 42.779 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,194.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/21/2020	6.75	59.82	47,539.35203965

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	179.53

Plan Survey Tool Program **Date** 1/21/2020

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,139.1	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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	8.00	70.39	1,297.4	18.7	52.5	1.00	1.00	0.00	70.39	
5,868.5	8.00	70.39	5,821.4	232.1	651.4	0.00	0.00	0.00	0.00	
6,401.8	0.00	0.00	6,353.0	244.6	686.5	1.50	-1.50	0.00	180.00	
7,125.8	0.00	0.00	7,077.0	244.6	686.5	0.00	0.00	0.00	0.00	VP - Voni Fed Com
8,025.8	90.00	179.80	7,650.0	-328.3	688.5	10.00	10.00	0.00	179.80	
8,039.4	90.00	179.53	7,650.0	-342.0	688.5	2.00	0.00	-2.00	-90.04	
20,139.1	90.00	179.53	7,650.0	-12,441.2	788.4	0.00	0.00	0.00	0.00	BHL - Voni Fed Cor

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**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
Start Build 1.00									
600.0	1.00	70.39	600.0	0.3	0.8	-0.3	1.00	1.00	0.00
700.0	2.00	70.39	700.0	1.2	3.3	-1.1	1.00	1.00	0.00
800.0	3.00	70.39	799.9	2.6	7.4	-2.6	1.00	1.00	0.00
895.9	3.96	70.39	895.6	4.6	12.9	-4.5	1.00	1.00	0.00
Rustler									
900.0	4.00	70.39	899.7	4.7	13.1	-4.6	1.00	1.00	0.00
1,000.0	5.00	70.39	999.4	7.3	20.5	-7.1	1.00	1.00	0.00
1,100.0	6.00	70.39	1,098.9	10.5	29.6	-10.3	1.00	1.00	0.00
1,200.0	7.00	70.39	1,198.3	14.3	40.2	-14.0	1.00	1.00	0.00
1,300.0	8.00	70.39	1,297.4	18.7	52.5	-18.3	1.00	1.00	0.00
Start 4568.5 hold at 1300.0 MD									
1,400.0	8.00	70.39	1,396.4	23.4	65.6	-22.8	0.00	0.00	0.00
1,500.0	8.00	70.39	1,495.5	28.1	78.7	-27.4	0.00	0.00	0.00
1,582.0	8.00	70.39	1,576.6	31.9	89.5	-31.2	0.00	0.00	0.00
Salado (Top Salt)									
1,600.0	8.00	70.39	1,594.5	32.7	91.9	-32.0	0.00	0.00	0.00
1,700.0	8.00	70.39	1,693.5	37.4	105.0	-36.5	0.00	0.00	0.00
1,800.0	8.00	70.39	1,792.5	42.1	118.1	-41.1	0.00	0.00	0.00
1,900.0	8.00	70.39	1,891.6	46.7	131.2	-45.7	0.00	0.00	0.00
2,000.0	8.00	70.39	1,990.6	51.4	144.3	-50.2	0.00	0.00	0.00
2,100.0	8.00	70.39	2,089.6	56.1	157.4	-54.8	0.00	0.00	0.00
2,200.0	8.00	70.39	2,188.6	60.8	170.5	-59.4	0.00	0.00	0.00
2,300.0	8.00	70.39	2,287.7	65.4	183.6	-63.9	0.00	0.00	0.00
2,400.0	8.00	70.39	2,386.7	70.1	196.7	-68.5	0.00	0.00	0.00
2,500.0	8.00	70.39	2,485.7	74.8	209.8	-73.0	0.00	0.00	0.00
2,600.0	8.00	70.39	2,584.8	79.4	223.0	-77.6	0.00	0.00	0.00
2,700.0	8.00	70.39	2,683.8	84.1	236.1	-82.2	0.00	0.00	0.00
2,800.0	8.00	70.39	2,782.8	88.8	249.2	-86.7	0.00	0.00	0.00
2,900.0	8.00	70.39	2,881.8	93.5	262.3	-91.3	0.00	0.00	0.00
3,000.0	8.00	70.39	2,980.9	98.1	275.4	-95.9	0.00	0.00	0.00
3,100.0	8.00	70.39	3,079.9	102.8	288.5	-100.4	0.00	0.00	0.00
3,200.0	8.00	70.39	3,178.9	107.5	301.6	-105.0	0.00	0.00	0.00
3,300.0	8.00	70.39	3,277.9	112.1	314.7	-109.6	0.00	0.00	0.00
3,400.0	8.00	70.39	3,377.0	116.8	327.8	-114.1	0.00	0.00	0.00
3,500.0	8.00	70.39	3,476.0	121.5	340.9	-118.7	0.00	0.00	0.00
3,600.0	8.00	70.39	3,575.0	126.2	354.1	-123.2	0.00	0.00	0.00
3,700.0	8.00	70.39	3,674.0	130.8	367.2	-127.8	0.00	0.00	0.00
3,800.0	8.00	70.39	3,773.1	135.5	380.3	-132.4	0.00	0.00	0.00
3,900.0	8.00	70.39	3,872.1	140.2	393.4	-136.9	0.00	0.00	0.00
4,000.0	8.00	70.39	3,971.1	144.8	406.5	-141.5	0.00	0.00	0.00
4,056.7	8.00	70.39	4,027.3	147.5	413.9	-144.1	0.00	0.00	0.00
Base Salt									
4,084.2	8.00	70.39	4,054.5	148.8	417.5	-145.3	0.00	0.00	0.00
Bell Canyon									
4,100.0	8.00	70.39	4,070.2	149.5	419.6	-146.1	0.00	0.00	0.00
4,200.0	8.00	70.39	4,169.2	154.2	432.7	-150.6	0.00	0.00	0.00

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**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)
4,300.0	8.00	70.39	4,268.2	158.9	445.8	-155.2	0.00	0.00	0.00
4,400.0	8.00	70.39	4,367.2	163.5	458.9	-159.8	0.00	0.00	0.00
4,500.0	8.00	70.39	4,466.3	168.2	472.0	-164.3	0.00	0.00	0.00
4,600.0	8.00	70.39	4,565.3	172.9	485.2	-168.9	0.00	0.00	0.00
4,700.0	8.00	70.39	4,664.3	177.5	498.3	-173.5	0.00	0.00	0.00
4,800.0	8.00	70.39	4,763.3	182.2	511.4	-178.0	0.00	0.00	0.00
4,900.0	8.00	70.39	4,862.4	186.9	524.5	-182.6	0.00	0.00	0.00
5,000.0	8.00	70.39	4,961.4	191.6	537.6	-187.1	0.00	0.00	0.00
5,100.0	8.00	70.39	5,060.4	196.2	550.7	-191.7	0.00	0.00	0.00
5,185.0	8.00	70.39	5,144.6	200.2	561.8	-195.6	0.00	0.00	0.00
Cherry Canyon									
5,200.0	8.00	70.39	5,159.4	200.9	563.8	-196.3	0.00	0.00	0.00
5,300.0	8.00	70.39	5,258.5	205.6	576.9	-200.8	0.00	0.00	0.00
5,400.0	8.00	70.39	5,357.5	210.2	590.0	-205.4	0.00	0.00	0.00
5,500.0	8.00	70.39	5,456.5	214.9	603.1	-210.0	0.00	0.00	0.00
5,600.0	8.00	70.39	5,555.6	219.6	616.3	-214.5	0.00	0.00	0.00
5,700.0	8.00	70.39	5,654.6	224.3	629.4	-219.1	0.00	0.00	0.00
5,800.0	8.00	70.39	5,753.6	228.9	642.5	-223.7	0.00	0.00	0.00
5,868.5	8.00	70.39	5,821.4	232.1	651.4	-226.8	0.00	0.00	0.00
Start Drop -1.50									
5,900.0	7.53	70.39	5,852.7	233.6	655.5	-228.2	1.50	-1.50	0.00
6,000.0	6.03	70.39	5,952.0	237.5	666.6	-232.0	1.50	-1.50	0.00
6,100.0	4.53	70.39	6,051.5	240.6	675.2	-235.1	1.50	-1.50	0.00
6,200.0	3.03	70.39	6,151.3	242.8	681.4	-237.2	1.50	-1.50	0.00
6,300.0	1.53	70.39	6,251.2	244.2	685.2	-238.5	1.50	-1.50	0.00
6,342.7	0.89	70.39	6,294.0	244.5	686.0	-238.8	1.50	-1.50	0.00
Brushy Canyon									
6,400.0	0.03	70.39	6,351.2	244.6	686.5	-239.0	1.50	-1.50	0.00
6,401.8	0.00	0.00	6,353.0	244.6	686.5	-239.0	1.50	-1.50	0.00
Start 724.0 hold at 6401.8 MD									
6,500.0	0.00	0.00	6,451.2	244.6	686.5	-239.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,551.2	244.6	686.5	-239.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,651.2	244.6	686.5	-239.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,751.2	244.6	686.5	-239.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,851.2	244.6	686.5	-239.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,951.2	244.6	686.5	-239.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,051.2	244.6	686.5	-239.0	0.00	0.00	0.00
7,125.8	0.00	0.00	7,077.0	244.6	686.5	-239.0	0.00	0.00	0.00
Start Build 10.00 - VP - Voni Fed Com #024H									
7,200.0	7.42	179.80	7,151.0	239.8	686.5	-234.2	10.00	10.00	0.00
7,300.0	17.42	179.80	7,248.5	218.3	686.6	-212.7	10.00	10.00	0.00
7,400.0	27.42	179.80	7,340.9	180.2	686.7	-174.6	10.00	10.00	0.00
7,457.0	33.12	179.80	7,390.1	151.5	686.8	-145.9	10.00	10.00	0.00
L. Brushy Canyon									
7,500.0	37.42	179.80	7,425.2	126.7	686.9	-121.0	10.00	10.00	0.00
7,600.0	47.42	179.80	7,498.9	59.3	687.1	-53.7	10.00	10.00	0.00
7,700.0	57.42	179.80	7,559.8	-19.8	687.4	25.5	10.00	10.00	0.00
7,800.0	67.42	179.80	7,606.0	-108.4	687.7	114.0	10.00	10.00	0.00
7,900.0	77.42	179.80	7,636.2	-203.6	688.0	209.2	10.00	10.00	0.00
8,000.0	87.42	179.80	7,649.4	-302.6	688.4	308.2	10.00	10.00	0.00
8,025.8	90.00	179.80	7,650.0	-328.3	688.5	334.0	10.00	10.00	0.00
Start DLS 2.00 TFO -90.04									
8,039.4	90.00	179.53	7,650.0	-342.0	688.5	347.6	2.00	0.00	-2.00

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**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)
Start 12099.6 hold at 8039.4 MD									
8,100.0	90.00	179.53	7,650.0	-402.6	689.0	408.2	0.00	0.00	0.00
8,200.0	90.00	179.53	7,650.0	-502.6	689.9	508.2	0.00	0.00	0.00
8,300.0	90.00	179.53	7,650.0	-602.6	690.7	608.2	0.00	0.00	0.00
8,400.0	90.00	179.53	7,650.0	-702.5	691.5	708.2	0.00	0.00	0.00
8,500.0	90.00	179.53	7,650.0	-802.5	692.3	808.2	0.00	0.00	0.00
8,600.0	90.00	179.53	7,650.0	-902.5	693.2	908.2	0.00	0.00	0.00
8,700.0	90.00	179.53	7,650.0	-1,002.5	694.0	1,008.2	0.00	0.00	0.00
8,800.0	90.00	179.53	7,650.0	-1,102.5	694.8	1,108.2	0.00	0.00	0.00
8,900.0	90.00	179.53	7,650.0	-1,202.5	695.7	1,208.2	0.00	0.00	0.00
9,000.0	90.00	179.53	7,650.0	-1,302.5	696.5	1,308.2	0.00	0.00	0.00
9,100.0	90.00	179.53	7,650.0	-1,402.5	697.3	1,408.2	0.00	0.00	0.00
9,200.0	90.00	179.53	7,650.0	-1,502.5	698.1	1,508.2	0.00	0.00	0.00
9,300.0	90.00	179.53	7,650.0	-1,602.5	699.0	1,608.2	0.00	0.00	0.00
9,400.0	90.00	179.53	7,650.0	-1,702.5	699.8	1,708.2	0.00	0.00	0.00
9,500.0	90.00	179.53	7,650.0	-1,802.5	700.6	1,808.2	0.00	0.00	0.00
9,600.0	90.00	179.53	7,650.0	-1,902.5	701.4	1,908.2	0.00	0.00	0.00
9,700.0	90.00	179.53	7,650.0	-2,002.5	702.3	2,008.2	0.00	0.00	0.00
9,800.0	90.00	179.53	7,650.0	-2,102.5	703.1	2,108.2	0.00	0.00	0.00
9,900.0	90.00	179.53	7,650.0	-2,202.5	703.9	2,208.2	0.00	0.00	0.00
10,000.0	90.00	179.53	7,650.0	-2,302.5	704.7	2,308.2	0.00	0.00	0.00
10,100.0	90.00	179.53	7,650.0	-2,402.5	705.6	2,408.2	0.00	0.00	0.00
10,200.0	90.00	179.53	7,650.0	-2,502.5	706.4	2,508.2	0.00	0.00	0.00
10,300.0	90.00	179.53	7,650.0	-2,602.5	707.2	2,608.2	0.00	0.00	0.00
10,400.0	90.00	179.53	7,650.0	-2,702.5	708.0	2,708.2	0.00	0.00	0.00
10,500.0	90.00	179.53	7,650.0	-2,802.5	708.9	2,808.2	0.00	0.00	0.00
10,600.0	90.00	179.53	7,650.0	-2,902.5	709.7	2,908.2	0.00	0.00	0.00
10,700.0	90.00	179.53	7,650.0	-3,002.5	710.5	3,008.2	0.00	0.00	0.00
10,800.0	90.00	179.53	7,650.0	-3,102.5	711.3	3,108.2	0.00	0.00	0.00
10,900.0	90.00	179.53	7,650.0	-3,202.5	712.2	3,208.2	0.00	0.00	0.00
11,000.0	90.00	179.53	7,650.0	-3,302.5	713.0	3,308.2	0.00	0.00	0.00
11,100.0	90.00	179.53	7,650.0	-3,402.5	713.8	3,408.2	0.00	0.00	0.00
11,200.0	90.00	179.53	7,650.0	-3,502.5	714.6	3,508.2	0.00	0.00	0.00
11,300.0	90.00	179.53	7,650.0	-3,602.4	715.5	3,608.2	0.00	0.00	0.00
11,400.0	90.00	179.53	7,650.0	-3,702.4	716.3	3,708.2	0.00	0.00	0.00
11,500.0	90.00	179.53	7,650.0	-3,802.4	717.1	3,808.2	0.00	0.00	0.00
11,600.0	90.00	179.53	7,650.0	-3,902.4	717.9	3,908.2	0.00	0.00	0.00
11,700.0	90.00	179.53	7,650.0	-4,002.4	718.8	4,008.2	0.00	0.00	0.00
11,800.0	90.00	179.53	7,650.0	-4,102.4	719.6	4,108.2	0.00	0.00	0.00
11,900.0	90.00	179.53	7,650.0	-4,202.4	720.4	4,208.2	0.00	0.00	0.00
12,000.0	90.00	179.53	7,650.0	-4,302.4	721.2	4,308.2	0.00	0.00	0.00
12,100.0	90.00	179.53	7,650.0	-4,402.4	722.1	4,408.2	0.00	0.00	0.00
12,200.0	90.00	179.53	7,650.0	-4,502.4	722.9	4,508.2	0.00	0.00	0.00
12,300.0	90.00	179.53	7,650.0	-4,602.4	723.7	4,608.2	0.00	0.00	0.00
12,400.0	90.00	179.53	7,650.0	-4,702.4	724.5	4,708.2	0.00	0.00	0.00
12,500.0	90.00	179.53	7,650.0	-4,802.4	725.4	4,808.2	0.00	0.00	0.00
12,600.0	90.00	179.53	7,650.0	-4,902.4	726.2	4,908.2	0.00	0.00	0.00
12,700.0	90.00	179.53	7,650.0	-5,002.4	727.0	5,008.2	0.00	0.00	0.00
12,800.0	90.00	179.53	7,650.0	-5,102.4	727.8	5,108.2	0.00	0.00	0.00
12,900.0	90.00	179.53	7,650.0	-5,202.4	728.7	5,208.2	0.00	0.00	0.00
13,000.0	90.00	179.53	7,650.0	-5,302.4	729.5	5,308.2	0.00	0.00	0.00
13,100.0	90.00	179.53	7,650.0	-5,402.4	730.3	5,408.2	0.00	0.00	0.00
13,200.0	90.00	179.53	7,650.0	-5,502.4	731.1	5,508.2	0.00	0.00	0.00

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**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)
13,300.0	90.00	179.53	7,650.0	-5,602.4	732.0	5,608.2	0.00	0.00	0.00
13,400.0	90.00	179.53	7,650.0	-5,702.4	732.8	5,708.2	0.00	0.00	0.00
13,500.0	90.00	179.53	7,650.0	-5,802.4	733.6	5,808.2	0.00	0.00	0.00
13,600.0	90.00	179.53	7,650.0	-5,902.4	734.4	5,908.2	0.00	0.00	0.00
13,700.0	90.00	179.53	7,650.0	-6,002.4	735.3	6,008.2	0.00	0.00	0.00
13,800.0	90.00	179.53	7,650.0	-6,102.4	736.1	6,108.2	0.00	0.00	0.00
13,900.0	90.00	179.53	7,650.0	-6,202.4	736.9	6,208.2	0.00	0.00	0.00
14,000.0	90.00	179.53	7,650.0	-6,302.4	737.8	6,308.2	0.00	0.00	0.00
14,100.0	90.00	179.53	7,650.0	-6,402.4	738.6	6,408.2	0.00	0.00	0.00
14,200.0	90.00	179.53	7,650.0	-6,502.4	739.4	6,508.2	0.00	0.00	0.00
14,300.0	90.00	179.53	7,650.0	-6,602.3	740.2	6,608.2	0.00	0.00	0.00
14,400.0	90.00	179.53	7,650.0	-6,702.3	741.1	6,708.2	0.00	0.00	0.00
14,500.0	90.00	179.53	7,650.0	-6,802.3	741.9	6,808.2	0.00	0.00	0.00
14,600.0	90.00	179.53	7,650.0	-6,902.3	742.7	6,908.2	0.00	0.00	0.00
14,700.0	90.00	179.53	7,650.0	-7,002.3	743.5	7,008.2	0.00	0.00	0.00
14,800.0	90.00	179.53	7,650.0	-7,102.3	744.4	7,108.2	0.00	0.00	0.00
14,900.0	90.00	179.53	7,650.0	-7,202.3	745.2	7,208.2	0.00	0.00	0.00
15,000.0	90.00	179.53	7,650.0	-7,302.3	746.0	7,308.2	0.00	0.00	0.00
15,100.0	90.00	179.53	7,650.0	-7,402.3	746.8	7,408.2	0.00	0.00	0.00
15,200.0	90.00	179.53	7,650.0	-7,502.3	747.7	7,508.2	0.00	0.00	0.00
15,300.0	90.00	179.53	7,650.0	-7,602.3	748.5	7,608.2	0.00	0.00	0.00
15,400.0	90.00	179.53	7,650.0	-7,702.3	749.3	7,708.2	0.00	0.00	0.00
15,500.0	90.00	179.53	7,650.0	-7,802.3	750.1	7,808.2	0.00	0.00	0.00
15,600.0	90.00	179.53	7,650.0	-7,902.3	751.0	7,908.2	0.00	0.00	0.00
15,700.0	90.00	179.53	7,650.0	-8,002.3	751.8	8,008.2	0.00	0.00	0.00
15,800.0	90.00	179.53	7,650.0	-8,102.3	752.6	8,108.2	0.00	0.00	0.00
15,900.0	90.00	179.53	7,650.0	-8,202.3	753.4	8,208.2	0.00	0.00	0.00
16,000.0	90.00	179.53	7,650.0	-8,302.3	754.3	8,308.2	0.00	0.00	0.00
16,100.0	90.00	179.53	7,650.0	-8,402.3	755.1	8,408.2	0.00	0.00	0.00
16,200.0	90.00	179.53	7,650.0	-8,502.3	755.9	8,508.2	0.00	0.00	0.00
16,300.0	90.00	179.53	7,650.0	-8,602.3	756.7	8,608.2	0.00	0.00	0.00
16,400.0	90.00	179.53	7,650.0	-8,702.3	757.6	8,708.2	0.00	0.00	0.00
16,500.0	90.00	179.53	7,650.0	-8,802.3	758.4	8,808.2	0.00	0.00	0.00
16,600.0	90.00	179.53	7,650.0	-8,902.3	759.2	8,908.2	0.00	0.00	0.00
16,700.0	90.00	179.53	7,650.0	-9,002.3	760.0	9,008.2	0.00	0.00	0.00
16,800.0	90.00	179.53	7,650.0	-9,102.3	760.9	9,108.2	0.00	0.00	0.00
16,900.0	90.00	179.53	7,650.0	-9,202.3	761.7	9,208.2	0.00	0.00	0.00
17,000.0	90.00	179.53	7,650.0	-9,302.3	762.5	9,308.2	0.00	0.00	0.00
17,100.0	90.00	179.53	7,650.0	-9,402.3	763.3	9,408.2	0.00	0.00	0.00
17,200.0	90.00	179.53	7,650.0	-9,502.2	764.2	9,508.2	0.00	0.00	0.00
17,300.0	90.00	179.53	7,650.0	-9,602.2	765.0	9,608.2	0.00	0.00	0.00
17,400.0	90.00	179.53	7,650.0	-9,702.2	765.8	9,708.2	0.00	0.00	0.00
17,500.0	90.00	179.53	7,650.0	-9,802.2	766.6	9,808.2	0.00	0.00	0.00
17,600.0	90.00	179.53	7,650.0	-9,902.2	767.5	9,908.2	0.00	0.00	0.00
17,700.0	90.00	179.53	7,650.0	-10,002.2	768.3	10,008.2	0.00	0.00	0.00
17,800.0	90.00	179.53	7,650.0	-10,102.2	769.1	10,108.2	0.00	0.00	0.00
17,900.0	90.00	179.53	7,650.0	-10,202.2	769.9	10,208.2	0.00	0.00	0.00
18,000.0	90.00	179.53	7,650.0	-10,302.2	770.8	10,308.2	0.00	0.00	0.00
18,100.0	90.00	179.53	7,650.0	-10,402.2	771.6	10,408.2	0.00	0.00	0.00
18,200.0	90.00	179.53	7,650.0	-10,502.2	772.4	10,508.2	0.00	0.00	0.00
18,300.0	90.00	179.53	7,650.0	-10,602.2	773.2	10,608.2	0.00	0.00	0.00
18,400.0	90.00	179.53	7,650.0	-10,702.2	774.1	10,708.2	0.00	0.00	0.00
18,500.0	90.00	179.53	7,650.0	-10,802.2	774.9	10,808.2	0.00	0.00	0.00
18,600.0	90.00	179.53	7,650.0	-10,902.2	775.7	10,908.2	0.00	0.00	0.00

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**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)
18,700.0	90.00	179.53	7,650.0	-11,002.2	776.6	11,008.2	0.00	0.00	0.00
18,800.0	90.00	179.53	7,650.0	-11,102.2	777.4	11,108.2	0.00	0.00	0.00
18,900.0	90.00	179.53	7,650.0	-11,202.2	778.2	11,208.2	0.00	0.00	0.00
19,000.0	90.00	179.53	7,650.0	-11,302.2	779.0	11,308.2	0.00	0.00	0.00
19,100.0	90.00	179.53	7,650.0	-11,402.2	779.9	11,408.2	0.00	0.00	0.00
19,200.0	90.00	179.53	7,650.0	-11,502.2	780.7	11,508.2	0.00	0.00	0.00
19,300.0	90.00	179.53	7,650.0	-11,602.2	781.5	11,608.2	0.00	0.00	0.00
19,400.0	90.00	179.53	7,650.0	-11,702.2	782.3	11,708.2	0.00	0.00	0.00
19,500.0	90.00	179.53	7,650.0	-11,802.2	783.2	11,808.2	0.00	0.00	0.00
19,600.0	90.00	179.53	7,650.0	-11,902.2	784.0	11,908.2	0.00	0.00	0.00
19,700.0	90.00	179.53	7,650.0	-12,002.2	784.8	12,008.2	0.00	0.00	0.00
19,800.0	90.00	179.53	7,650.0	-12,102.2	785.6	12,108.2	0.00	0.00	0.00
19,900.0	90.00	179.53	7,650.0	-12,202.2	786.5	12,208.2	0.00	0.00	0.00
20,000.0	90.00	179.53	7,650.0	-12,302.2	787.3	12,308.2	0.00	0.00	0.00
20,100.0	90.00	179.53	7,650.0	-12,402.1	788.1	12,408.2	0.00	0.00	0.00
20,139.1	90.00	179.53	7,650.0	-12,441.2	788.4	12,447.3	0.00	0.00	0.00
TD at 20139.1 - BHL - Voni Fed Com #024H									

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 - Voni Fed Com #(- plan hits target center - Point	0.00	0.00	7,077.0	244.6	686.5	376,979.00	672,603.00	32° 2' 6.743 N	103° 46' 34.791 W
BHL - Voni Fed Com # - plan hits target center - Point	0.00	0.00	7,650.0	-12,441.2	788.4	364,293.39	672,705.04	32° 0' 1.198 N	103° 46' 34.365 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
895.9	895.6	Rustler			
1,582.0	1,576.6	Salado (Top Salt)			
4,056.7	4,027.3	Base Salt			
4,084.2	4,054.5	Bell Canyon			
5,185.0	5,144.6	Cherry Canyon			
6,342.7	6,294.0	Brushy Canyon			
7,457.0	7,390.1	L. Brushy Canyon			

Database:	EDM 5000.14 Server	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Company:	Matador Production Company	**TVD Reference:**	KB @ 3222.5usft
Project:	Rustler Breaks	**MD Reference:**	KB @ 3222.5usft
Site:	Voni	**North Reference:**	Grid
Well:	Voni Fed Com #024H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
500.0	500.0	0.0	0.0	Start Build 1.00
1,300.0	1,297.4	18.7	52.5	Start 4568.5 hold at 1300.0 MD
5,868.5	5,821.4	232.1	651.4	Start Drop -1.50
6,401.8	6,353.0	244.6	686.5	Start 724.0 hold at 6401.8 MD
7,125.8	7,077.0	244.6	686.5	Start Build 10.00
8,025.8	7,650.0	-328.3	688.5	Start DLS 2.00 TFO -90.04
8,039.4	7,650.0	-342.0	688.5	Start 12099.6 hold at 8039.4 MD
20,139.1	7,650.0	-12,441.2	788.4	TD at 20139.1

Matador Production Company

Rustler Breaks
Voni
Voni Fed Com #024H

Wellbore #1
BLM Plan #1

Anticollision Report

21 January, 2020

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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** 1/21/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,139.1	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
Voni						
Voni Fed Com #104H - Wellbore #1 - BLM Plan #1	1,903.4	1,892.8	15.1	1.9	1.145	Level 2, CC, ES, SF
Voni Fed Com #108H - Wellbore #1 - BLM Plan #1	500.0	498.0	110.1	107.0	35.317	CC
Voni Fed Com #108H - Wellbore #1 - BLM Plan #1	700.0	693.6	110.8	106.3	24.561	ES
Voni Fed Com #108H - Wellbore #1 - BLM Plan #1	20,139.1	21,142.4	1,039.8	812.3	4.572	SF
Voni Fed Com #114H - Wellbore #1 - BLM Plan #1	1,070.1	1,066.2	9.9	2.7	1.381	Level 3, CC, ES, SF
Voni Fed Com #124H - Wellbore #1 - BLM Plan #1	7,142.9	7,136.0	70.0	18.8	1.369	Level 3, CC
Voni Fed Com #124H - Wellbore #1 - BLM Plan #1	7,200.0	7,207.2	70.1	18.7	1.363	Level 3, ES, SF
Voni Fed Com #134H - Wellbore #1 - BLM Plan #1	1,162.2	1,159.7	18.3	10.4	2.317	CC, ES
Voni Fed Com #134H - Wellbore #1 - BLM Plan #1	7,300.0	7,294.3	92.4	39.4	1.744	SF
Voni Fed Com #204H - Wellbore #1 - BLM Plan #1	4,350.2	4,333.2	86.4	53.5	2.630	CC
Voni Fed Com #204H - Wellbore #1 - BLM Plan #1	4,400.0	4,382.6	86.7	53.4	2.607	ES, SF
Voni Fed Com #218H - Wellbore #1 - BLM Plan #1	7,331.3	7,302.0	78.8	25.8	1.486	Level 3, CC, ES, SF
Voni Fed Com #224H - Wellbore #1 - BLM Plan #1	1,920.4	1,909.8	17.9	4.3	1.314	Level 3, CC, ES, SF
Voni Fed Com #228H - Wellbore #1 - BLM Plan #1	1,849.8	1,839.9	46.2	33.1	3.538	CC, ES
Voni Fed Com #228H - Wellbore #1 - BLM Plan #1	1,900.0	1,889.6	46.7	33.3	3.477	SF
Voni Fed Com #244H - Wellbore #1 - BLM Plan #1	836.5	836.3	28.2	22.7	5.107	CC
Voni Fed Com #244H - Wellbore #1 - BLM Plan #1	900.0	900.3	28.5	22.5	4.766	ES
Voni Fed Com #244H - Wellbore #1 - BLM Plan #1	1,000.0	1,000.6	30.6	23.9	4.570	SF

Offset Design Voni - Voni Fed Com #104H - 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	2.0	-2.0	0.0	0.0	74.42	30.7	109.9	114.1				
100.0	100.0	102.0	98.0	0.1	0.1	74.42	30.7	109.9	114.1	113.9	0.26	433.116	
200.0	200.0	202.0	198.0	0.5	0.5	74.42	30.7	109.9	114.1	113.1	0.98	116.395	
300.0	300.0	302.0	298.0	0.8	0.9	74.42	30.7	109.9	114.1	112.4	1.70	67.231	
400.0	400.0	402.0	398.0	1.2	1.2	74.42	30.7	109.9	114.1	111.7	2.41	47.267	
500.0	500.0	502.0	498.0	1.6	1.6	74.42	30.7	109.9	114.1	111.0	3.13	36.444	
600.0	600.0	602.0	598.0	1.9	1.9	4.06	30.7	109.9	113.2	109.4	3.84	29.470	
700.0	700.0	702.0	698.0	2.3	2.3	4.16	30.7	109.9	110.6	106.1	4.55	24.304	
800.0	799.9	802.1	797.9	2.6	2.6	4.34	30.7	109.9	106.3	101.0	5.26	20.190	
900.0	899.7	902.3	897.7	3.0	3.0	4.60	30.7	109.9	100.2	94.2	5.98	16.759	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #104H - 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
1,000.0	999.4	1,002.6	997.4	3.3	3.4	5.00	30.7	109.9	92.4	85.7	6.69	13.799	
1,100.0	1,098.9	1,103.1	1,096.9	3.7	3.7	5.59	30.7	109.9	82.8	75.4	7.41	11.175	
1,200.0	1,198.3	1,196.3	1,196.3	4.1	4.1	6.48	30.7	109.9	71.6	63.5	8.11	8.830	
1,300.0	1,297.4	1,294.6	1,294.6	4.5	4.4	7.55	31.2	110.5	59.3	50.5	8.82	6.727	
1,400.0	1,396.4	1,393.1	1,393.0	4.9	4.8	8.24	32.8	112.3	47.7	38.1	9.53	5.005	
1,500.0	1,495.5	1,491.9	1,491.8	5.3	5.1	8.01	35.6	115.5	37.5	27.3	10.24	3.666	
1,600.0	1,594.5	1,591.1	1,590.7	5.7	5.5	5.92	39.6	119.9	28.9	17.9	10.95	2.637	
1,700.0	1,693.5	1,690.4	1,689.8	6.1	5.8	0.21	44.6	125.5	21.9	10.2	11.66	1.877	
1,800.0	1,792.5	1,789.9	1,788.8	6.5	6.2	-11.76	50.9	132.5	17.0	4.6	12.39	1.373	Level 3
1,900.0	1,891.6	1,889.4	1,887.8	6.9	6.5	-30.46	58.3	140.8	15.1	1.9	13.18	1.148	Level 2
1,903.4	1,894.9	1,892.8	1,891.1	6.9	6.6	-31.14	58.6	141.1	15.1	1.9	13.20	1.145	Level 2, CC, ES, SF
2,000.0	1,990.6	1,989.0	1,986.5	7.3	6.9	-48.61	66.9	150.3	16.7	2.7	14.02	1.191	Level 2
2,100.0	2,089.6	2,088.9	2,085.4	7.7	7.3	-60.64	76.1	160.7	20.4	5.5	14.87	1.373	Level 3
2,200.0	2,188.6	2,188.7	2,184.3	8.1	7.7	-68.72	85.4	171.0	24.8	9.1	15.70	1.577	
2,300.0	2,287.7	2,288.6	2,283.2	8.5	8.1	-74.31	94.7	181.4	29.4	12.9	16.52	1.782	
2,400.0	2,386.7	2,388.4	2,382.0	8.9	8.5	-78.34	103.9	191.7	34.3	17.0	17.34	1.980	
2,500.0	2,485.7	2,488.3	2,480.9	9.4	8.8	-81.36	113.2	202.1	39.3	21.2	18.15	2.167	
2,600.0	2,584.8	2,588.1	2,579.8	9.8	9.2	-83.69	122.5	212.4	44.4	25.5	18.96	2.343	
2,700.0	2,683.8	2,688.0	2,678.7	10.2	9.6	-85.54	131.8	222.8	49.6	29.8	19.77	2.507	
2,800.0	2,782.8	2,787.8	2,777.6	10.6	10.0	-87.04	141.0	233.1	54.8	34.2	20.59	2.660	
2,900.0	2,881.8	2,887.7	2,876.5	11.0	10.4	-88.28	150.3	243.4	60.0	38.6	21.40	2.803	
3,000.0	2,980.9	2,987.6	2,975.4	11.4	10.8	-89.32	159.6	253.8	65.2	43.0	22.22	2.937	
3,100.0	3,079.9	3,087.4	3,074.2	11.9	11.2	-90.20	168.9	264.1	70.5	47.5	23.03	3.061	
3,200.0	3,178.9	3,187.3	3,173.1	12.3	11.6	-90.97	178.1	274.5	75.8	51.9	23.85	3.178	
3,300.0	3,277.9	3,287.1	3,272.0	12.7	12.0	-91.63	187.4	284.8	81.1	56.4	24.67	3.287	
3,400.0	3,377.0	3,387.0	3,370.9	13.1	12.4	-92.21	196.7	295.2	86.4	60.9	25.49	3.389	
3,500.0	3,476.0	3,486.8	3,469.8	13.5	12.9	-92.72	206.0	305.5	91.7	65.4	26.31	3.486	
3,600.0	3,575.0	3,586.7	3,568.7	13.9	13.3	-93.18	215.2	315.9	97.0	69.9	27.13	3.576	
3,700.0	3,674.0	3,687.2	3,668.2	14.4	13.7	-93.97	224.1	325.8	102.1	74.2	27.95	3.653	
3,800.0	3,773.1	3,787.8	3,768.3	14.8	14.1	-95.99	231.3	333.8	106.5	77.7	28.77	3.703	
3,900.0	3,872.1	3,888.3	3,868.4	15.2	14.4	-99.17	236.7	339.9	110.4	80.9	29.56	3.736	
4,000.0	3,971.1	3,988.4	3,968.4	15.6	14.8	-103.42	240.4	343.9	114.2	83.9	30.31	3.768	
4,100.0	4,070.2	4,088.1	4,068.0	16.0	15.2	-108.61	242.3	346.1	118.4	87.4	31.01	3.818	
4,200.0	4,169.2	4,187.2	4,167.2	16.4	15.5	-114.48	242.6	346.4	123.6	91.9	31.64	3.905	
4,300.0	4,268.2	4,286.2	4,266.2	16.9	15.8	-120.03	242.6	346.4	130.0	97.7	32.24	4.031	
4,400.0	4,367.2	4,385.3	4,365.2	17.3	16.2	-125.03	242.6	346.4	137.5	104.7	32.83	4.189	
4,500.0	4,466.3	4,484.3	4,464.3	17.7	16.5	-129.48	242.6	346.4	146.0	112.6	33.42	4.369	
4,600.0	4,565.3	4,583.3	4,563.3	18.1	16.8	-133.42	242.6	346.4	155.3	121.3	34.00	4.566	
4,700.0	4,664.3	4,682.4	4,662.3	18.5	17.2	-136.92	242.6	346.4	165.2	130.6	34.60	4.774	
4,800.0	4,763.3	4,781.4	4,761.3	19.0	17.5	-140.01	242.6	346.4	175.7	140.5	35.21	4.989	
4,900.0	4,862.4	4,880.4	4,860.4	19.4	17.8	-142.74	242.6	346.4	186.6	150.8	35.83	5.207	
5,000.0	4,961.4	4,979.4	4,959.4	19.8	18.2	-145.18	242.6	346.4	197.9	161.4	36.46	5.427	
5,100.0	5,060.4	5,078.5	5,058.4	20.2	18.5	-147.34	242.6	346.4	209.5	172.4	37.10	5.647	
5,200.0	5,159.4	5,177.5	5,157.4	20.6	18.9	-149.28	242.6	346.4	221.4	183.6	37.75	5.864	
5,300.0	5,258.5	5,276.5	5,256.5	21.0	19.2	-151.02	242.6	346.4	233.5	195.1	38.40	6.079	
5,400.0	5,357.5	5,375.5	5,355.5	21.5	19.5	-152.59	242.6	346.4	245.8	206.7	39.07	6.291	
5,500.0	5,456.5	5,474.6	5,454.5	21.9	19.9	-154.01	242.6	346.4	258.2	218.5	39.74	6.498	
5,600.0	5,555.6	5,573.6	5,553.6	22.3	20.2	-155.30	242.6	346.4	270.8	230.4	40.41	6.702	
5,700.0	5,654.6	5,672.6	5,652.6	22.7	20.6	-156.47	242.6	346.4	283.5	242.5	41.09	6.901	
5,800.0	5,753.6	5,771.6	5,751.6	23.1	20.9	-157.55	242.6	346.4	296.4	254.6	41.77	7.095	
5,868.5	5,821.4	5,839.5	5,819.4	23.4	21.1	-158.23	242.6	346.4	305.2	263.0	42.24	7.225	
5,900.0	5,852.7	5,870.7	5,850.7	23.6	21.3	-158.54	242.6	346.4	309.2	266.7	42.46	7.282	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #104H - 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
6,000.0	5,952.0	5,970.0	5,950.0	24.0	21.6	-159.37	242.6	346.4	320.2	277.0	43.15	7.420	
6,100.0	6,051.5	6,069.6	6,049.5	24.4	21.9	-159.98	242.6	346.4	328.8	285.0	43.85	7.500	
6,200.0	6,151.3	6,169.3	6,149.3	24.7	22.3	-160.40	242.6	346.4	335.0	290.5	44.54	7.522	
6,300.0	6,251.2	6,269.3	6,249.2	25.1	22.6	-160.64	242.6	346.4	338.8	293.5	45.24	7.489	
6,401.8	6,353.0	6,371.1	6,351.0	25.4	23.0	-90.34	242.6	346.4	340.1	294.1	45.94	7.402	
6,500.0	6,451.2	6,469.2	6,449.2	25.7	23.3	-90.34	242.6	346.4	340.1	293.4	46.61	7.295	
6,600.0	6,551.2	6,569.2	6,549.2	26.0	23.7	-90.34	242.6	346.4	340.1	292.8	47.30	7.189	
6,700.0	6,651.2	6,669.2	6,649.2	26.3	24.0	-90.34	242.6	346.4	340.1	292.1	47.99	7.086	
6,800.0	6,751.2	6,769.2	6,749.2	26.6	24.4	-90.34	242.6	346.4	340.1	291.4	48.68	6.986	
6,900.0	6,851.2	6,869.2	6,849.2	27.0	24.7	-90.34	242.6	346.4	340.1	290.7	49.37	6.888	
7,000.0	6,951.2	6,969.2	6,949.2	27.3	25.1	-90.34	242.6	346.4	340.1	290.0	50.06	6.793	
7,100.0	7,051.2	7,069.2	7,049.2	27.6	25.4	-90.34	242.6	346.4	340.1	289.3	50.75	6.701	
7,125.8	7,077.0	7,105.0	7,075.0	27.7	25.6	-90.34	242.6	346.4	340.1	289.1	50.96	6.673	
7,150.0	7,101.2	7,119.2	7,099.2	27.7	25.6	89.95	242.6	346.4	340.1	289.0	51.09	6.655	
7,156.1	7,107.3	7,125.4	7,105.3	27.8	25.6	90.00	242.6	346.4	340.1	288.9	51.14	6.650	
7,200.0	7,151.0	7,169.0	7,149.0	27.9	25.8	90.67	242.6	346.4	340.1	288.6	51.44	6.611	
7,250.0	7,200.2	7,218.3	7,198.2	28.0	26.0	92.07	242.6	346.4	340.3	288.5	51.80	6.569	
7,300.0	7,248.5	7,266.6	7,246.5	28.1	26.1	94.09	242.6	346.4	341.0	288.8	52.17	6.537	
7,350.0	7,295.5	7,313.6	7,293.5	28.3	26.3	96.59	242.6	346.4	342.7	290.2	52.54	6.522	
7,400.0	7,340.9	7,358.9	7,338.9	28.4	26.5	99.42	242.6	346.4	345.9	293.0	52.92	6.537	
7,450.0	7,384.2	7,402.2	7,382.2	28.4	26.6	102.39	242.6	346.4	351.4	298.1	53.30	6.592	
7,500.0	7,425.2	7,443.2	7,423.2	28.5	26.8	105.30	242.6	346.4	359.7	306.0	53.68	6.700	
7,550.0	7,463.5	7,481.5	7,461.5	28.6	26.9	107.94	242.6	346.4	371.3	317.3	54.04	6.871	
7,600.0	7,498.9	7,516.9	7,496.9	28.7	27.0	110.16	242.6	346.4	386.9	332.5	54.38	7.114	
7,650.0	7,531.1	7,549.1	7,529.1	28.7	27.1	111.77	242.6	346.4	406.5	351.8	54.68	7.434	
7,700.0	7,559.8	7,587.5	7,567.4	28.8	27.3	113.78	242.2	346.4	430.2	375.2	55.00	7.821	
7,750.0	7,584.9	7,645.7	7,625.4	28.8	27.4	117.54	237.2	346.5	456.4	401.2	55.21	8.267	
7,800.0	7,606.0	7,716.1	7,694.3	28.9	27.6	121.87	223.3	346.9	484.1	429.2	54.95	8.810	
7,850.0	7,623.2	7,806.1	7,779.2	28.9	27.9	127.08	193.5	347.5	512.3	458.5	53.82	9.518	
7,900.0	7,636.2	7,929.0	7,885.4	29.0	28.1	133.30	132.0	348.9	539.2	488.2	51.01	10.570	
7,950.0	7,645.0	8,106.1	8,010.0	29.1	28.4	139.89	7.2	351.8	561.7	516.3	45.45	12.359	
8,000.0	7,649.4	8,353.4	8,108.7	29.2	29.0	144.52	-217.4	356.9	574.5	535.3	39.14	14.676	
8,025.8	7,650.0	8,472.1	8,120.0	29.3	29.5	145.13	-335.2	359.5	575.4	536.5	38.81	14.824	
8,039.4	7,650.0	8,484.3	8,120.0	29.4	29.5	145.14	-347.5	359.8	575.3	536.4	38.89	14.791	
8,059.5	7,650.0	8,515.8	8,120.0	29.4	29.6	145.14	-364.7	360.0	575.2	536.1	39.07	14.722	
8,100.0	7,650.0	8,542.1	8,120.0	29.6	29.8	145.14	-405.2	360.3	575.2	535.9	39.34	14.621	
8,200.0	7,650.0	8,642.1	8,120.0	30.0	30.3	145.14	-505.2	361.1	575.2	535.0	40.21	14.306	
8,300.0	7,650.0	8,742.1	8,120.0	30.6	30.8	145.14	-605.2	362.0	575.2	534.0	41.18	13.968	
8,400.0	7,650.0	8,842.1	8,120.0	31.2	31.5	145.14	-705.2	362.8	575.2	533.0	42.25	13.613	
8,500.0	7,650.0	8,942.1	8,120.0	31.9	32.2	145.14	-805.2	363.6	575.2	531.8	43.42	13.247	
8,600.0	7,650.0	9,042.1	8,120.0	32.7	33.0	145.14	-905.2	364.4	575.2	530.5	44.68	12.874	
8,700.0	7,650.0	9,142.1	8,120.0	33.5	33.8	145.14	-1,005.2	365.2	575.2	529.2	46.02	12.501	
8,800.0	7,650.0	9,242.1	8,120.0	34.4	34.7	145.14	-1,105.2	366.0	575.2	527.8	47.42	12.130	
8,900.0	7,650.0	9,342.1	8,120.0	35.4	35.6	145.14	-1,205.2	366.8	575.2	526.3	48.90	11.764	
9,000.0	7,650.0	9,442.1	8,120.0	36.4	36.6	145.14	-1,305.2	367.7	575.2	524.8	50.43	11.406	
9,100.0	7,650.0	9,542.1	8,120.0	37.4	37.7	145.14	-1,405.2	368.5	575.3	523.2	52.03	11.057	
9,200.0	7,650.0	9,642.1	8,120.0	38.5	38.8	145.13	-1,505.2	369.3	575.3	521.6	53.67	10.719	
9,300.0	7,650.0	9,742.1	8,120.0	39.6	39.9	145.13	-1,605.2	370.1	575.3	519.9	55.36	10.392	
9,400.0	7,650.0	9,842.1	8,120.0	40.8	41.1	145.13	-1,705.2	370.9	575.3	518.2	57.08	10.077	
9,500.0	7,650.0	9,942.1	8,120.0	42.0	42.3	145.13	-1,805.2	371.7	575.3	516.4	58.85	9.775	
9,600.0	7,650.0	10,042.1	8,120.0	43.2	43.5	145.13	-1,905.2	372.6	575.3	514.6	60.66	9.484	
9,700.0	7,650.0	10,142.1	8,120.0	44.5	44.8	145.13	-2,005.2	373.4	575.3	512.8	62.49	9.206	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #104H - 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
9,800.0	7,650.0	10,242.1	8,120.0	45.8	46.0	145.13	-2,105.2	374.2	575.3	510.9	64.35	8.940	
9,900.0	7,650.0	10,342.1	8,120.0	47.1	47.3	145.13	-2,205.2	375.0	575.3	509.1	66.24	8.685	
10,000.0	7,650.0	10,442.1	8,120.0	48.4	48.7	145.13	-2,305.2	375.8	575.3	507.1	68.16	8.441	
10,100.0	7,650.0	10,542.1	8,120.0	49.7	50.0	145.13	-2,405.2	376.6	575.3	505.2	70.10	8.207	
10,200.0	7,650.0	10,642.1	8,120.0	51.1	51.4	145.13	-2,505.2	377.4	575.3	503.3	72.05	7.985	
10,300.0	7,650.0	10,742.1	8,120.0	52.5	52.7	145.13	-2,605.2	378.3	575.3	501.3	74.03	7.771	
10,400.0	7,650.0	10,842.1	8,120.0	53.9	54.1	145.12	-2,705.2	379.1	575.3	499.3	76.03	7.568	
10,500.0	7,650.0	10,942.1	8,120.0	55.3	55.5	145.12	-2,805.2	379.9	575.3	497.3	78.04	7.373	
10,600.0	7,650.0	11,042.1	8,120.0	56.7	57.0	145.12	-2,905.2	380.7	575.3	495.3	80.06	7.186	
10,700.0	7,650.0	11,142.1	8,120.0	58.1	58.4	145.12	-3,005.1	381.5	575.4	493.2	82.10	7.008	
10,800.0	7,650.0	11,242.1	8,120.0	59.6	59.8	145.12	-3,105.1	382.3	575.4	491.2	84.15	6.837	
10,900.0	7,650.0	11,342.1	8,120.0	61.0	61.3	145.12	-3,205.1	383.1	575.4	489.1	86.22	6.673	
11,000.0	7,650.0	11,442.1	8,120.0	62.5	62.8	145.12	-3,305.1	384.0	575.4	487.1	88.30	6.516	
11,100.0	7,650.0	11,542.1	8,120.0	63.9	64.2	145.12	-3,405.1	384.8	575.4	485.0	90.38	6.366	
11,200.0	7,650.0	11,642.1	8,120.0	65.4	65.7	145.12	-3,505.1	385.6	575.4	482.9	92.48	6.222	
11,300.0	7,650.0	11,742.1	8,120.0	66.9	67.2	145.12	-3,605.1	386.4	575.4	480.8	94.58	6.084	
11,400.0	7,650.0	11,842.1	8,120.0	68.4	68.7	145.12	-3,705.1	387.2	575.4	478.7	96.69	5.951	
11,500.0	7,650.0	11,942.1	8,120.0	69.9	70.2	145.11	-3,805.1	388.0	575.4	476.6	98.82	5.823	
11,600.0	7,650.0	12,042.1	8,120.0	71.4	71.7	145.11	-3,905.1	388.9	575.4	474.5	100.94	5.700	
11,700.0	7,650.0	12,142.1	8,120.0	72.9	73.2	145.11	-4,005.1	389.7	575.4	472.3	103.08	5.582	
11,800.0	7,650.0	12,242.1	8,120.0	74.5	74.7	145.11	-4,105.1	390.5	575.4	470.2	105.22	5.469	
11,900.0	7,650.0	12,342.1	8,120.0	76.0	76.3	145.11	-4,205.1	391.3	575.4	468.1	107.37	5.359	
12,000.0	7,650.0	12,442.1	8,120.0	77.5	77.8	145.11	-4,305.1	392.1	575.4	465.9	109.52	5.254	
12,100.0	7,650.0	12,542.1	8,120.0	79.1	79.3	145.11	-4,405.1	392.9	575.4	463.8	111.68	5.152	
12,200.0	7,650.0	12,642.1	8,120.0	80.6	80.9	145.11	-4,505.1	393.7	575.4	461.6	113.85	5.055	
12,300.0	7,650.0	12,742.1	8,120.0	82.2	82.4	145.11	-4,605.1	394.6	575.4	459.4	116.02	4.960	
12,400.0	7,650.0	12,842.1	8,120.0	83.7	84.0	145.11	-4,705.1	395.4	575.5	457.3	118.19	4.869	
12,500.0	7,650.0	12,942.1	8,120.0	85.3	85.5	145.11	-4,805.1	396.2	575.5	455.1	120.37	4.781	
12,600.0	7,650.0	13,042.1	8,120.0	86.8	87.1	145.11	-4,905.1	397.0	575.5	452.9	122.55	4.696	
12,700.0	7,650.0	13,142.1	8,120.0	88.4	88.7	145.10	-5,005.1	397.8	575.5	450.7	124.74	4.613	
12,800.0	7,650.0	13,242.1	8,120.0	89.9	90.2	145.10	-5,105.1	398.6	575.5	448.6	126.93	4.534	
12,900.0	7,650.0	13,342.1	8,120.0	91.5	91.8	145.10	-5,205.1	399.4	575.5	446.4	129.12	4.457	
13,000.0	7,650.0	13,442.1	8,120.0	93.1	93.4	145.10	-5,305.1	400.3	575.5	444.2	131.32	4.382	
13,100.0	7,650.0	13,542.1	8,120.0	94.7	94.9	145.10	-5,405.1	401.1	575.5	442.0	133.52	4.310	
13,200.0	7,650.0	13,642.1	8,120.0	96.2	96.5	145.10	-5,505.1	401.9	575.5	439.8	135.72	4.240	
13,300.0	7,650.0	13,742.1	8,120.0	97.8	98.1	145.10	-5,605.1	402.7	575.5	437.6	137.93	4.173	
13,400.0	7,650.0	13,842.1	8,120.0	99.4	99.7	145.10	-5,705.1	403.5	575.5	435.4	140.13	4.107	
13,500.0	7,650.0	13,942.1	8,120.0	101.0	101.3	145.10	-5,805.1	404.3	575.5	433.2	142.35	4.043	
13,600.0	7,650.0	14,042.1	8,120.0	102.6	102.8	145.10	-5,905.1	405.1	575.5	431.0	144.56	3.981	
13,700.0	7,650.0	14,142.1	8,120.0	104.1	104.4	145.10	-6,005.0	406.0	575.5	428.8	146.78	3.921	
13,800.0	7,650.0	14,242.1	8,120.0	105.7	106.0	145.10	-6,105.0	406.8	575.5	426.5	148.99	3.863	
13,900.0	7,650.0	14,342.1	8,120.0	107.3	107.6	145.09	-6,205.0	407.6	575.5	424.3	151.21	3.806	
14,000.0	7,650.0	14,442.1	8,120.0	108.9	109.2	145.09	-6,305.0	408.4	575.5	422.1	153.44	3.751	
14,100.0	7,650.0	14,542.1	8,120.0	110.5	110.8	145.09	-6,405.0	409.2	575.6	419.9	155.66	3.697	
14,200.0	7,650.0	14,642.1	8,120.0	112.1	112.4	145.09	-6,505.0	410.0	575.6	417.7	157.89	3.645	
14,300.0	7,650.0	14,742.1	8,120.0	113.7	114.0	145.09	-6,605.0	410.9	575.6	415.5	160.12	3.595	
14,400.0	7,650.0	14,842.1	8,120.0	115.3	115.6	145.09	-6,705.0	411.7	575.6	413.2	162.35	3.545	
14,500.0	7,650.0	14,942.1	8,120.0	116.9	117.2	145.09	-6,805.0	412.5	575.6	411.0	164.58	3.497	
14,600.0	7,650.0	15,042.1	8,120.0	118.5	118.8	145.09	-6,905.0	413.3	575.6	408.8	166.81	3.450	
14,700.0	7,650.0	15,142.1	8,120.0	120.1	120.4	145.09	-7,005.0	414.1	575.6	406.5	169.05	3.405	
14,800.0	7,650.0	15,242.1	8,120.0	121.7	122.0	145.09	-7,105.0	414.9	575.6	404.3	171.29	3.360	
14,900.0	7,650.0	15,342.1	8,120.0	123.3	123.6	145.09	-7,205.0	415.7	575.6	402.1	173.52	3.317	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #104H - 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
15,000.0	7,650.0	15,442.1	8,120.0	124.9	125.2	145.08	-7,305.0	416.6	575.6	399.8	175.76	3.275	
15,100.0	7,650.0	15,542.1	8,120.0	126.5	126.8	145.08	-7,405.0	417.4	575.6	397.6	178.01	3.234	
15,200.0	7,650.0	15,642.1	8,120.0	128.2	128.4	145.08	-7,505.0	418.2	575.6	395.4	180.25	3.194	
15,300.0	7,650.0	15,742.1	8,120.0	129.8	130.1	145.08	-7,605.0	419.0	575.6	393.1	182.49	3.154	
15,400.0	7,650.0	15,842.1	8,120.0	131.4	131.7	145.08	-7,705.0	419.8	575.6	390.9	184.74	3.116	
15,500.0	7,650.0	15,942.1	8,120.0	133.0	133.3	145.08	-7,805.0	420.6	575.6	388.7	186.98	3.079	
15,600.0	7,650.0	16,042.1	8,120.0	134.6	134.9	145.08	-7,905.0	421.4	575.6	386.4	189.23	3.042	
15,700.0	7,650.0	16,142.1	8,120.0	136.2	136.5	145.08	-8,005.0	422.3	575.7	384.2	191.48	3.006	
15,800.0	7,650.0	16,242.1	8,120.0	137.8	138.1	145.08	-8,105.0	423.1	575.7	381.9	193.73	2.971	
15,900.0	7,650.0	16,342.1	8,120.0	139.5	139.7	145.08	-8,205.0	423.9	575.7	379.7	195.98	2.937	
16,000.0	7,650.0	16,442.1	8,120.0	141.1	141.4	145.08	-8,305.0	424.7	575.7	377.4	198.23	2.904	
16,100.0	7,650.0	16,542.1	8,120.0	142.7	143.0	145.08	-8,405.0	425.5	575.7	375.2	200.48	2.871	
16,200.0	7,650.0	16,642.1	8,120.0	144.3	144.6	145.07	-8,505.0	426.3	575.7	372.9	202.73	2.840	
16,300.0	7,650.0	16,742.1	8,120.0	145.9	146.2	145.07	-8,605.0	427.2	575.7	370.7	204.99	2.808	
16,400.0	7,650.0	16,842.1	8,120.0	147.6	147.8	145.07	-8,705.0	428.0	575.7	368.5	207.24	2.778	
16,500.0	7,650.0	16,942.1	8,120.0	149.2	149.5	145.07	-8,805.0	428.8	575.7	366.2	209.50	2.748	
16,600.0	7,650.0	17,042.1	8,120.0	150.8	151.1	145.07	-8,905.0	429.6	575.7	364.0	211.76	2.719	
16,700.0	7,650.0	17,142.1	8,120.0	152.4	152.7	145.07	-9,004.9	430.4	575.7	361.7	214.01	2.690	
16,800.0	7,650.0	17,242.1	8,120.0	154.0	154.3	145.07	-9,104.9	431.2	575.7	359.4	216.27	2.662	
16,900.0	7,650.0	17,342.1	8,120.0	155.7	155.9	145.07	-9,204.9	432.0	575.7	357.2	218.53	2.635	
17,000.0	7,650.0	17,442.1	8,120.0	157.3	157.6	145.07	-9,304.9	432.9	575.7	354.9	220.79	2.608	
17,100.0	7,650.0	17,542.1	8,120.0	158.9	159.2	145.07	-9,404.9	433.7	575.7	352.7	223.05	2.581	
17,200.0	7,650.0	17,642.1	8,120.0	160.5	160.8	145.07	-9,504.9	434.5	575.7	350.4	225.31	2.555	
17,300.0	7,650.0	17,742.1	8,120.0	162.2	162.4	145.06	-9,604.9	435.3	575.7	348.2	227.58	2.530	
17,400.0	7,650.0	17,842.1	8,120.0	163.8	164.1	145.06	-9,704.9	436.1	575.8	345.9	229.84	2.505	
17,500.0	7,650.0	17,942.1	8,120.0	165.4	165.7	145.06	-9,804.9	436.9	575.8	343.7	232.10	2.481	
17,600.0	7,650.0	18,042.1	8,120.0	167.0	167.3	145.06	-9,904.9	437.7	575.8	341.4	234.36	2.457	
17,700.0	7,650.0	18,142.1	8,120.0	168.7	169.0	145.06	-10,004.9	438.6	575.8	339.1	236.63	2.433	
17,800.0	7,650.0	18,242.1	8,120.0	170.3	170.6	145.06	-10,104.9	439.4	575.8	336.9	238.89	2.410	
17,900.0	7,650.0	18,342.1	8,120.0	171.9	172.2	145.06	-10,204.9	440.2	575.8	334.6	241.16	2.388	
18,000.0	7,650.0	18,442.1	8,120.0	173.6	173.8	145.06	-10,304.9	441.0	575.8	332.4	243.43	2.365	
18,100.0	7,650.0	18,542.1	8,120.0	175.2	175.5	145.06	-10,404.9	441.8	575.8	330.1	245.69	2.344	
18,200.0	7,650.0	18,642.1	8,120.0	176.8	177.1	145.06	-10,504.9	442.6	575.8	327.8	247.96	2.322	
18,300.0	7,650.0	18,742.1	8,120.0	178.5	178.7	145.06	-10,604.9	443.5	575.8	325.6	250.23	2.301	
18,400.0	7,650.0	18,842.1	8,120.0	180.1	180.4	145.06	-10,704.9	444.3	575.8	323.3	252.50	2.281	
18,500.0	7,650.0	18,942.1	8,120.0	181.7	182.0	145.05	-10,804.9	445.1	575.8	321.1	254.76	2.260	
18,600.0	7,650.0	19,042.1	8,120.0	183.3	183.6	145.05	-10,904.9	445.9	575.8	318.8	257.03	2.240	
18,700.0	7,650.0	19,142.1	8,120.0	185.0	185.3	145.05	-11,004.9	446.7	575.8	316.5	259.30	2.221	
18,800.0	7,650.0	19,242.1	8,120.0	186.6	186.9	145.05	-11,104.9	447.5	575.8	314.3	261.57	2.201	
18,900.0	7,650.0	19,342.1	8,120.0	188.2	188.5	145.05	-11,204.9	448.3	575.8	312.0	263.84	2.183	
19,000.0	7,650.0	19,442.1	8,120.0	189.9	190.2	145.05	-11,304.9	449.2	575.9	309.7	266.11	2.164	
19,100.0	7,650.0	19,542.1	8,120.0	191.5	191.8	145.05	-11,404.9	450.0	575.9	307.5	268.39	2.146	
19,200.0	7,650.0	19,642.1	8,120.0	193.1	193.4	145.05	-11,504.9	450.8	575.9	305.2	270.66	2.128	
19,300.0	7,650.0	19,742.1	8,120.0	194.8	195.1	145.05	-11,604.9	451.6	575.9	302.9	272.93	2.110	
19,400.0	7,650.0	19,842.1	8,120.0	196.4	196.7	145.05	-11,704.9	452.4	575.9	300.7	275.20	2.093	
19,500.0	7,650.0	19,942.1	8,120.0	198.1	198.3	145.05	-11,804.9	453.2	575.9	298.4	277.48	2.075	
19,600.0	7,650.0	20,042.1	8,120.0	199.7	200.0	145.05	-11,904.9	454.0	575.9	296.1	279.75	2.059	
19,700.0	7,650.0	20,142.1	8,120.0	201.3	201.6	145.04	-12,004.9	454.9	575.9	293.9	282.02	2.042	
19,800.0	7,650.0	20,242.1	8,120.0	203.0	203.2	145.04	-12,104.8	455.7	575.9	291.6	284.30	2.026	
19,900.0	7,650.0	20,342.1	8,120.0	204.6	204.9	145.04	-12,204.8	456.5	575.9	289.3	286.57	2.010	
20,000.0	7,650.0	20,442.1	8,120.0	206.2	206.5	145.04	-12,304.8	457.3	575.9	287.1	288.85	1.994	
20,100.0	7,650.0	20,542.1	8,120.0	207.9	208.2	145.04	-12,404.8	458.1	575.9	284.8	291.12	1.978	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #104H - 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
20,139.1	7,650.0	20,581.1	8,120.0	208.5	208.8	145.04	-12,443.9	458.4	575.9	283.9	292.01	1.972	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #108H - 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	2.0	-2.0	0.0	0.0	89.71	0.6	110.1	110.1				
100.0	100.0	102.0	98.0	0.1	0.1	89.71	0.6	110.1	110.1	109.8	0.26	417.793	
200.0	200.0	202.0	198.0	0.5	0.5	89.71	0.6	110.1	110.1	109.1	0.98	112.277	
300.0	300.0	302.0	298.0	0.8	0.9	89.71	0.6	110.1	110.1	108.4	1.70	64.853	
400.0	400.0	402.0	398.0	1.2	1.2	89.71	0.6	110.1	110.1	107.7	2.41	45.594	
500.0	500.0	498.0	498.0	1.6	1.6	89.71	0.6	110.1	110.1	107.0	3.12	35.317	CC
600.0	600.0	595.8	595.8	1.9	1.9	19.33	0.8	111.0	110.2	106.4	3.82	28.886	
700.0	700.0	693.6	693.5	2.3	2.2	19.36	1.6	114.0	110.8	106.3	4.51	24.561	ES
800.0	799.9	791.3	791.1	2.6	2.6	19.41	3.0	118.9	111.7	106.5	5.21	21.447	
900.0	899.7	889.0	888.6	3.0	2.9	19.48	4.8	125.8	113.0	107.1	5.91	19.126	
1,000.0	999.4	986.7	985.8	3.3	3.3	19.55	7.2	134.6	114.7	108.1	6.61	17.351	
1,100.0	1,098.9	1,084.3	1,082.8	3.7	3.7	19.65	10.2	145.5	116.8	109.4	7.31	15.966	
1,200.0	1,198.3	1,181.9	1,179.5	4.1	4.0	19.75	13.6	158.3	119.2	111.2	8.02	14.872	
1,300.0	1,297.4	1,279.8	1,276.1	4.5	4.4	19.86	17.7	173.0	122.0	113.3	8.73	13.985	
1,400.0	1,396.4	1,379.7	1,374.7	4.9	4.8	20.03	21.9	188.8	124.8	115.3	9.46	13.196	
1,500.0	1,495.5	1,479.7	1,473.3	5.3	5.3	20.18	26.2	204.7	127.5	117.3	10.19	12.515	
1,600.0	1,594.5	1,579.7	1,571.9	5.7	5.7	20.33	30.5	220.5	130.3	119.3	10.93	11.921	
1,700.0	1,693.5	1,679.6	1,670.6	6.1	6.1	20.47	34.8	236.3	133.0	121.3	11.67	11.400	
1,800.0	1,792.5	1,779.6	1,769.2	6.5	6.5	20.61	39.1	252.1	135.8	123.3	12.41	10.939	
1,900.0	1,891.6	1,879.5	1,867.8	6.9	7.0	20.74	43.4	267.9	138.5	125.3	13.15	10.528	
2,000.0	1,990.6	1,979.5	1,966.4	7.3	7.4	20.87	47.7	283.7	141.2	127.3	13.90	10.161	
2,100.0	2,089.6	2,079.5	2,065.0	7.7	7.8	20.99	52.0	299.6	144.0	129.3	14.65	9.830	
2,200.0	2,188.6	2,179.4	2,163.6	8.1	8.3	21.11	56.3	315.4	146.7	131.3	15.40	9.530	
2,300.0	2,287.7	2,279.4	2,262.2	8.5	8.7	21.22	60.6	331.2	149.5	133.3	16.15	9.257	
2,400.0	2,386.7	2,379.3	2,360.8	8.9	9.1	21.33	64.9	347.0	152.2	135.3	16.90	9.008	
2,500.0	2,485.7	2,479.3	2,459.4	9.4	9.6	21.44	69.2	362.8	155.0	137.3	17.65	8.780	
2,600.0	2,584.8	2,579.3	2,558.0	9.8	10.0	21.54	73.5	378.6	157.7	139.3	18.41	8.570	
2,700.0	2,683.8	2,679.2	2,656.7	10.2	10.4	21.64	77.8	394.5	160.5	141.3	19.16	8.377	
2,800.0	2,782.8	2,779.2	2,755.3	10.6	10.9	21.73	82.0	410.3	163.2	143.3	19.91	8.198	
2,900.0	2,881.8	2,879.2	2,853.9	11.0	11.3	21.82	86.3	426.1	166.0	145.3	20.67	8.031	
3,000.0	2,980.9	2,979.1	2,952.5	11.4	11.7	21.91	90.6	441.9	168.8	147.3	21.42	7.876	
3,100.0	3,079.9	3,079.1	3,051.1	11.9	12.2	22.00	94.9	457.7	171.5	149.3	22.18	7.732	
3,200.0	3,178.9	3,179.0	3,149.7	12.3	12.6	22.08	99.2	473.5	174.3	151.3	22.94	7.597	
3,300.0	3,277.9	3,279.0	3,248.3	12.7	13.1	22.16	103.5	489.4	177.0	153.3	23.69	7.471	
3,400.0	3,377.0	3,379.0	3,346.9	13.1	13.5	22.24	107.8	505.2	179.8	155.3	24.45	7.352	
3,500.0	3,476.0	3,478.9	3,445.5	13.5	13.9	22.31	112.1	521.0	182.5	157.3	25.21	7.240	
3,600.0	3,575.0	3,578.9	3,544.1	13.9	14.4	22.39	116.4	536.8	185.3	159.3	25.97	7.135	
3,700.0	3,674.0	3,678.9	3,642.7	14.4	14.8	22.46	120.7	552.6	188.0	161.3	26.73	7.035	
3,800.0	3,773.1	3,778.8	3,741.4	14.8	15.3	22.53	125.0	568.4	190.8	163.3	27.49	6.941	
3,900.0	3,872.1	3,878.8	3,840.0	15.2	15.7	22.59	129.3	584.3	193.5	165.3	28.24	6.852	
4,000.0	3,971.1	3,978.7	3,938.6	15.6	16.1	22.66	133.6	600.1	196.3	167.3	29.00	6.768	
4,100.0	4,070.2	4,078.7	4,037.2	16.0	16.6	22.72	137.9	615.9	199.1	169.3	29.76	6.688	
4,200.0	4,169.2	4,178.7	4,135.8	16.4	17.0	22.78	142.2	631.7	201.8	171.3	30.52	6.612	
4,300.0	4,268.2	4,278.6	4,234.4	16.9	17.5	22.84	146.4	647.5	204.6	173.3	31.28	6.539	
4,400.0	4,367.2	4,378.6	4,333.0	17.3	17.9	22.90	150.7	663.3	207.3	175.3	32.04	6.470	
4,500.0	4,466.3	4,478.5	4,431.6	17.7	18.3	22.96	155.0	679.2	210.1	177.3	32.80	6.404	
4,600.0	4,565.3	4,578.5	4,530.2	18.1	18.8	23.02	159.3	695.0	212.8	179.3	33.57	6.341	
4,700.0	4,664.3	4,678.5	4,628.8	18.5	19.2	23.07	163.6	710.8	215.6	181.3	34.33	6.281	
4,800.0	4,763.3	4,778.4	4,727.4	19.0	19.7	23.12	167.9	726.6	218.4	183.3	35.09	6.223	
4,900.0	4,862.4	4,878.4	4,826.1	19.4	20.1	23.17	172.2	742.4	221.1	185.3	35.85	6.168	
5,000.0	4,961.4	4,978.4	4,924.7	19.8	20.5	23.22	176.5	758.2	223.9	187.3	36.61	6.115	
5,100.0	5,060.4	5,078.3	5,023.3	20.2	21.0	23.27	180.8	774.1	226.6	189.3	37.37	6.064	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #108H - 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
5,200.0	5,159.4	5,179.4	5,123.0	20.6	21.4	23.34	185.1	789.8	229.2	191.0	38.14	6.008	
5,300.0	5,258.5	5,280.6	5,222.9	21.0	21.9	23.45	189.2	805.1	231.2	192.3	38.92	5.940	
5,400.0	5,357.5	5,381.8	5,323.0	21.5	22.3	23.61	193.2	819.8	232.7	193.0	39.69	5.862	
5,500.0	5,456.5	5,482.9	5,423.1	21.9	22.7	23.80	197.1	834.0	233.6	193.2	40.47	5.774	
5,600.0	5,555.6	5,584.1	5,523.3	22.3	23.2	24.04	200.8	847.6	234.1	192.9	41.24	5.677	
5,700.0	5,654.6	5,685.3	5,623.6	22.7	23.6	24.33	204.3	860.8	234.1	192.1	42.01	5.571	
5,800.0	5,753.6	5,786.5	5,723.9	23.1	24.0	24.66	207.8	873.4	233.5	190.7	42.79	5.457	
5,868.5	5,821.4	5,855.8	5,792.7	23.4	24.3	24.92	210.0	881.7	232.9	189.5	43.32	5.375	
5,900.0	5,852.7	5,887.7	5,824.3	23.6	24.4	25.03	211.0	885.5	232.6	189.0	43.57	5.339	
5,929.8	5,882.2	5,917.9	5,854.3	23.7	24.5	25.12	212.0	889.0	232.5	188.7	43.80	5.309	
6,000.0	5,952.0	5,988.9	5,924.8	24.0	24.8	25.24	214.2	897.0	233.0	188.6	44.33	5.256	
6,100.0	6,051.5	6,090.1	6,025.3	24.4	25.2	25.23	217.2	908.0	235.2	190.1	45.06	5.219	
6,200.0	6,151.3	6,191.2	6,125.9	24.7	25.6	25.01	220.0	918.5	239.3	193.5	45.78	5.228	
6,300.0	6,251.2	6,292.2	6,226.4	25.1	26.0	24.60	222.7	928.4	245.3	198.8	46.47	5.278	
6,401.8	6,353.0	6,395.0	6,328.7	25.4	26.4	94.39	225.3	938.0	253.3	206.1	47.14	5.372	
6,500.0	6,451.2	6,494.1	6,427.3	25.7	26.8	93.73	227.7	946.7	261.7	213.9	47.78	5.477	
6,600.0	6,551.2	6,595.1	6,528.0	26.0	27.2	93.13	229.9	955.0	269.8	221.4	48.44	5.570	
6,700.0	6,651.2	6,696.2	6,628.7	26.3	27.5	92.60	232.0	962.9	277.4	228.3	49.10	5.650	
6,800.0	6,751.2	6,797.4	6,729.6	26.6	27.9	92.14	234.0	970.2	284.6	234.8	49.77	5.718	
6,900.0	6,851.2	6,898.6	6,830.7	27.0	28.3	91.72	235.9	976.9	291.2	240.8	50.43	5.774	
7,000.0	6,951.2	7,000.0	6,931.8	27.3	28.6	91.36	237.6	983.2	297.3	246.2	51.10	5.818	
7,100.0	7,051.2	7,101.4	7,033.0	27.6	29.0	91.04	239.1	988.9	302.9	251.1	51.77	5.851	
7,125.8	7,077.0	7,127.6	7,059.2	27.7	29.1	90.97	239.5	990.3	304.3	252.3	51.94	5.858	
7,150.0	7,101.2	7,152.1	7,083.7	27.7	29.2	-88.88	239.8	991.5	305.5	253.4	52.09	5.864	
7,200.0	7,151.0	7,202.6	7,134.1	27.9	29.4	-89.57	240.5	994.0	307.9	255.5	52.37	5.879	
7,250.0	7,200.2	7,252.5	7,183.9	28.0	29.5	-91.03	241.1	996.4	310.4	257.8	52.61	5.899	
7,300.0	7,248.5	7,301.4	7,232.8	28.1	29.7	-93.15	241.7	998.6	313.2	260.4	52.83	5.929	
7,350.0	7,295.5	7,348.9	7,280.3	28.3	29.9	-95.78	242.3	1,000.6	316.9	263.8	53.04	5.975	
7,400.0	7,340.9	7,394.8	7,326.1	28.4	30.0	-98.76	242.8	1,002.4	322.1	268.8	53.28	6.045	
7,450.0	7,384.2	7,438.6	7,369.9	28.4	30.2	-101.86	243.2	1,004.0	329.4	275.9	53.56	6.150	
7,500.0	7,425.2	7,480.0	7,411.3	28.5	30.3	-104.88	243.6	1,005.5	339.6	285.6	53.93	6.297	
7,550.0	7,463.5	7,518.8	7,450.0	28.6	30.4	-107.61	244.0	1,006.7	353.1	298.7	54.38	6.493	
7,600.0	7,498.9	7,554.5	7,485.8	28.7	30.6	-109.87	244.3	1,007.8	370.4	315.5	54.90	6.747	
7,650.0	7,531.1	7,587.0	7,518.2	28.7	30.7	-111.51	244.5	1,008.8	391.7	336.2	55.48	7.061	
7,700.0	7,559.8	7,616.0	7,547.2	28.8	30.8	-112.36	244.7	1,009.6	417.0	361.0	56.07	7.437	
7,750.0	7,584.9	7,641.3	7,572.5	28.8	30.8	-112.31	244.9	1,010.2	446.2	389.6	56.66	7.875	
7,800.0	7,606.0	7,662.7	7,593.8	28.9	30.9	-111.21	245.1	1,010.8	478.9	421.7	57.22	8.370	
7,850.0	7,623.2	7,679.9	7,611.1	28.9	31.0	-108.86	245.2	1,011.2	514.8	457.1	57.72	8.918	
7,900.0	7,636.2	7,692.9	7,624.0	29.0	31.0	-105.08	245.2	1,011.5	553.3	495.2	58.17	9.512	
7,950.0	7,645.0	7,701.5	7,632.7	29.1	31.0	-99.66	245.3	1,011.7	594.0	535.4	58.55	10.144	
8,000.0	7,649.4	7,705.8	7,636.9	29.2	31.1	-92.49	245.3	1,011.8	636.3	577.4	58.88	10.807	
8,025.8	7,650.0	7,706.2	7,637.4	29.3	31.1	-88.14	245.3	1,011.8	658.6	599.6	59.02	11.158	
8,039.4	7,650.0	7,706.1	7,637.3	29.4	31.1	-88.14	245.3	1,011.8	670.5	611.4	59.09	11.346	
8,100.0	7,650.0	7,705.8	7,636.9	29.6	31.1	-88.07	245.3	1,011.8	723.9	664.5	59.38	12.190	
8,200.0	7,650.0	7,705.2	7,636.3	30.0	31.1	-87.97	245.3	1,011.8	814.3	754.5	59.77	13.624	
8,300.0	7,650.0	7,704.6	7,635.7	30.6	31.1	-87.86	245.3	1,011.8	906.7	846.6	60.07	15.094	
8,400.0	7,650.0	7,704.0	7,635.1	31.2	31.1	-87.76	245.3	1,011.7	1,000.6	940.3	60.31	16.591	
8,500.0	7,650.0	9,503.4	8,634.0	31.9	36.1	-161.49	-799.8	1,022.3	1,039.8	1,014.4	25.35	41.022	
8,600.0	7,650.0	9,603.4	8,634.0	32.7	36.8	-161.49	-899.8	1,023.2	1,039.8	1,013.3	26.44	39.322	
8,700.0	7,650.0	9,703.4	8,634.0	33.5	37.6	-161.49	-999.8	1,024.0	1,039.8	1,012.1	27.61	37.653	
8,800.0	7,650.0	9,803.4	8,634.0	34.4	38.4	-161.49	-1,099.8	1,024.8	1,039.8	1,010.9	28.85	36.036	
8,900.0	7,650.0	9,903.4	8,634.0	35.4	39.2	-161.49	-1,199.8	1,025.6	1,039.8	1,009.6	30.15	34.485	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #108H - 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
9,000.0	7,650.0	10,003.4	8,634.0	36.4	40.1	-161.49	-1,299.8	1,026.5	1,039.8	1,008.3	31.50	33.008	
9,100.0	7,650.0	10,103.4	8,634.0	37.4	41.1	-161.49	-1,399.8	1,027.3	1,039.8	1,006.9	32.89	31.609	
9,200.0	7,650.0	10,203.4	8,634.0	38.5	42.1	-161.49	-1,499.8	1,028.1	1,039.8	1,005.4	34.33	30.288	
9,300.0	7,650.0	10,303.4	8,634.0	39.6	43.1	-161.49	-1,599.8	1,029.0	1,039.8	1,004.0	35.80	29.045	
9,400.0	7,650.0	10,403.4	8,634.0	40.8	44.2	-161.49	-1,699.8	1,029.8	1,039.8	1,002.5	37.30	27.877	
9,500.0	7,650.0	10,503.4	8,634.0	42.0	45.3	-161.49	-1,799.8	1,030.6	1,039.8	1,000.9	38.82	26.781	
9,600.0	7,650.0	10,603.4	8,634.0	43.2	46.4	-161.49	-1,899.8	1,031.4	1,039.8	999.4	40.38	25.752	
9,700.0	7,650.0	10,703.4	8,634.0	44.5	47.6	-161.49	-1,999.8	1,032.3	1,039.8	997.8	41.95	24.786	
9,800.0	7,650.0	10,803.4	8,634.0	45.8	48.8	-161.49	-2,099.8	1,033.1	1,039.8	996.2	43.54	23.880	
9,900.0	7,650.0	10,903.4	8,634.0	47.1	50.0	-161.49	-2,199.8	1,033.9	1,039.8	994.6	45.15	23.029	
10,000.0	7,650.0	11,003.4	8,634.0	48.4	51.2	-161.49	-2,299.8	1,034.7	1,039.8	993.0	46.77	22.229	
10,100.0	7,650.0	11,103.4	8,634.0	49.7	52.5	-161.49	-2,399.8	1,035.6	1,039.8	991.3	48.41	21.477	
10,200.0	7,650.0	11,203.4	8,634.0	51.1	53.8	-161.49	-2,499.8	1,036.4	1,039.8	989.7	50.06	20.769	
10,300.0	7,650.0	11,303.4	8,634.0	52.5	55.1	-161.50	-2,599.8	1,037.2	1,039.8	988.0	51.73	20.101	
10,400.0	7,650.0	11,403.4	8,634.0	53.9	56.4	-161.50	-2,699.8	1,038.0	1,039.8	986.4	53.40	19.472	
10,500.0	7,650.0	11,503.4	8,634.0	55.3	57.8	-161.50	-2,799.7	1,038.9	1,039.8	984.7	55.08	18.877	
10,600.0	7,650.0	11,603.4	8,634.0	56.7	59.1	-161.50	-2,899.7	1,039.7	1,039.8	983.0	56.77	18.315	
10,700.0	7,650.0	11,703.4	8,634.0	58.1	60.5	-161.50	-2,999.7	1,040.5	1,039.8	981.3	58.47	17.783	
10,800.0	7,650.0	11,803.4	8,634.0	59.6	61.9	-161.50	-3,099.7	1,041.3	1,039.8	979.6	60.17	17.279	
10,900.0	7,650.0	11,903.4	8,634.0	61.0	63.3	-161.50	-3,199.7	1,042.2	1,039.8	977.9	61.89	16.801	
11,000.0	7,650.0	12,003.4	8,634.0	62.5	64.7	-161.50	-3,299.7	1,043.0	1,039.8	976.2	63.60	16.348	
11,100.0	7,650.0	12,103.4	8,634.0	63.9	66.1	-161.50	-3,399.7	1,043.8	1,039.8	974.4	65.33	15.916	
11,200.0	7,650.0	12,203.4	8,634.0	65.4	67.6	-161.50	-3,499.7	1,044.6	1,039.8	972.7	67.06	15.506	
11,300.0	7,650.0	12,303.4	8,634.0	66.9	69.0	-161.50	-3,599.7	1,045.5	1,039.8	971.0	68.79	15.115	
11,400.0	7,650.0	12,403.4	8,634.0	68.4	70.5	-161.50	-3,699.7	1,046.3	1,039.8	969.2	70.53	14.743	
11,500.0	7,650.0	12,503.4	8,634.0	69.9	71.9	-161.50	-3,799.7	1,047.1	1,039.8	967.5	72.27	14.388	
11,600.0	7,650.0	12,603.4	8,634.0	71.4	73.4	-161.50	-3,899.7	1,047.9	1,039.8	965.7	74.01	14.048	
11,700.0	7,650.0	12,703.4	8,634.0	72.9	74.9	-161.50	-3,999.7	1,048.8	1,039.8	964.0	75.76	13.724	
11,800.0	7,650.0	12,803.4	8,634.0	74.5	76.4	-161.50	-4,099.7	1,049.6	1,039.8	962.2	77.51	13.414	
11,900.0	7,650.0	12,903.4	8,634.0	76.0	77.9	-161.50	-4,199.7	1,050.4	1,039.8	960.5	79.27	13.117	
12,000.0	7,650.0	13,003.4	8,634.0	77.5	79.4	-161.50	-4,299.7	1,051.2	1,039.8	958.7	81.03	12.832	
12,100.0	7,650.0	13,103.4	8,634.0	79.1	80.9	-161.50	-4,399.7	1,052.1	1,039.8	957.0	82.79	12.559	
12,200.0	7,650.0	13,203.4	8,634.0	80.6	82.4	-161.50	-4,499.7	1,052.9	1,039.8	955.2	84.55	12.297	
12,300.0	7,650.0	13,303.4	8,634.0	82.2	83.9	-161.50	-4,599.7	1,053.7	1,039.8	953.4	86.32	12.046	
12,400.0	7,650.0	13,403.4	8,634.0	83.7	85.4	-161.50	-4,699.7	1,054.5	1,039.8	951.7	88.08	11.804	
12,500.0	7,650.0	13,503.4	8,634.0	85.3	86.9	-161.50	-4,799.7	1,055.4	1,039.8	949.9	89.85	11.572	
12,600.0	7,650.0	13,603.4	8,634.0	86.8	88.5	-161.50	-4,899.7	1,056.2	1,039.8	948.1	91.63	11.348	
12,700.0	7,650.0	13,703.4	8,634.0	88.4	90.0	-161.50	-4,999.7	1,057.0	1,039.8	946.4	93.40	11.132	
12,800.0	7,650.0	13,803.4	8,634.0	89.9	91.5	-161.50	-5,099.7	1,057.8	1,039.8	944.6	95.17	10.925	
12,900.0	7,650.0	13,903.4	8,634.0	91.5	93.1	-161.50	-5,199.7	1,058.7	1,039.8	942.8	96.95	10.725	
13,000.0	7,650.0	14,003.4	8,634.0	93.1	94.6	-161.50	-5,299.7	1,059.5	1,039.8	941.0	98.73	10.531	
13,100.0	7,650.0	14,103.4	8,634.0	94.7	96.2	-161.50	-5,399.7	1,060.3	1,039.8	939.2	100.51	10.345	
13,200.0	7,650.0	14,203.4	8,634.0	96.2	97.7	-161.50	-5,499.7	1,061.1	1,039.8	937.5	102.29	10.165	
13,300.0	7,650.0	14,303.4	8,634.0	97.8	99.3	-161.50	-5,599.7	1,062.0	1,039.8	935.7	104.07	9.990	
13,400.0	7,650.0	14,403.4	8,634.0	99.4	100.8	-161.50	-5,699.7	1,062.8	1,039.8	933.9	105.86	9.822	
13,500.0	7,650.0	14,503.4	8,634.0	101.0	102.4	-161.50	-5,799.6	1,063.6	1,039.8	932.1	107.64	9.659	
13,600.0	7,650.0	14,603.4	8,634.0	102.6	103.9	-161.50	-5,899.6	1,064.4	1,039.8	930.3	109.43	9.502	
13,700.0	7,650.0	14,703.4	8,634.0	104.1	105.5	-161.50	-5,999.6	1,065.3	1,039.8	928.5	111.22	9.349	
13,800.0	7,650.0	14,803.4	8,634.0	105.7	107.1	-161.50	-6,099.6	1,066.1	1,039.8	926.7	113.01	9.201	
13,900.0	7,650.0	14,903.4	8,634.0	107.3	108.7	-161.50	-6,199.6	1,066.9	1,039.8	925.0	114.80	9.057	
14,000.0	7,650.0	15,003.4	8,634.0	108.9	110.2	-161.50	-6,299.6	1,067.7	1,039.8	923.2	116.59	8.918	
14,100.0	7,650.0	15,103.4	8,634.0	110.5	111.8	-161.50	-6,399.6	1,068.6	1,039.8	921.4	118.38	8.783	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #108H - 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
14,200.0	7,650.0	15,203.4	8,634.0	112.1	113.4	-161.50	-6,499.6	1,069.4	1,039.8	919.6	120.17	8.652	
14,300.0	7,650.0	15,303.4	8,634.0	113.7	115.0	-161.50	-6,599.6	1,070.2	1,039.8	917.8	121.96	8.525	
14,400.0	7,650.0	15,403.4	8,634.0	115.3	116.6	-161.50	-6,699.6	1,071.0	1,039.8	916.0	123.76	8.402	
14,500.0	7,650.0	15,503.4	8,634.0	116.9	118.1	-161.50	-6,799.6	1,071.9	1,039.8	914.2	125.55	8.281	
14,600.0	7,650.0	15,603.4	8,634.0	118.5	119.7	-161.50	-6,899.6	1,072.7	1,039.8	912.4	127.35	8.165	
14,700.0	7,650.0	15,703.4	8,634.0	120.1	121.3	-161.50	-6,999.6	1,073.5	1,039.8	910.6	129.14	8.051	
14,800.0	7,650.0	15,803.4	8,634.0	121.7	122.9	-161.50	-7,099.6	1,074.3	1,039.8	908.8	130.94	7.941	
14,900.0	7,650.0	15,903.4	8,634.0	123.3	124.5	-161.50	-7,199.6	1,075.2	1,039.8	907.0	132.74	7.833	
15,000.0	7,650.0	16,003.4	8,634.0	124.9	126.1	-161.50	-7,299.6	1,076.0	1,039.8	905.2	134.54	7.729	
15,100.0	7,650.0	16,103.4	8,634.0	126.5	127.7	-161.50	-7,399.6	1,076.8	1,039.8	903.4	136.33	7.627	
15,200.0	7,650.0	16,203.4	8,634.0	128.2	129.3	-161.50	-7,499.6	1,077.6	1,039.8	901.6	138.13	7.527	
15,300.0	7,650.0	16,303.4	8,634.0	129.8	130.9	-161.50	-7,599.6	1,078.5	1,039.8	899.8	139.93	7.430	
15,400.0	7,650.0	16,403.4	8,634.0	131.4	132.5	-161.50	-7,699.6	1,079.3	1,039.8	898.0	141.73	7.336	
15,500.0	7,650.0	16,503.4	8,634.0	133.0	134.1	-161.50	-7,799.6	1,080.1	1,039.8	896.2	143.53	7.244	
15,600.0	7,650.0	16,603.4	8,634.0	134.6	135.7	-161.50	-7,899.6	1,080.9	1,039.8	894.4	145.33	7.154	
15,700.0	7,650.0	16,703.4	8,634.0	136.2	137.3	-161.50	-7,999.6	1,081.8	1,039.8	892.6	147.14	7.067	
15,800.0	7,650.0	16,803.4	8,634.0	137.8	138.9	-161.50	-8,099.6	1,082.6	1,039.8	890.8	148.94	6.981	
15,900.0	7,650.0	16,903.4	8,634.0	139.5	140.5	-161.50	-8,199.6	1,083.4	1,039.8	889.0	150.74	6.898	
16,000.0	7,650.0	17,003.4	8,634.0	141.1	142.1	-161.50	-8,299.6	1,084.2	1,039.8	887.2	152.54	6.816	
16,100.0	7,650.0	17,103.4	8,634.0	142.7	143.7	-161.50	-8,399.6	1,085.1	1,039.8	885.4	154.35	6.736	
16,200.0	7,650.0	17,203.4	8,634.0	144.3	145.3	-161.50	-8,499.6	1,085.9	1,039.8	883.6	156.15	6.659	
16,300.0	7,650.0	17,303.4	8,634.0	145.9	146.9	-161.50	-8,599.6	1,086.7	1,039.8	881.8	157.95	6.583	
16,400.0	7,650.0	17,403.4	8,634.0	147.6	148.5	-161.50	-8,699.5	1,087.5	1,039.8	880.0	159.76	6.508	
16,500.0	7,650.0	17,503.4	8,634.0	149.2	150.1	-161.50	-8,799.5	1,088.4	1,039.8	878.2	161.56	6.436	
16,600.0	7,650.0	17,603.4	8,634.0	150.8	151.7	-161.50	-8,899.5	1,089.2	1,039.8	876.4	163.37	6.364	
16,700.0	7,650.0	17,703.4	8,634.0	152.4	153.4	-161.50	-8,999.5	1,090.0	1,039.8	874.6	165.17	6.295	
16,800.0	7,650.0	17,803.4	8,634.0	154.0	155.0	-161.50	-9,099.5	1,090.8	1,039.8	872.8	166.98	6.227	
16,900.0	7,650.0	17,903.4	8,634.0	155.7	156.6	-161.50	-9,199.5	1,091.7	1,039.8	871.0	168.79	6.160	
17,000.0	7,650.0	18,003.4	8,634.0	157.3	158.2	-161.50	-9,299.5	1,092.5	1,039.8	869.2	170.59	6.095	
17,100.0	7,650.0	18,103.4	8,634.0	158.9	159.8	-161.50	-9,399.5	1,093.3	1,039.8	867.4	172.40	6.031	
17,200.0	7,650.0	18,203.4	8,634.0	160.5	161.4	-161.50	-9,499.5	1,094.1	1,039.8	865.5	174.21	5.969	
17,300.0	7,650.0	18,303.4	8,634.0	162.2	163.1	-161.50	-9,599.5	1,095.0	1,039.8	863.7	176.01	5.907	
17,400.0	7,650.0	18,403.4	8,634.0	163.8	164.7	-161.50	-9,699.5	1,095.8	1,039.8	861.9	177.82	5.847	
17,500.0	7,650.0	18,503.4	8,634.0	165.4	166.3	-161.50	-9,799.5	1,096.6	1,039.8	860.1	179.63	5.788	
17,600.0	7,650.0	18,603.4	8,634.0	167.0	167.9	-161.50	-9,899.5	1,097.4	1,039.8	858.3	181.44	5.731	
17,700.0	7,650.0	18,703.4	8,634.0	168.7	169.5	-161.50	-9,999.5	1,098.3	1,039.8	856.5	183.24	5.674	
17,800.0	7,650.0	18,803.4	8,634.0	170.3	171.1	-161.50	-10,099.5	1,099.1	1,039.8	854.7	185.05	5.619	
17,900.0	7,650.0	18,903.4	8,634.0	171.9	172.8	-161.50	-10,199.5	1,099.9	1,039.8	852.9	186.86	5.564	
18,000.0	7,650.0	19,003.4	8,634.0	173.6	174.4	-161.50	-10,299.5	1,100.7	1,039.8	851.1	188.67	5.511	
18,100.0	7,650.0	19,103.4	8,634.0	175.2	176.0	-161.50	-10,399.5	1,101.6	1,039.8	849.3	190.48	5.459	
18,200.0	7,650.0	19,203.4	8,634.0	176.8	177.6	-161.50	-10,499.5	1,102.4	1,039.8	847.5	192.29	5.407	
18,300.0	7,650.0	19,303.4	8,634.0	178.5	179.3	-161.50	-10,599.5	1,103.2	1,039.8	845.7	194.10	5.357	
18,400.0	7,650.0	19,403.4	8,634.0	180.1	180.9	-161.50	-10,699.5	1,104.0	1,039.8	843.8	195.91	5.307	
18,500.0	7,650.0	19,503.4	8,634.0	181.7	182.5	-161.50	-10,799.5	1,104.9	1,039.8	842.0	197.72	5.259	
18,600.0	7,650.0	19,603.4	8,634.0	183.3	184.1	-161.50	-10,899.5	1,105.7	1,039.8	840.2	199.53	5.211	
18,700.0	7,650.0	19,703.4	8,634.0	185.0	185.8	-161.50	-10,999.5	1,106.5	1,039.8	838.4	201.34	5.164	
18,800.0	7,650.0	19,803.4	8,634.0	186.6	187.4	-161.50	-11,099.5	1,107.3	1,039.8	836.6	203.15	5.118	
18,900.0	7,650.0	19,903.4	8,634.0	188.2	189.0	-161.50	-11,199.5	1,108.2	1,039.8	834.8	204.96	5.073	
19,000.0	7,650.0	20,003.4	8,634.0	189.9	190.6	-161.50	-11,299.5	1,109.0	1,039.8	833.0	206.77	5.029	
19,100.0	7,650.0	20,103.4	8,634.0	191.5	192.3	-161.50	-11,399.5	1,109.8	1,039.8	831.2	208.58	4.985	
19,200.0	7,650.0	20,203.4	8,634.0	193.1	193.9	-161.50	-11,499.5	1,110.6	1,039.8	829.4	210.39	4.942	
19,300.0	7,650.0	20,303.4	8,634.0	194.8	195.5	-161.50	-11,599.4	1,111.5	1,039.8	827.5	212.20	4.900	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #108H - 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
19,400.0	7,650.0	20,403.4	8,634.0	196.4	197.2	-161.50	-11,699.4	1,112.3	1,039.8	825.7	214.01	4.858	
19,500.0	7,650.0	20,503.4	8,634.0	198.1	198.8	-161.50	-11,799.4	1,113.1	1,039.8	823.9	215.82	4.818	
19,600.0	7,650.0	20,603.4	8,634.0	199.7	200.4	-161.50	-11,899.4	1,114.0	1,039.8	822.1	217.64	4.777	
19,700.0	7,650.0	20,703.4	8,634.0	201.3	202.0	-161.50	-11,999.4	1,114.8	1,039.8	820.3	219.45	4.738	
19,800.0	7,650.0	20,803.4	8,634.0	203.0	203.7	-161.50	-12,099.4	1,115.6	1,039.8	818.5	221.26	4.699	
19,900.0	7,650.0	20,903.4	8,634.0	204.6	205.3	-161.50	-12,199.4	1,116.4	1,039.8	816.7	223.07	4.661	
20,000.0	7,650.0	21,003.4	8,634.0	206.2	206.9	-161.50	-12,299.4	1,117.3	1,039.8	814.9	224.88	4.623	
20,100.0	7,650.0	21,103.4	8,634.0	207.9	208.6	-161.50	-12,399.4	1,118.1	1,039.8	813.1	226.70	4.587	
20,139.1	7,650.0	21,142.4	8,634.0	208.5	209.2	-161.50	-12,438.5	1,118.4	1,039.8	812.3	227.40	4.572	SF

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #114H - 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	3.0	-3.0	0.0	0.0	89.71	0.2	30.0	30.0				
100.0	100.0	103.0	97.0	0.1	0.1	89.71	0.2	30.0	30.0	29.8	0.27	112.446	
200.0	200.0	203.0	197.0	0.5	0.5	89.71	0.2	30.0	30.0	29.0	0.98	30.518	
300.0	300.0	303.0	297.0	0.8	0.9	89.71	0.2	30.0	30.0	28.3	1.70	17.655	
400.0	400.0	403.0	397.0	1.2	1.2	89.71	0.2	30.0	30.0	27.6	2.42	12.420	
500.0	500.0	503.0	497.0	1.6	1.6	89.71	0.2	30.0	30.0	26.9	3.13	9.579	
600.0	600.0	603.0	597.0	1.9	1.9	19.89	0.2	30.0	29.2	25.4	3.85	7.594	
700.0	700.0	703.0	697.0	2.3	2.3	21.80	0.2	30.0	26.8	22.2	4.56	5.874	
800.0	799.9	803.1	796.9	2.6	2.6	25.90	0.2	30.0	22.8	17.5	5.27	4.322	
900.0	899.7	903.3	896.7	3.0	3.0	34.70	0.2	30.0	17.5	11.5	5.98	2.922	
1,000.0	999.4	1,003.6	996.4	3.3	3.4	56.76	0.2	30.0	11.9	5.2	6.70	1.774	
1,070.1	1,069.2	1,066.2	1,066.2	3.6	3.6	90.00	0.2	30.0	9.9	2.7	7.19	1.381	Level 3, CC, ES, SF
1,100.0	1,098.9	1,104.1	1,095.9	3.7	3.7	106.97	0.2	30.0	10.4	2.9	7.44	1.396	Level 3
1,200.0	1,198.3	1,204.7	1,195.3	4.1	4.1	145.14	0.2	30.0	17.5	9.3	8.16	2.142	
1,300.0	1,297.4	1,305.6	1,294.4	4.5	4.4	159.90	0.2	30.0	29.2	20.3	8.87	3.287	
1,400.0	1,396.4	1,406.6	1,393.4	4.9	4.8	166.36	0.2	30.0	42.5	32.9	9.59	4.433	
1,500.0	1,495.5	1,492.5	1,492.5	5.3	5.1	169.71	0.2	30.0	56.1	45.9	10.26	5.473	
1,600.0	1,594.5	1,592.4	1,592.4	5.7	5.5	172.09	0.8	30.4	69.3	58.3	10.98	6.309	
1,700.0	1,693.5	1,692.8	1,692.8	6.1	5.8	174.38	2.9	31.7	81.0	69.3	11.70	6.924	
1,800.0	1,792.5	1,793.5	1,793.3	6.5	6.2	176.74	6.6	33.9	91.4	79.0	12.42	7.362	
1,900.0	1,891.6	1,894.3	1,894.0	6.9	6.6	179.23	11.8	37.0	100.6	87.4	13.14	7.655	
2,000.0	1,990.6	1,995.3	1,994.7	7.3	6.9	-178.09	18.5	41.1	108.6	94.7	13.86	7.832	
2,100.0	2,089.6	2,096.3	2,095.3	7.7	7.3	-175.18	26.7	46.1	115.5	100.9	14.59	7.916	
2,200.0	2,188.6	2,197.4	2,195.7	8.1	7.7	-171.99	36.4	51.9	121.5	106.1	15.32	7.928	
2,300.0	2,287.7	2,298.4	2,295.9	8.5	8.0	-168.50	47.7	58.7	126.6	110.6	16.06	7.884	
2,400.0	2,386.7	2,402.0	2,394.5	8.9	8.4	-165.02	59.6	65.9	131.7	114.9	16.83	7.825	
2,500.0	2,485.7	2,502.4	2,493.1	9.4	8.8	-161.81	71.4	73.1	137.2	119.6	17.60	7.798	
2,600.0	2,584.8	2,597.1	2,591.7	9.8	9.2	-158.86	83.3	80.2	143.1	124.8	18.35	7.801	
2,700.0	2,683.8	2,703.3	2,690.2	10.2	9.6	-156.14	95.2	87.4	149.4	130.2	19.15	7.801	
2,800.0	2,782.8	2,803.7	2,788.8	10.6	10.0	-153.65	107.0	94.5	156.0	136.0	19.94	7.823	
2,900.0	2,881.8	2,904.2	2,887.4	11.0	10.4	-151.36	118.9	101.7	162.8	142.1	20.73	7.854	
3,000.0	2,980.9	3,004.6	2,986.0	11.4	10.7	-149.26	130.7	108.9	169.9	148.4	21.53	7.892	
3,100.0	3,079.9	3,105.0	3,084.6	11.9	11.1	-147.33	142.6	116.0	177.2	154.8	22.33	7.935	
3,200.0	3,178.9	3,205.5	3,183.2	12.3	11.5	-145.55	154.5	123.2	184.7	161.5	23.13	7.982	
3,300.0	3,277.9	3,305.9	3,281.8	12.7	11.9	-143.91	166.3	130.4	192.3	168.4	23.94	8.032	
3,400.0	3,377.0	3,393.6	3,380.4	13.1	12.3	-142.40	178.2	137.5	200.1	175.4	24.70	8.100	
3,500.0	3,476.0	3,506.8	3,479.0	13.5	12.7	-141.00	190.1	144.7	208.0	182.4	25.56	8.136	
3,600.0	3,575.0	3,592.8	3,577.6	13.9	13.1	-139.71	201.9	151.8	216.0	189.7	26.32	8.207	
3,700.0	3,674.0	3,692.1	3,676.0	14.4	13.5	-138.53	213.7	158.9	224.2	197.0	27.13	8.262	
3,800.0	3,773.1	3,790.8	3,773.9	14.8	13.9	-137.89	223.8	165.1	232.7	204.7	27.92	8.334	
3,900.0	3,872.1	3,889.4	3,872.1	15.2	14.3	-137.90	231.8	169.9	241.6	212.9	28.68	8.423	
4,000.0	3,971.1	3,987.9	3,970.4	15.6	14.6	-138.48	237.5	173.3	250.9	221.5	29.42	8.529	
4,100.0	4,070.2	4,086.2	4,068.6	16.0	15.0	-139.57	241.1	175.5	260.7	230.6	30.13	8.654	
4,200.0	4,169.2	4,184.1	4,166.4	16.4	15.3	-141.09	242.6	176.4	271.1	240.3	30.81	8.802	
4,300.0	4,268.2	4,282.8	4,265.2	16.9	15.7	-142.85	242.6	176.4	282.1	250.7	31.48	8.963	
4,400.0	4,367.2	4,381.9	4,364.2	17.3	16.0	-144.49	242.6	176.4	293.4	261.2	32.15	9.125	
4,500.0	4,466.3	4,480.9	4,463.3	17.7	16.3	-146.00	242.6	176.4	304.9	272.0	32.83	9.286	
4,600.0	4,565.3	4,579.9	4,562.3	18.1	16.7	-147.41	242.6	176.4	316.5	283.0	33.51	9.446	
4,700.0	4,664.3	4,678.9	4,661.3	18.5	17.0	-148.71	242.6	176.4	328.4	294.2	34.19	9.604	
4,800.0	4,763.3	4,778.0	4,760.3	19.0	17.4	-149.93	242.6	176.4	340.4	305.5	34.88	9.759	
4,900.0	4,862.4	4,877.0	4,859.4	19.4	17.7	-151.06	242.6	176.4	352.5	317.0	35.56	9.912	
5,000.0	4,961.4	4,976.0	4,958.4	19.8	18.0	-152.11	242.6	176.4	364.8	328.5	36.25	10.062	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #114H - 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	5,060.4	5,075.1	5,057.4	20.2	18.4	-153.10	242.6	176.4	377.2	340.2	36.94	10.210	
5,200.0	5,159.4	5,174.1	5,156.4	20.6	18.7	-154.02	242.6	176.4	389.7	352.0	37.64	10.353	
5,300.0	5,258.5	5,273.1	5,255.5	21.0	19.1	-154.89	242.6	176.4	402.2	363.9	38.33	10.494	
5,400.0	5,357.5	5,372.1	5,354.5	21.5	19.4	-155.71	242.6	176.4	414.9	375.9	39.02	10.632	
5,500.0	5,456.5	5,471.2	5,453.5	21.9	19.8	-156.47	242.6	176.4	427.6	387.9	39.72	10.766	
5,600.0	5,555.6	5,570.2	5,552.6	22.3	20.1	-157.19	242.6	176.4	440.5	400.0	40.42	10.897	
5,700.0	5,654.6	5,669.2	5,651.6	22.7	20.5	-157.87	242.6	176.4	453.3	412.2	41.12	11.024	
5,800.0	5,753.6	5,768.2	5,750.6	23.1	20.8	-158.52	242.6	176.4	466.3	424.5	41.82	11.149	
5,868.5	5,821.4	5,836.1	5,818.4	23.4	21.0	-158.94	242.6	176.4	475.2	432.9	42.30	11.232	
5,900.0	5,852.7	5,867.3	5,849.7	23.6	21.1	-159.14	242.6	176.4	479.1	436.6	42.52	11.268	
6,000.0	5,952.0	5,966.6	5,949.0	24.0	21.5	-159.69	242.6	176.4	490.2	447.0	43.23	11.340	
6,100.0	6,051.5	6,066.2	6,048.5	24.4	21.8	-160.10	242.6	176.4	498.8	454.9	43.93	11.356	
6,200.0	6,151.3	6,165.9	6,148.3	24.7	22.2	-160.39	242.6	176.4	505.0	460.4	44.63	11.316	
6,300.0	6,251.2	6,265.9	6,248.2	25.1	22.5	-160.56	242.6	176.4	508.8	463.5	45.33	11.224	
6,401.8	6,353.0	6,367.7	6,350.0	25.4	22.9	-90.23	242.6	176.4	510.1	464.0	46.03	11.080	
6,500.0	6,451.2	6,465.8	6,448.2	25.7	23.2	-90.23	242.6	176.4	510.1	463.4	46.71	10.921	
6,600.0	6,551.2	6,565.8	6,548.2	26.0	23.6	-90.23	242.6	176.4	510.1	462.7	47.40	10.762	
6,700.0	6,651.2	6,665.8	6,648.2	26.3	23.9	-90.23	242.6	176.4	510.1	462.0	48.08	10.608	
6,800.0	6,751.2	6,765.8	6,748.2	26.6	24.3	-90.23	242.6	176.4	510.1	461.3	48.77	10.458	
6,900.0	6,851.2	6,865.8	6,848.2	27.0	24.6	-90.23	242.6	176.4	510.1	460.6	49.46	10.312	
7,000.0	6,951.2	6,965.8	6,948.2	27.3	25.0	-90.23	242.6	176.4	510.1	459.9	50.15	10.170	
7,100.0	7,051.2	7,065.8	7,048.2	27.6	25.4	-90.23	242.6	176.4	510.1	459.2	50.84	10.032	
7,125.8	7,077.0	7,108.4	7,074.0	27.7	25.5	-90.23	242.6	176.4	510.1	459.0	51.08	9.986	
7,141.9	7,093.1	7,107.8	7,090.1	27.7	25.5	90.00	242.6	176.4	510.1	458.9	51.13	9.976	
7,150.0	7,101.2	7,115.8	7,098.2	27.7	25.5	90.03	242.6	176.4	510.1	458.9	51.19	9.965	
7,200.0	7,151.0	7,165.6	7,148.0	27.9	25.7	90.51	242.6	176.4	510.1	458.6	51.53	9.899	
7,250.0	7,200.2	7,214.9	7,197.2	28.0	25.9	91.45	242.6	176.4	510.2	458.4	51.87	9.837	
7,300.0	7,248.5	7,263.2	7,245.5	28.1	26.0	92.79	242.6	176.4	510.7	458.5	52.21	9.782	
7,350.0	7,295.5	7,310.2	7,292.5	28.3	26.2	94.46	242.6	176.4	511.9	459.3	52.55	9.741	
7,400.0	7,340.9	7,355.5	7,337.9	28.4	26.4	96.37	242.6	176.4	514.1	461.2	52.88	9.721	
7,450.0	7,384.2	7,401.2	7,381.2	28.4	26.5	98.39	242.6	176.4	517.8	464.6	53.22	9.729	
7,500.0	7,425.2	7,439.8	7,422.2	28.5	26.7	100.38	242.6	176.4	523.5	469.9	53.53	9.779	
7,550.0	7,463.5	7,478.1	7,460.5	28.6	26.8	102.23	242.6	176.4	531.6	477.8	53.83	9.875	
7,600.0	7,498.9	7,513.5	7,495.9	28.7	26.9	103.79	242.6	176.4	542.6	488.5	54.12	10.027	
7,650.0	7,531.1	7,545.7	7,528.1	28.7	27.0	104.95	242.6	176.4	556.8	502.4	54.38	10.240	
7,700.0	7,559.8	7,574.4	7,556.8	28.8	27.1	105.58	242.6	176.4	574.4	519.8	54.61	10.519	
7,750.0	7,584.9	7,600.5	7,581.9	28.8	27.2	105.59	242.6	176.4	595.6	540.8	54.81	10.866	
7,800.0	7,606.0	7,620.7	7,603.0	28.9	27.3	104.87	242.6	176.4	620.2	565.2	54.97	11.282	
7,850.0	7,623.2	7,637.8	7,620.2	28.9	27.4	103.31	242.6	176.4	648.0	592.9	55.10	11.761	
7,900.0	7,636.2	7,650.8	7,633.2	29.0	27.4	100.83	242.6	176.4	678.8	623.7	55.19	12.301	
7,950.0	7,645.0	7,659.6	7,642.0	29.1	27.4	97.33	242.6	176.4	712.3	657.0	55.24	12.895	
8,000.0	7,649.4	7,664.0	7,646.4	29.2	27.5	92.76	242.6	176.4	747.9	692.6	55.26	13.534	
8,025.8	7,650.0	7,664.6	7,647.0	29.3	27.5	90.00	242.6	176.4	766.9	711.7	55.26	13.879	
8,039.4	7,650.0	7,664.6	7,647.0	29.4	27.5	90.00	242.6	176.4	777.2	722.0	55.25	14.066	
8,100.0	7,650.0	7,664.6	7,647.0	29.6	27.5	90.00	242.6	176.4	824.0	768.8	55.24	14.917	
8,200.0	7,650.0	7,664.6	7,647.0	30.0	27.5	90.00	242.6	176.4	904.9	849.7	55.22	16.389	
8,300.0	7,650.0	7,664.6	7,647.0	30.6	27.5	90.00	242.6	176.4	989.3	934.1	55.19	17.925	
8,400.0	7,650.0	7,664.6	7,647.0	31.2	27.5	90.00	242.6	176.4	1,076.4	1,021.2	55.17	19.510	
8,500.0	7,650.0	7,664.6	7,647.0	31.9	27.5	90.00	242.6	176.4	1,165.6	1,110.4	55.15	21.133	
8,600.0	7,650.0	7,664.6	7,647.0	32.7	27.5	90.00	242.6	176.4	1,256.3	1,201.2	55.14	22.786	
8,700.0	7,650.0	7,664.6	7,647.0	33.5	27.5	90.00	242.6	176.4	1,348.4	1,293.3	55.12	24.461	
8,800.0	7,650.0	7,664.6	7,647.0	34.4	27.5	90.00	242.6	176.4	1,441.6	1,386.5	55.12	26.155	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #114H - 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
8,900.0	7,650.0	10,306.4	9,069.0	35.4	38.7	166.97	-1,205.2	366.6	1,459.6	1,425.3	34.33	42.521	
9,000.0	7,650.0	10,406.4	9,069.0	36.4	39.6	166.97	-1,305.2	367.4	1,459.6	1,424.0	35.58	41.028	
9,100.0	7,650.0	10,506.4	9,069.0	37.4	40.6	166.97	-1,405.2	368.2	1,459.6	1,422.7	36.86	39.597	
9,200.0	7,650.0	10,606.4	9,069.0	38.5	41.6	166.97	-1,505.2	369.0	1,459.6	1,421.4	38.18	38.230	
9,300.0	7,650.0	10,706.4	9,069.0	39.6	42.6	166.97	-1,605.2	369.8	1,459.6	1,420.1	39.53	36.927	
9,400.0	7,650.0	10,806.4	9,069.0	40.8	43.7	166.97	-1,705.2	370.7	1,459.6	1,418.7	40.90	35.687	
9,500.0	7,650.0	10,906.4	9,069.0	42.0	44.9	166.97	-1,805.2	371.5	1,459.6	1,417.3	42.30	34.508	
9,600.0	7,650.0	11,006.4	9,069.0	43.2	46.0	166.97	-1,905.2	372.3	1,459.6	1,415.9	43.72	33.388	
9,700.0	7,650.0	11,106.4	9,069.0	44.5	47.2	166.97	-2,005.2	373.1	1,459.6	1,414.4	45.15	32.325	
9,800.0	7,650.0	11,206.4	9,069.0	45.8	48.4	166.97	-2,105.2	373.9	1,459.6	1,413.0	46.61	31.315	
9,900.0	7,650.0	11,306.4	9,069.0	47.1	49.6	166.97	-2,205.2	374.8	1,459.6	1,411.5	48.08	30.356	
10,000.0	7,650.0	11,406.4	9,069.0	48.4	50.9	166.97	-2,305.2	375.6	1,459.6	1,410.0	49.57	29.446	
10,100.0	7,650.0	11,506.4	9,069.0	49.7	52.2	166.97	-2,405.2	376.4	1,459.6	1,408.5	51.07	28.581	
10,200.0	7,650.0	11,606.4	9,069.0	51.1	53.5	166.97	-2,505.2	377.2	1,459.6	1,407.0	52.58	27.758	
10,300.0	7,650.0	11,706.4	9,069.0	52.5	54.8	166.97	-2,605.2	378.0	1,459.6	1,405.5	54.11	26.977	
10,400.0	7,650.0	11,806.4	9,069.0	53.9	56.1	166.97	-2,705.2	378.8	1,459.6	1,404.0	55.64	26.233	
10,500.0	7,650.0	11,906.4	9,069.0	55.3	57.5	166.96	-2,805.2	379.7	1,459.6	1,402.4	57.18	25.525	
10,600.0	7,650.0	12,006.4	9,069.0	56.7	58.9	166.96	-2,905.2	380.5	1,459.6	1,400.9	58.74	24.850	
10,700.0	7,650.0	12,106.4	9,069.0	58.1	60.2	166.96	-3,005.2	381.3	1,459.6	1,399.3	60.30	24.207	
10,800.0	7,650.0	12,206.4	9,069.0	59.6	61.6	166.96	-3,105.2	382.1	1,459.6	1,397.8	61.87	23.593	
10,900.0	7,650.0	12,306.4	9,069.0	61.0	63.1	166.96	-3,205.1	382.9	1,459.6	1,396.2	63.44	23.008	
11,000.0	7,650.0	12,406.4	9,069.0	62.5	64.5	166.96	-3,305.1	383.7	1,459.6	1,394.6	65.02	22.448	
11,100.0	7,650.0	12,506.4	9,069.0	63.9	65.9	166.96	-3,405.1	384.6	1,459.6	1,393.0	66.61	21.913	
11,200.0	7,650.0	12,606.4	9,069.0	65.4	67.4	166.96	-3,505.1	385.4	1,459.6	1,391.4	68.20	21.401	
11,300.0	7,650.0	12,706.4	9,069.0	66.9	68.8	166.96	-3,605.1	386.2	1,459.6	1,389.8	69.80	20.911	
11,400.0	7,650.0	12,806.4	9,069.0	68.4	70.3	166.96	-3,705.1	387.0	1,459.6	1,388.2	71.40	20.442	
11,500.0	7,650.0	12,906.4	9,069.0	69.9	71.7	166.96	-3,805.1	387.8	1,459.6	1,386.6	73.01	19.992	
11,600.0	7,650.0	13,006.4	9,069.0	71.4	73.2	166.96	-3,905.1	388.6	1,459.6	1,385.0	74.62	19.560	
11,700.0	7,650.0	13,106.4	9,069.0	72.9	74.7	166.96	-4,005.1	389.5	1,459.6	1,383.4	76.24	19.146	
11,800.0	7,650.0	13,206.4	9,069.0	74.5	76.2	166.96	-4,105.1	390.3	1,459.6	1,381.8	77.86	18.748	
11,900.0	7,650.0	13,306.4	9,069.0	76.0	77.7	166.96	-4,205.1	391.1	1,459.6	1,380.2	79.48	18.365	
12,000.0	7,650.0	13,406.4	9,069.0	77.5	79.2	166.96	-4,305.1	391.9	1,459.6	1,378.5	81.11	17.997	
12,100.0	7,650.0	13,506.4	9,069.0	79.1	80.7	166.96	-4,405.1	392.7	1,459.6	1,376.9	82.73	17.642	
12,200.0	7,650.0	13,606.4	9,069.0	80.6	82.2	166.96	-4,505.1	393.5	1,459.6	1,375.3	84.37	17.301	
12,300.0	7,650.0	13,706.4	9,069.0	82.2	83.7	166.96	-4,605.1	394.4	1,459.6	1,373.6	86.00	16.972	
12,400.0	7,650.0	13,806.4	9,069.0	83.7	85.3	166.96	-4,705.1	395.2	1,459.6	1,372.0	87.64	16.655	
12,500.0	7,650.0	13,906.4	9,069.0	85.3	86.8	166.96	-4,805.1	396.0	1,459.6	1,370.4	89.28	16.349	
12,600.0	7,650.0	14,006.4	9,069.0	86.8	88.3	166.96	-4,905.1	396.8	1,459.7	1,368.7	90.92	16.054	
12,700.0	7,650.0	14,106.4	9,069.0	88.4	89.9	166.96	-5,005.1	397.6	1,459.7	1,367.1	92.56	15.769	
12,800.0	7,650.0	14,206.4	9,069.0	89.9	91.4	166.96	-5,105.1	398.4	1,459.7	1,365.4	94.21	15.493	
12,900.0	7,650.0	14,306.4	9,069.0	91.5	92.9	166.96	-5,205.1	399.3	1,459.7	1,363.8	95.86	15.227	
13,000.0	7,650.0	14,406.4	9,069.0	93.1	94.5	166.96	-5,305.1	400.1	1,459.7	1,362.1	97.51	14.969	
13,100.0	7,650.0	14,506.4	9,069.0	94.7	96.0	166.96	-5,405.1	400.9	1,459.7	1,360.5	99.16	14.720	
13,200.0	7,650.0	14,606.4	9,069.0	96.2	97.6	166.96	-5,505.1	401.7	1,459.7	1,358.8	100.82	14.479	
13,300.0	7,650.0	14,706.4	9,069.0	97.8	99.2	166.96	-5,605.1	402.5	1,459.7	1,357.2	102.47	14.245	
13,400.0	7,650.0	14,806.4	9,069.0	99.4	100.7	166.96	-5,705.1	403.4	1,459.7	1,355.5	104.13	14.018	
13,500.0	7,650.0	14,906.4	9,069.0	101.0	102.3	166.96	-5,805.1	404.2	1,459.7	1,353.9	105.79	13.798	
13,600.0	7,650.0	15,006.4	9,069.0	102.6	103.9	166.95	-5,905.1	405.0	1,459.7	1,352.2	107.45	13.585	
13,700.0	7,650.0	15,106.4	9,069.0	104.1	105.4	166.95	-6,005.1	405.8	1,459.7	1,350.6	109.11	13.378	
13,800.0	7,650.0	15,206.4	9,069.0	105.7	107.0	166.95	-6,105.1	406.6	1,459.7	1,348.9	110.77	13.178	
13,900.0	7,650.0	15,306.4	9,069.0	107.3	108.6	166.95	-6,205.0	407.4	1,459.7	1,347.2	112.43	12.983	
14,000.0	7,650.0	15,406.4	9,069.0	108.9	110.2	166.95	-6,305.0	408.3	1,459.7	1,345.6	114.10	12.793	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #114H - 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	7,650.0	15,506.4	9,069.0	110.5	111.7	166.95	-6,405.0	409.1	1,459.7	1,343.9	115.76	12.609	
14,200.0	7,650.0	15,606.4	9,069.0	112.1	113.3	166.95	-6,505.0	409.9	1,459.7	1,342.3	117.43	12.430	
14,300.0	7,650.0	15,706.4	9,069.0	113.7	114.9	166.95	-6,605.0	410.7	1,459.7	1,340.6	119.10	12.256	
14,400.0	7,650.0	15,806.4	9,069.0	115.3	116.5	166.95	-6,705.0	411.5	1,459.7	1,338.9	120.77	12.087	
14,500.0	7,650.0	15,906.4	9,069.0	116.9	118.1	166.95	-6,805.0	412.3	1,459.7	1,337.3	122.44	11.922	
14,600.0	7,650.0	16,006.4	9,069.0	118.5	119.7	166.95	-6,905.0	413.2	1,459.7	1,335.6	124.11	11.762	
14,700.0	7,650.0	16,106.4	9,069.0	120.1	121.3	166.95	-7,005.0	414.0	1,459.7	1,333.9	125.78	11.605	
14,800.0	7,650.0	16,206.4	9,069.0	121.7	122.9	166.95	-7,105.0	414.8	1,459.7	1,332.2	127.45	11.453	
14,900.0	7,650.0	16,306.4	9,069.0	123.3	124.4	166.95	-7,205.0	415.6	1,459.7	1,330.6	129.12	11.305	
15,000.0	7,650.0	16,406.4	9,069.0	124.9	126.0	166.95	-7,305.0	416.4	1,459.7	1,328.9	130.80	11.160	
15,100.0	7,650.0	16,506.4	9,069.0	126.5	127.6	166.95	-7,405.0	417.2	1,459.7	1,327.2	132.47	11.019	
15,200.0	7,650.0	16,606.4	9,069.0	128.2	129.2	166.95	-7,505.0	418.1	1,459.7	1,325.6	134.15	10.881	
15,300.0	7,650.0	16,706.4	9,069.0	129.8	130.8	166.95	-7,605.0	418.9	1,459.7	1,323.9	135.82	10.747	
15,400.0	7,650.0	16,806.4	9,069.0	131.4	132.4	166.95	-7,705.0	419.7	1,459.7	1,322.2	137.50	10.616	
15,500.0	7,650.0	16,906.4	9,069.0	133.0	134.0	166.95	-7,805.0	420.5	1,459.7	1,320.5	139.18	10.488	
15,600.0	7,650.0	17,006.4	9,069.0	134.6	135.6	166.95	-7,905.0	421.3	1,459.7	1,318.9	140.86	10.363	
15,700.0	7,650.0	17,106.4	9,069.0	136.2	137.2	166.95	-8,005.0	422.1	1,459.7	1,317.2	142.53	10.241	
15,800.0	7,650.0	17,206.4	9,069.0	137.8	138.9	166.95	-8,105.0	423.0	1,459.7	1,315.5	144.21	10.122	
15,900.0	7,650.0	17,306.4	9,069.0	139.5	140.5	166.95	-8,205.0	423.8	1,459.7	1,313.8	145.89	10.005	
16,000.0	7,650.0	17,406.4	9,069.0	141.1	142.1	166.95	-8,305.0	424.6	1,459.7	1,312.1	147.57	9.891	
16,100.0	7,650.0	17,506.4	9,069.0	142.7	143.7	166.95	-8,405.0	425.4	1,459.7	1,310.5	149.25	9.780	
16,200.0	7,650.0	17,606.4	9,069.0	144.3	145.3	166.95	-8,505.0	426.2	1,459.7	1,308.8	150.94	9.671	
16,300.0	7,650.0	17,706.4	9,069.0	145.9	146.9	166.95	-8,605.0	427.1	1,459.7	1,307.1	152.62	9.565	
16,400.0	7,650.0	17,806.4	9,069.0	147.6	148.5	166.95	-8,705.0	427.9	1,459.7	1,305.4	154.30	9.460	
16,500.0	7,650.0	17,906.4	9,069.0	149.2	150.1	166.95	-8,805.0	428.7	1,459.7	1,303.7	155.98	9.358	
16,600.0	7,650.0	18,006.4	9,069.0	150.8	151.7	166.95	-8,905.0	429.5	1,459.7	1,302.1	157.67	9.258	
16,700.0	7,650.0	18,106.4	9,069.0	152.4	153.4	166.95	-9,005.0	430.3	1,459.7	1,300.4	159.35	9.161	
16,800.0	7,650.0	18,206.4	9,069.0	154.0	155.0	166.94	-9,105.0	431.1	1,459.7	1,298.7	161.03	9.065	
16,900.0	7,650.0	18,306.4	9,069.0	155.7	156.6	166.94	-9,204.9	432.0	1,459.7	1,297.0	162.72	8.971	
17,000.0	7,650.0	18,406.4	9,069.0	157.3	158.2	166.94	-9,304.9	432.8	1,459.7	1,295.3	164.40	8.879	
17,100.0	7,650.0	18,506.4	9,069.0	158.9	159.8	166.94	-9,404.9	433.6	1,459.7	1,293.6	166.09	8.789	
17,200.0	7,650.0	18,606.4	9,069.0	160.5	161.4	166.94	-9,504.9	434.4	1,459.7	1,292.0	167.77	8.701	
17,300.0	7,650.0	18,706.4	9,069.0	162.2	163.1	166.94	-9,604.9	435.2	1,459.7	1,290.3	169.46	8.614	
17,400.0	7,650.0	18,806.4	9,069.0	163.8	164.7	166.94	-9,704.9	436.0	1,459.7	1,288.6	171.15	8.529	
17,500.0	7,650.0	18,906.4	9,069.0	165.4	166.3	166.94	-9,804.9	436.9	1,459.7	1,286.9	172.83	8.446	
17,600.0	7,650.0	19,006.4	9,069.0	167.0	167.9	166.94	-9,904.9	437.7	1,459.7	1,285.2	174.52	8.364	
17,700.0	7,650.0	19,106.4	9,069.0	168.7	169.5	166.94	-10,004.9	438.5	1,459.7	1,283.5	176.21	8.284	
17,800.0	7,650.0	19,206.4	9,069.0	170.3	171.2	166.94	-10,104.9	439.3	1,459.7	1,281.9	177.89	8.206	
17,900.0	7,650.0	19,306.4	9,069.0	171.9	172.8	166.94	-10,204.9	440.1	1,459.8	1,280.2	179.58	8.129	
18,000.0	7,650.0	19,406.4	9,069.0	173.6	174.4	166.94	-10,304.9	440.9	1,459.8	1,278.5	181.27	8.053	
18,100.0	7,650.0	19,506.4	9,069.0	175.2	176.0	166.94	-10,404.9	441.8	1,459.8	1,276.8	182.96	7.979	
18,200.0	7,650.0	19,606.4	9,069.0	176.8	177.7	166.94	-10,504.9	442.6	1,459.8	1,275.1	184.65	7.906	
18,300.0	7,650.0	19,706.4	9,069.0	178.5	179.3	166.94	-10,604.9	443.4	1,459.8	1,273.4	186.34	7.834	
18,400.0	7,650.0	19,806.4	9,069.0	180.1	180.9	166.94	-10,704.9	444.2	1,459.8	1,271.7	188.03	7.764	
18,500.0	7,650.0	19,906.4	9,069.0	181.7	182.5	166.94	-10,804.9	445.0	1,459.8	1,270.0	189.72	7.694	
18,600.0	7,650.0	20,006.4	9,069.0	183.3	184.2	166.94	-10,904.9	445.8	1,459.8	1,268.4	191.40	7.627	
18,700.0	7,650.0	20,106.4	9,069.0	185.0	185.8	166.94	-11,004.9	446.7	1,459.8	1,266.7	193.09	7.560	
18,800.0	7,650.0	20,206.4	9,069.0	186.6	187.4	166.94	-11,104.9	447.5	1,459.8	1,265.0	194.79	7.494	
18,900.0	7,650.0	20,306.4	9,069.0	188.2	189.0	166.94	-11,204.9	448.3	1,459.8	1,263.3	196.48	7.430	
19,000.0	7,650.0	20,406.4	9,069.0	189.9	190.7	166.94	-11,304.9	449.1	1,459.8	1,261.6	198.17	7.366	
19,100.0	7,650.0	20,506.4	9,069.0	191.5	192.3	166.94	-11,404.9	449.9	1,459.8	1,259.9	199.86	7.304	
19,200.0	7,650.0	20,606.4	9,069.0	193.1	193.9	166.94	-11,504.9	450.8	1,459.8	1,258.2	201.55	7.243	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #114H - 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
19,300.0	7,650.0	20,706.4	9,069.0	194.8	195.6	166.94	-11,604.9	451.6	1,459.8	1,256.5	203.24	7.183	
19,400.0	7,650.0	20,806.4	9,069.0	196.4	197.2	166.94	-11,704.9	452.4	1,459.8	1,254.8	204.93	7.123	
19,500.0	7,650.0	20,906.4	9,069.0	198.1	198.8	166.94	-11,804.9	453.2	1,459.8	1,253.2	206.62	7.065	
19,600.0	7,650.0	21,006.4	9,069.0	199.7	200.4	166.94	-11,904.9	454.0	1,459.8	1,251.5	208.32	7.008	
19,700.0	7,650.0	21,106.4	9,069.0	201.3	202.1	166.94	-12,004.9	454.8	1,459.8	1,249.8	210.01	6.951	
19,800.0	7,650.0	21,206.4	9,069.0	203.0	203.7	166.94	-12,104.9	455.7	1,459.8	1,248.1	211.70	6.896	
19,900.0	7,650.0	21,306.4	9,069.0	204.6	205.3	166.93	-12,204.8	456.5	1,459.8	1,246.4	213.39	6.841	
20,000.0	7,650.0	21,406.4	9,069.0	206.2	207.0	166.93	-12,304.8	457.3	1,459.8	1,244.7	215.09	6.787	
20,100.0	7,650.0	21,506.4	9,069.0	207.9	208.6	166.93	-12,404.8	458.1	1,459.8	1,243.0	216.78	6.734	
20,139.1	7,650.0	21,545.4	9,069.0	208.5	209.2	166.93	-12,443.9	458.4	1,459.8	1,242.4	217.44	6.714	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #124H - 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	2.0	-2.0	0.0	0.0	82.79	31.6	249.9	251.9				
100.0	100.0	102.0	98.0	0.1	0.1	82.79	31.6	249.9	251.9	251.7	0.26	956.168	
200.0	200.0	202.0	198.0	0.5	0.5	82.79	31.6	249.9	251.9	250.9	0.98	256.959	
300.0	300.0	302.0	298.0	0.8	0.9	82.79	31.6	249.9	251.9	250.2	1.70	148.423	
400.0	400.0	402.0	398.0	1.2	1.2	82.79	31.6	249.9	251.9	249.5	2.41	104.348	
500.0	500.0	498.0	498.0	1.6	1.6	82.79	31.6	249.9	251.9	248.8	3.12	80.826	
600.0	600.0	594.0	594.0	1.9	1.9	12.39	31.9	250.6	251.9	248.0	3.81	66.100	
700.0	700.0	690.0	689.9	2.3	2.2	12.37	32.8	252.8	251.7	247.2	4.50	55.950	
800.0	799.9	785.9	785.8	2.6	2.6	12.33	34.4	256.5	251.4	246.2	5.19	48.441	
900.0	899.7	881.8	881.6	3.0	2.9	12.28	36.6	261.7	251.1	245.2	5.88	42.663	
1,000.0	999.4	977.8	977.2	3.3	3.3	12.21	39.3	268.3	250.6	244.0	6.58	38.081	
1,100.0	1,098.9	1,073.7	1,072.8	3.7	3.6	12.12	42.8	276.4	250.1	242.8	7.28	34.354	
1,200.0	1,198.3	1,169.7	1,168.2	4.1	4.0	12.01	46.8	286.0	249.5	241.5	7.98	31.268	
1,300.0	1,297.4	1,265.7	1,263.4	4.5	4.3	11.89	51.4	297.0	248.7	240.1	8.68	28.656	
1,346.9	1,343.8	1,310.7	1,308.0	4.7	4.5	11.82	53.8	302.7	248.6	239.6	9.01	27.589	
1,400.0	1,396.4	1,361.6	1,358.4	4.9	4.7	11.71	56.7	309.5	248.8	239.4	9.38	26.514	
1,500.0	1,495.5	1,457.6	1,453.1	5.3	5.1	11.44	62.6	323.5	250.5	240.4	10.09	24.831	
1,600.0	1,594.5	1,555.7	1,549.8	5.7	5.5	11.08	69.1	339.1	253.5	242.7	10.81	23.460	
1,700.0	1,693.5	1,655.7	1,648.2	6.1	5.9	10.72	75.8	355.1	256.7	245.2	11.54	22.247	
1,800.0	1,792.5	1,755.6	1,746.6	6.5	6.4	10.37	82.6	371.1	260.0	247.7	12.28	21.176	
1,900.0	1,891.6	1,855.5	1,845.1	6.9	6.8	10.03	89.3	387.1	263.2	250.2	13.01	20.225	
2,000.0	1,990.6	1,955.5	1,943.5	7.3	7.2	9.69	96.0	403.1	266.5	252.7	13.75	19.374	
2,100.0	2,089.6	2,055.4	2,041.9	7.7	7.7	9.37	102.7	419.1	269.7	255.2	14.49	18.609	
2,200.0	2,188.6	2,155.3	2,140.3	8.1	8.1	9.05	109.5	435.1	273.0	257.7	15.23	17.918	
2,300.0	2,287.7	2,255.3	2,238.7	8.5	8.5	8.74	116.2	451.1	276.2	260.3	15.98	17.291	
2,400.0	2,386.7	2,355.2	2,337.1	8.9	9.0	8.44	122.9	467.1	279.5	262.8	16.72	16.719	
2,500.0	2,485.7	2,455.1	2,435.6	9.4	9.4	8.14	129.7	483.1	282.8	265.4	17.46	16.196	
2,600.0	2,584.8	2,555.1	2,534.0	9.8	9.8	7.85	136.4	499.1	286.1	267.9	18.21	15.715	
2,700.0	2,683.8	2,655.0	2,632.4	10.2	10.3	7.57	143.1	515.1	289.4	270.5	18.95	15.272	
2,800.0	2,782.8	2,754.9	2,730.8	10.6	10.7	7.29	149.8	531.1	292.7	273.0	19.69	14.863	
2,900.0	2,881.8	2,854.9	2,829.2	11.0	11.2	7.02	156.6	547.1	296.0	275.6	20.44	14.484	
3,000.0	2,980.9	2,954.8	2,927.6	11.4	11.6	6.75	163.3	563.1	299.4	278.2	21.18	14.131	
3,100.0	3,079.9	3,054.8	3,026.1	11.9	12.1	6.49	170.0	579.1	302.7	280.8	21.93	13.803	
3,200.0	3,178.9	3,154.7	3,124.5	12.3	12.5	6.24	176.7	595.0	306.0	283.3	22.67	13.496	
3,300.0	3,277.9	3,254.6	3,222.9	12.7	13.0	5.99	183.5	611.0	309.4	285.9	23.42	13.209	
3,400.0	3,377.0	3,354.6	3,321.3	13.1	13.4	5.75	190.2	627.0	312.7	288.5	24.17	12.940	
3,500.0	3,476.0	3,454.5	3,419.7	13.5	13.8	5.51	196.9	643.0	316.1	291.2	24.91	12.687	
3,600.0	3,575.0	3,554.4	3,518.2	13.9	14.3	5.28	203.6	659.0	319.4	293.8	25.66	12.449	
3,700.0	3,674.0	3,654.4	3,616.6	14.4	14.7	5.05	210.4	675.0	322.8	296.4	26.40	12.224	
3,800.0	3,773.1	3,754.3	3,715.0	14.8	15.2	4.83	217.1	691.0	326.1	299.0	27.15	12.012	
3,900.0	3,872.1	3,856.6	3,815.8	15.2	15.6	4.61	223.9	707.3	329.4	301.5	27.92	11.801	
4,000.0	3,971.1	3,966.0	3,923.8	15.6	16.1	4.43	230.4	722.7	330.7	301.9	28.72	11.514	
4,100.0	4,070.2	4,075.3	4,032.4	16.0	16.6	4.32	235.7	735.2	329.1	299.6	29.50	11.156	
4,200.0	4,169.2	4,184.5	4,141.0	16.4	17.0	4.28	239.7	744.8	324.6	294.4	30.24	10.734	
4,300.0	4,268.2	4,293.3	4,249.6	16.9	17.4	4.32	242.5	751.5	317.4	286.4	30.96	10.252	
4,400.0	4,367.2	4,401.6	4,357.8	17.3	17.7	4.43	244.1	755.4	307.3	275.7	31.64	9.713	
4,500.0	4,466.3	4,508.1	4,464.3	17.7	18.1	4.62	244.6	756.4	294.5	262.2	32.29	9.119	
4,600.0	4,565.3	4,607.1	4,563.3	18.1	18.4	4.85	244.6	756.4	280.6	247.6	33.00	8.504	
4,700.0	4,664.3	4,706.1	4,662.3	18.5	18.7	5.10	244.6	756.4	266.7	233.0	33.70	7.915	
4,800.0	4,763.3	4,805.2	4,761.3	19.0	19.0	5.38	244.6	756.4	252.9	218.5	34.41	7.350	
4,900.0	4,862.4	4,904.2	4,860.4	19.4	19.3	5.70	244.6	756.4	239.0	203.9	35.11	6.807	
5,000.0	4,961.4	5,003.2	4,959.4	19.8	19.6	6.05	244.6	756.4	225.2	189.4	35.82	6.286	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #124H - 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	5,060.4	5,102.2	5,058.4	20.2	19.9	6.45	244.6	756.4	211.3	174.8	36.53	5.785	
5,200.0	5,159.4	5,201.3	5,157.4	20.6	20.2	6.90	244.6	756.4	197.5	160.3	37.24	5.303	
5,300.0	5,258.5	5,300.3	5,256.5	21.0	20.6	7.42	244.6	756.4	183.7	145.7	37.96	4.840	
5,400.0	5,357.5	5,400.7	5,355.5	21.5	20.9	8.03	244.6	756.4	169.9	131.2	38.68	4.393	
5,500.0	5,456.5	5,501.6	5,454.5	21.9	21.2	8.74	244.6	756.4	156.1	116.7	39.41	3.962	
5,600.0	5,555.6	5,602.6	5,553.6	22.3	21.5	9.59	244.6	756.4	142.4	102.3	40.14	3.548	
5,700.0	5,654.6	5,703.6	5,652.6	22.7	21.9	10.62	244.6	756.4	128.7	87.8	40.88	3.148	
5,800.0	5,753.6	5,804.6	5,751.6	23.1	22.2	11.90	244.6	756.4	115.0	73.4	41.62	2.764	
5,868.5	5,821.4	5,863.3	5,819.4	23.4	22.4	12.96	244.6	756.4	105.7	63.6	42.11	2.511	
5,900.0	5,852.7	5,905.5	5,850.7	23.6	22.5	13.49	244.6	756.4	101.6	59.2	42.38	2.397	
6,000.0	5,952.0	6,006.2	5,950.0	24.0	22.8	15.19	244.6	756.4	90.1	47.0	43.15	2.089	
6,100.0	6,051.5	6,106.6	6,049.5	24.4	23.2	16.85	244.6	756.4	81.3	37.4	43.92	1.851	
6,200.0	6,151.3	6,206.9	6,149.3	24.7	23.5	18.28	244.6	756.4	75.0	30.3	44.67	1.679	
6,300.0	6,251.2	6,306.9	6,249.2	25.1	23.8	19.26	244.6	756.4	71.2	25.8	45.41	1.569	
6,401.8	6,353.0	6,405.1	6,351.0	25.4	24.1	90.01	244.6	756.4	70.0	23.9	46.11	1.517	
6,500.0	6,451.2	6,507.0	6,449.2	25.7	24.5	90.01	244.6	756.4	70.0	23.2	46.79	1.495	Level 3
6,600.0	6,551.2	6,607.0	6,549.2	26.0	24.8	90.01	244.6	756.4	70.0	22.5	47.47	1.474	Level 3
6,700.0	6,651.2	6,707.0	6,649.2	26.3	25.1	90.01	244.6	756.4	70.0	21.8	48.15	1.453	Level 3
6,800.0	6,751.2	6,807.0	6,749.2	26.6	25.5	90.01	244.6	756.4	70.0	21.1	48.83	1.433	Level 3
6,900.0	6,851.2	6,907.0	6,849.2	27.0	25.8	90.01	244.6	756.4	70.0	20.4	49.52	1.413	Level 3
7,000.0	6,951.2	7,007.0	6,949.2	27.3	26.1	90.01	244.6	756.4	70.0	19.8	50.20	1.394	Level 3
7,100.0	7,051.2	7,107.0	7,049.2	27.6	26.5	90.01	244.6	756.4	70.0	19.1	50.89	1.375	Level 3
7,125.8	7,077.0	7,118.8	7,075.0	27.7	26.5	90.01	244.6	756.4	70.0	19.0	51.02	1.371	Level 3
7,142.9	7,094.2	7,136.0	7,092.2	27.7	26.6	-90.00	244.6	756.4	70.0	18.8	51.12	1.369	Level 3, CC
7,150.0	7,101.2	7,143.0	7,099.2	27.7	26.6	-90.21	244.6	756.4	70.0	18.8	51.16	1.368	Level 3
7,200.0	7,151.0	7,207.2	7,149.0	27.9	26.8	-93.68	244.6	756.4	70.1	18.7	51.42	1.363	Level 3, ES, SF
7,250.0	7,200.2	7,242.1	7,198.2	28.0	26.9	-100.40	244.6	756.4	71.2	19.7	51.54	1.381	Level 3
7,300.0	7,248.5	7,309.6	7,246.5	28.1	27.2	-109.54	244.6	756.4	74.6	22.8	51.89	1.439	Level 3
7,350.0	7,295.5	7,337.4	7,293.5	28.3	27.3	-119.63	244.6	756.4	82.2	29.8	52.36	1.569	
7,400.0	7,340.9	7,382.7	7,338.9	28.4	27.4	-129.13	244.6	756.4	94.9	41.8	53.11	1.787	
7,450.0	7,384.2	7,426.0	7,382.2	28.4	27.6	-137.05	244.6	756.4	113.2	59.3	53.91	2.101	
7,500.0	7,425.2	7,467.0	7,423.2	28.5	27.7	-143.18	244.6	756.4	136.9	82.3	54.63	2.506	
7,550.0	7,463.5	7,505.3	7,461.5	28.6	27.8	-147.67	244.6	756.4	165.3	110.1	55.23	2.993	
7,600.0	7,498.9	7,540.7	7,496.9	28.7	27.9	-150.80	244.6	756.4	197.8	142.1	55.70	3.551	
7,650.0	7,531.1	7,572.9	7,529.1	28.7	28.1	-152.80	244.6	756.4	234.0	177.9	56.08	4.172	
7,700.0	7,559.8	7,601.6	7,557.8	28.8	28.1	-153.81	244.6	756.4	273.3	216.9	56.39	4.847	
7,750.0	7,584.9	7,626.7	7,582.9	28.8	28.2	-153.82	244.6	756.4	315.3	258.7	56.64	5.567	
7,800.0	7,606.0	7,647.9	7,604.0	28.9	28.3	-152.68	244.6	756.4	359.6	302.8	56.83	6.327	
7,850.0	7,623.2	7,665.0	7,621.2	28.9	28.4	-149.90	244.6	756.4	405.7	348.8	56.98	7.120	
7,900.0	7,636.2	7,678.0	7,634.2	29.0	28.4	-144.35	244.6	756.4	453.4	396.2	57.10	7.939	
7,950.0	7,645.0	7,686.8	7,643.0	29.1	28.4	-133.14	244.6	756.4	502.0	444.8	57.19	8.779	
8,000.0	7,649.4	7,708.8	7,647.4	29.2	28.5	-109.38	244.6	756.4	551.4	494.1	57.31	9.621	
8,025.8	7,650.0	7,708.2	7,648.0	29.3	28.5	-90.00	244.6	756.4	577.0	519.6	57.32	10.065	
8,039.4	7,650.0	7,708.2	7,648.0	29.4	28.5	-90.00	244.6	756.4	590.5	533.2	57.33	10.300	
8,100.0	7,650.0	7,708.2	7,648.0	29.6	28.5	-90.00	244.6	756.4	650.7	593.3	57.37	11.341	
8,200.0	7,650.0	7,708.2	7,648.0	30.0	28.5	-90.00	244.6	756.4	750.1	692.7	57.42	13.064	
8,300.0	7,650.0	7,708.2	7,648.0	30.6	28.5	-90.00	244.6	756.4	849.7	792.2	57.46	14.788	
8,400.0	7,650.0	7,708.2	7,648.0	31.2	28.5	-90.00	244.6	756.4	949.4	891.9	57.49	16.514	
8,500.0	7,650.0	7,708.2	7,648.0	31.9	28.5	-90.00	244.6	756.4	1,049.1	991.6	57.52	18.240	
8,600.0	7,650.0	7,708.2	7,648.0	32.7	28.5	-90.00	244.6	756.4	1,148.9	1,091.3	57.54	19.966	
8,700.0	7,650.0	7,708.2	7,648.0	33.5	28.5	-90.00	244.6	756.4	1,248.7	1,191.1	57.57	21.691	
8,800.0	7,650.0	7,708.2	7,648.0	34.4	28.5	-90.00	244.6	756.4	1,348.5	1,290.9	57.59	23.417	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #124H - 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
8,900.0	7,650.0	7,708.2	7,648.0	35.4	28.5	-90.00	244.6	756.4	1,448.4	1,390.8	57.61	25.141	
9,000.0	7,650.0	7,708.2	7,648.0	36.4	28.5	-90.00	244.6	756.4	1,548.3	1,490.7	57.63	26.865	
9,100.0	7,650.0	7,708.2	7,648.0	37.4	28.5	-90.00	244.6	756.4	1,648.2	1,590.5	57.65	28.588	
9,200.0	7,650.0	7,708.2	7,648.0	38.5	28.5	-90.00	244.6	756.4	1,748.1	1,690.4	57.67	30.310	
9,300.0	7,650.0	7,708.2	7,648.0	39.6	28.5	-90.01	244.6	756.4	1,848.0	1,790.3	57.69	32.031	
9,400.0	7,650.0	7,708.2	7,648.0	40.8	28.5	-90.01	244.6	756.4	1,947.9	1,890.2	57.71	33.751	
9,500.0	7,650.0	7,708.2	7,648.0	42.0	28.5	-90.01	244.6	756.4	2,047.9	1,990.1	57.74	35.469	
9,600.0	7,650.0	7,708.2	7,648.0	43.2	28.5	-90.01	244.6	756.4	2,147.8	2,090.0	57.76	37.186	
9,700.0	7,650.0	11,866.8	9,819.0	44.5	48.8	-179.99	-2,002.5	702.8	2,171.0	2,130.6	40.36	53.796	
9,800.0	7,650.0	11,966.8	9,819.0	45.8	50.0	-179.99	-2,102.5	703.6	2,171.0	2,129.3	41.72	52.035	
9,900.0	7,650.0	12,066.8	9,819.0	47.1	51.1	-179.99	-2,202.5	704.4	2,171.0	2,127.9	43.10	50.370	
10,000.0	7,650.0	12,166.8	9,819.0	48.4	52.4	-179.99	-2,302.5	705.2	2,171.0	2,126.5	44.49	48.795	
10,100.0	7,650.0	12,266.8	9,819.0	49.7	53.6	-179.99	-2,402.5	706.0	2,171.0	2,125.1	45.90	47.304	
10,200.0	7,650.0	12,366.8	9,819.0	51.1	54.9	-179.99	-2,502.5	706.9	2,171.0	2,123.7	47.31	45.891	
10,300.0	7,650.0	12,466.8	9,819.0	52.5	56.2	-179.99	-2,602.5	707.7	2,171.0	2,122.3	48.73	44.551	
10,400.0	7,650.0	12,566.8	9,819.0	53.9	57.5	-179.99	-2,702.5	708.5	2,171.0	2,120.8	50.16	43.280	
10,500.0	7,650.0	12,666.8	9,819.0	55.3	58.8	-179.99	-2,802.5	709.3	2,171.0	2,119.4	51.60	42.073	
10,600.0	7,650.0	12,766.8	9,819.0	56.7	60.1	-179.99	-2,902.5	710.1	2,171.0	2,118.0	53.05	40.926	
10,700.0	7,650.0	12,866.8	9,819.0	58.1	61.5	-179.99	-3,002.5	711.0	2,171.0	2,116.5	54.50	39.835	
10,800.0	7,650.0	12,966.8	9,819.0	59.6	62.8	-179.99	-3,102.5	711.8	2,171.0	2,115.0	55.96	38.797	
10,900.0	7,650.0	13,066.8	9,819.0	61.0	64.2	-179.99	-3,202.5	712.6	2,171.0	2,113.6	57.42	37.807	
11,000.0	7,650.0	13,166.8	9,819.0	62.5	65.6	-179.99	-3,302.4	713.4	2,171.0	2,112.1	58.89	36.863	
11,100.0	7,650.0	13,266.8	9,819.0	63.9	67.0	-179.99	-3,402.4	714.2	2,171.0	2,110.6	60.37	35.963	
11,200.0	7,650.0	13,366.8	9,819.0	65.4	68.4	-179.99	-3,502.4	715.1	2,171.0	2,109.2	61.85	35.102	
11,300.0	7,650.0	13,466.8	9,819.0	66.9	69.8	-179.99	-3,602.4	715.9	2,171.0	2,107.7	63.33	34.280	
11,400.0	7,650.0	13,566.8	9,819.0	68.4	71.3	-179.99	-3,702.4	716.7	2,171.0	2,106.2	64.82	33.493	
11,500.0	7,650.0	13,666.8	9,819.0	69.9	72.7	-179.99	-3,802.4	717.5	2,171.0	2,104.7	66.31	32.740	
11,600.0	7,650.0	13,766.8	9,819.0	71.4	74.2	-179.99	-3,902.4	718.3	2,171.0	2,103.2	67.81	32.018	
11,700.0	7,650.0	13,866.8	9,819.0	72.9	75.6	-179.99	-4,002.4	719.2	2,171.0	2,101.7	69.30	31.326	
11,800.0	7,650.0	13,966.8	9,819.0	74.5	77.1	-179.99	-4,102.4	720.0	2,171.0	2,100.2	70.81	30.661	
11,900.0	7,650.0	14,066.8	9,819.0	76.0	78.6	-179.99	-4,202.4	720.8	2,171.0	2,098.7	72.31	30.024	
12,000.0	7,650.0	14,166.8	9,819.0	77.5	80.1	-179.99	-4,302.4	721.6	2,171.0	2,097.2	73.82	29.411	
12,100.0	7,650.0	14,266.8	9,819.0	79.1	81.6	-179.99	-4,402.4	722.4	2,171.0	2,095.7	75.33	28.821	
12,200.0	7,650.0	14,366.8	9,819.0	80.6	83.0	-179.99	-4,502.4	723.3	2,171.0	2,094.2	76.84	28.254	
12,300.0	7,650.0	14,466.8	9,819.0	82.2	84.5	-179.99	-4,602.4	724.1	2,171.0	2,092.6	78.35	27.708	
12,400.0	7,650.0	14,566.8	9,819.0	83.7	86.1	-179.99	-4,702.4	724.9	2,171.0	2,091.1	79.87	27.182	
12,500.0	7,650.0	14,666.8	9,819.0	85.3	87.6	-179.99	-4,802.4	725.7	2,171.0	2,089.6	81.39	26.675	
12,600.0	7,650.0	14,766.8	9,819.0	86.8	89.1	-179.99	-4,902.4	726.5	2,171.0	2,088.1	82.91	26.186	
12,700.0	7,650.0	14,866.8	9,819.0	88.4	90.6	-179.99	-5,002.4	727.4	2,171.0	2,086.6	84.43	25.714	
12,800.0	7,650.0	14,966.8	9,819.0	89.9	92.1	-179.99	-5,102.4	728.2	2,171.0	2,085.0	85.95	25.258	
12,900.0	7,650.0	15,066.8	9,819.0	91.5	93.7	-179.99	-5,202.4	729.0	2,171.0	2,083.5	87.48	24.818	
13,000.0	7,650.0	15,166.8	9,819.0	93.1	95.2	-179.99	-5,302.4	729.8	2,171.0	2,082.0	89.00	24.392	
13,100.0	7,650.0	15,266.8	9,819.0	94.7	96.7	-179.99	-5,402.4	730.7	2,171.0	2,080.5	90.53	23.980	
13,200.0	7,650.0	15,366.8	9,819.0	96.2	98.3	-179.99	-5,502.4	731.5	2,171.0	2,078.9	92.06	23.582	
13,300.0	7,650.0	15,466.8	9,819.0	97.8	99.8	-179.99	-5,602.4	732.3	2,171.0	2,077.4	93.59	23.196	
13,400.0	7,650.0	15,566.8	9,819.0	99.4	101.4	-179.99	-5,702.4	733.1	2,171.0	2,075.9	95.13	22.823	
13,500.0	7,650.0	15,666.8	9,819.0	101.0	102.9	-179.99	-5,802.4	733.9	2,171.0	2,074.3	96.66	22.461	
13,600.0	7,650.0	15,766.8	9,819.0	102.6	104.5	-179.99	-5,902.4	734.8	2,171.0	2,072.8	98.19	22.110	
13,700.0	7,650.0	15,866.8	9,819.0	104.1	106.0	-179.99	-6,002.4	735.6	2,171.0	2,071.3	99.73	21.769	
13,800.0	7,650.0	15,966.8	9,819.0	105.7	107.6	-179.99	-6,102.4	736.4	2,171.0	2,069.7	101.27	21.439	
13,900.0	7,650.0	16,066.8	9,819.0	107.3	109.2	-179.99	-6,202.4	737.2	2,171.0	2,068.2	102.80	21.118	
14,000.0	7,650.0	16,166.8	9,819.0	108.9	110.7	-179.99	-6,302.3	738.0	2,171.0	2,066.7	104.34	20.807	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #124H - 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	7,650.0	16,266.8	9,819.0	110.5	112.3	-179.99	-6,402.3	738.9	2,171.0	2,065.1	105.88	20.504	
14,200.0	7,650.0	16,366.8	9,819.0	112.1	113.9	-179.99	-6,502.3	739.7	2,171.0	2,063.6	107.42	20.210	
14,300.0	7,650.0	16,466.8	9,819.0	113.7	115.4	-179.99	-6,602.3	740.5	2,171.0	2,062.0	108.96	19.924	
14,400.0	7,650.0	16,566.8	9,819.0	115.3	117.0	-179.99	-6,702.3	741.3	2,171.0	2,060.5	110.50	19.646	
14,500.0	7,650.0	16,666.8	9,819.0	116.9	118.6	-179.99	-6,802.3	742.1	2,171.0	2,059.0	112.05	19.376	
14,600.0	7,650.0	16,766.8	9,819.0	118.5	120.2	-179.99	-6,902.3	743.0	2,171.0	2,057.4	113.59	19.113	
14,700.0	7,650.0	16,866.8	9,819.0	120.1	121.8	-179.99	-7,002.3	743.8	2,171.0	2,055.9	115.13	18.856	
14,800.0	7,650.0	16,966.8	9,819.0	121.7	123.3	-179.99	-7,102.3	744.6	2,171.0	2,054.3	116.68	18.607	
14,900.0	7,650.0	17,066.8	9,819.0	123.3	124.9	-179.99	-7,202.3	745.4	2,171.0	2,052.8	118.22	18.363	
15,000.0	7,650.0	17,166.8	9,819.0	124.9	126.5	-179.99	-7,302.3	746.2	2,171.0	2,051.2	119.77	18.126	
15,100.0	7,650.0	17,266.8	9,819.0	126.5	128.1	-179.99	-7,402.3	747.1	2,171.0	2,049.7	121.32	17.895	
15,200.0	7,650.0	17,366.8	9,819.0	128.2	129.7	-179.99	-7,502.3	747.9	2,171.0	2,048.1	122.86	17.670	
15,300.0	7,650.0	17,466.8	9,819.0	129.8	131.3	-179.99	-7,602.3	748.7	2,171.0	2,046.6	124.41	17.450	
15,400.0	7,650.0	17,566.8	9,819.0	131.4	132.9	-179.99	-7,702.3	749.5	2,171.0	2,045.0	125.96	17.235	
15,500.0	7,650.0	17,666.8	9,819.0	133.0	134.5	-179.99	-7,802.3	750.3	2,171.0	2,043.5	127.51	17.026	
15,600.0	7,650.0	17,766.8	9,819.0	134.6	136.1	-179.99	-7,902.3	751.2	2,171.0	2,041.9	129.06	16.822	
15,700.0	7,650.0	17,866.8	9,819.0	136.2	137.7	-179.99	-8,002.3	752.0	2,171.0	2,040.4	130.61	16.622	
15,800.0	7,650.0	17,966.8	9,819.0	137.8	139.3	-179.99	-8,102.3	752.8	2,171.0	2,038.8	132.16	16.427	
15,900.0	7,650.0	18,066.8	9,819.0	139.5	140.9	-180.00	-8,202.3	753.6	2,171.0	2,037.3	133.71	16.237	
16,000.0	7,650.0	18,166.8	9,819.0	141.1	142.5	-180.00	-8,302.3	754.4	2,171.0	2,035.7	135.26	16.050	
16,100.0	7,650.0	18,266.8	9,819.0	142.7	144.1	-180.00	-8,402.3	755.3	2,171.0	2,034.2	136.81	15.868	
16,200.0	7,650.0	18,366.8	9,819.0	144.3	145.7	-180.00	-8,502.3	756.1	2,171.0	2,032.6	138.37	15.690	
16,300.0	7,650.0	18,466.8	9,819.0	145.9	147.3	-180.00	-8,602.3	756.9	2,171.0	2,031.1	139.92	15.516	
16,400.0	7,650.0	18,566.8	9,819.0	147.6	148.9	-180.00	-8,702.3	757.7	2,171.0	2,029.5	141.47	15.346	
16,500.0	7,650.0	18,666.8	9,819.0	149.2	150.5	-180.00	-8,802.3	758.5	2,171.0	2,028.0	143.02	15.179	
16,600.0	7,650.0	18,766.8	9,819.0	150.8	152.1	-180.00	-8,902.3	759.4	2,171.0	2,026.4	144.58	15.016	
16,700.0	7,650.0	18,866.8	9,819.0	152.4	153.7	-180.00	-9,002.3	760.2	2,171.0	2,024.9	146.13	14.857	
16,800.0	7,650.0	18,966.8	9,819.0	154.0	155.3	-180.00	-9,102.3	761.0	2,171.0	2,023.3	147.69	14.700	
16,900.0	7,650.0	19,066.8	9,819.0	155.7	156.9	-180.00	-9,202.2	761.8	2,171.0	2,021.8	149.24	14.547	
17,000.0	7,650.0	19,166.8	9,819.0	157.3	158.5	-180.00	-9,302.2	762.7	2,171.0	2,020.2	150.79	14.397	
17,100.0	7,650.0	19,266.8	9,819.0	158.9	160.2	-180.00	-9,402.2	763.5	2,171.0	2,018.7	152.35	14.250	
17,200.0	7,650.0	19,366.8	9,819.0	160.5	161.8	-180.00	-9,502.2	764.3	2,171.0	2,017.1	153.91	14.106	
17,300.0	7,650.0	19,466.8	9,819.0	162.2	163.4	-180.00	-9,602.2	765.1	2,171.0	2,015.5	155.46	13.965	
17,400.0	7,650.0	19,566.8	9,819.0	163.8	165.0	-180.00	-9,702.2	765.9	2,171.0	2,014.0	157.02	13.827	
17,500.0	7,650.0	19,666.8	9,819.0	165.4	166.6	-180.00	-9,802.2	766.8	2,171.0	2,012.4	158.57	13.691	
17,600.0	7,650.0	19,766.8	9,819.0	167.0	168.2	-180.00	-9,902.2	767.6	2,171.0	2,010.9	160.13	13.558	
17,700.0	7,650.0	19,866.8	9,819.0	168.7	169.8	-180.00	-10,002.2	768.4	2,171.0	2,009.3	161.69	13.427	
17,800.0	7,650.0	19,966.8	9,819.0	170.3	171.5	-180.00	-10,102.2	769.2	2,171.0	2,007.8	163.24	13.299	
17,900.0	7,650.0	20,066.8	9,819.0	171.9	173.1	-180.00	-10,202.2	770.0	2,171.0	2,006.2	164.80	13.173	
18,000.0	7,650.0	20,166.8	9,819.0	173.6	174.7	-180.00	-10,302.2	770.9	2,171.0	2,004.6	166.36	13.050	
18,100.0	7,650.0	20,266.8	9,819.0	175.2	176.3	-180.00	-10,402.2	771.7	2,171.0	2,003.1	167.92	12.929	
18,200.0	7,650.0	20,366.8	9,819.0	176.8	177.9	-180.00	-10,502.2	772.5	2,171.0	2,001.5	169.47	12.810	
18,300.0	7,650.0	20,466.8	9,819.0	178.5	179.6	-180.00	-10,602.2	773.3	2,171.0	2,000.0	171.03	12.694	
18,400.0	7,650.0	20,566.8	9,819.0	180.1	181.2	-180.00	-10,702.2	774.1	2,171.0	1,998.4	172.59	12.579	
18,500.0	7,650.0	20,666.8	9,819.0	181.7	182.8	-180.00	-10,802.2	775.0	2,171.0	1,996.9	174.15	12.466	
18,600.0	7,650.0	20,766.8	9,819.0	183.3	184.4	-180.00	-10,902.2	775.8	2,171.0	1,995.3	175.71	12.356	
18,700.0	7,650.0	20,866.8	9,819.0	185.0	186.0	-180.00	-11,002.2	776.6	2,171.0	1,993.7	177.27	12.247	
18,800.0	7,650.0	20,966.8	9,819.0	186.6	187.7	-180.00	-11,102.2	777.4	2,171.0	1,992.2	178.83	12.140	
18,900.0	7,650.0	21,066.8	9,819.0	188.2	189.3	-180.00	-11,202.2	778.2	2,171.0	1,990.6	180.38	12.035	
19,000.0	7,650.0	21,166.8	9,819.0	189.9	190.9	-180.00	-11,302.2	779.1	2,171.0	1,989.1	181.94	11.932	
19,100.0	7,650.0	21,266.8	9,819.0	191.5	192.5	-180.00	-11,402.2	779.9	2,171.0	1,987.5	183.50	11.831	
19,200.0	7,650.0	21,366.8	9,819.0	193.1	194.2	-180.00	-11,502.2	780.7	2,171.0	1,985.9	185.06	11.731	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #124H - 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
19,300.0	7,650.0	21,466.8	9,819.0	194.8	195.8	-180.00	-11,602.2	781.5	2,171.0	1,984.4	186.62	11.633	
19,400.0	7,650.0	21,566.8	9,819.0	196.4	197.4	-180.00	-11,702.2	782.3	2,171.0	1,982.8	188.18	11.537	
19,500.0	7,650.0	21,666.8	9,819.0	198.1	199.0	-180.00	-11,802.2	783.2	2,171.0	1,981.3	189.74	11.442	
19,600.0	7,650.0	21,766.8	9,819.0	199.7	200.7	-180.00	-11,902.2	784.0	2,171.0	1,979.7	191.30	11.348	
19,700.0	7,650.0	21,866.8	9,819.0	201.3	202.3	-180.00	-12,002.2	784.8	2,171.0	1,978.1	192.87	11.257	
19,800.0	7,650.0	21,966.8	9,819.0	203.0	203.9	180.00	-12,102.2	785.6	2,171.0	1,976.6	194.43	11.166	
19,900.0	7,650.0	22,066.8	9,819.0	204.6	205.6	180.00	-12,202.1	786.4	2,171.0	1,975.0	195.99	11.077	
20,000.0	7,650.0	22,166.8	9,819.0	206.2	207.2	180.00	-12,302.1	787.3	2,171.0	1,973.5	197.55	10.990	
20,100.0	7,650.0	22,266.8	9,819.0	207.9	208.8	180.00	-12,402.1	788.1	2,171.0	1,971.9	199.11	10.904	
20,139.1	7,650.0	22,305.9	9,819.0	208.5	209.4	180.00	-12,441.2	788.4	2,171.0	1,971.3	199.72	10.870	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #134H - 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	1.0	-1.0	0.0	0.0	44.86	30.0	29.9	42.4				
100.0	100.0	101.0	99.0	0.1	0.1	44.86	30.0	29.9	42.4	42.1	0.26	162.967	
200.0	200.0	201.0	199.0	0.5	0.5	44.86	30.0	29.9	42.4	41.4	0.98	43.358	
300.0	300.0	301.0	299.0	0.8	0.8	44.86	30.0	29.9	42.4	40.7	1.69	25.006	
400.0	400.0	401.0	399.0	1.2	1.2	44.86	30.0	29.9	42.4	39.9	2.41	17.569	
500.0	500.0	501.0	499.0	1.6	1.6	44.86	30.0	29.9	42.4	39.2	3.13	13.542	
600.0	600.0	601.0	599.0	1.9	1.9	-26.05	30.0	29.9	41.6	37.7	3.84	10.827	
700.0	700.0	701.0	699.0	2.3	2.3	-27.74	30.0	29.9	39.2	34.7	4.55	8.625	
800.0	799.9	801.1	798.9	2.6	2.6	-31.04	30.0	29.9	35.4	30.2	5.26	6.733	
900.0	899.7	901.3	898.7	3.0	3.0	-37.02	30.0	29.9	30.4	24.4	5.98	5.078	
1,000.0	999.4	1,001.6	998.4	3.3	3.4	-48.14	30.0	29.9	24.5	17.8	6.70	3.663	
1,100.0	1,098.9	1,102.1	1,097.9	3.7	3.7	-69.58	30.0	29.9	19.5	12.1	7.43	2.622	
1,162.2	1,160.7	1,159.7	1,159.7	3.9	3.9	-90.00	30.0	29.9	18.3	10.4	7.88	2.317	CC, ES
1,200.0	1,198.3	1,202.7	1,197.3	4.1	4.1	-103.72	30.0	29.9	18.8	10.6	8.17	2.301	
1,300.0	1,297.4	1,303.6	1,296.4	4.5	4.4	-133.58	30.0	29.9	25.3	16.4	8.88	2.850	
1,400.0	1,396.4	1,404.6	1,395.4	4.9	4.8	-149.63	30.0	29.9	36.4	26.8	9.59	3.792	
1,500.0	1,495.5	1,505.5	1,494.5	5.3	5.2	-157.89	30.0	29.9	48.9	38.6	10.31	4.745	
1,600.0	1,594.5	1,606.5	1,593.5	5.7	5.5	-162.73	30.0	29.9	62.0	51.0	11.03	5.626	
1,700.0	1,693.5	1,707.5	1,692.5	6.1	5.9	-165.87	30.0	29.9	75.5	63.7	11.75	6.421	
1,800.0	1,792.5	1,808.5	1,791.5	6.5	6.3	-168.06	30.0	29.9	89.0	76.5	12.47	7.137	
1,900.0	1,891.6	1,909.4	1,890.6	6.9	6.6	-169.66	30.0	29.9	102.7	89.5	13.20	7.780	
2,000.0	1,990.6	1,989.6	1,989.6	7.3	6.9	-170.89	30.0	29.9	116.4	102.6	13.85	8.406	
2,100.0	2,089.6	2,088.6	2,088.6	7.7	7.3	-171.86	30.0	29.9	130.2	115.6	14.57	8.936	
2,200.0	2,188.6	2,187.6	2,187.6	8.1	7.6	-172.65	30.0	29.9	144.0	128.7	15.29	9.418	
2,300.0	2,287.7	2,286.7	2,286.7	8.5	8.0	-173.29	30.0	29.9	157.8	141.8	16.01	9.857	
2,400.0	2,386.7	2,385.7	2,385.7	8.9	8.3	-173.84	30.0	29.9	171.6	154.9	16.73	10.260	
2,500.0	2,485.7	2,484.7	2,484.7	9.4	8.7	-174.30	30.0	29.9	185.4	168.0	17.45	10.630	
2,600.0	2,584.8	2,586.7	2,586.7	9.8	9.0	-174.69	30.2	30.5	198.7	180.5	18.18	10.926	
2,700.0	2,683.8	2,689.7	2,689.7	10.2	9.4	-174.98	31.1	32.8	210.2	191.2	18.92	11.110	
2,800.0	2,782.8	2,793.1	2,793.0	10.6	9.8	-175.19	32.6	36.9	219.9	200.2	19.65	11.191	
2,900.0	2,881.8	2,896.8	2,896.5	11.0	10.1	-175.35	34.8	42.8	227.8	207.4	20.37	11.181	
3,000.0	2,980.9	3,000.8	3,000.2	11.4	10.5	-175.45	37.6	50.4	233.9	212.8	21.09	11.087	
3,100.0	3,079.9	3,105.0	3,103.9	11.9	10.9	-175.50	41.1	59.8	238.2	216.4	21.81	10.920	
3,200.0	3,178.9	3,209.3	3,207.5	12.3	11.2	-175.52	45.3	71.0	240.7	218.2	22.53	10.685	
3,300.0	3,277.9	3,313.1	3,310.4	12.7	11.6	-175.49	50.0	83.9	241.4	218.2	23.24	10.389	
3,400.0	3,377.0	3,413.1	3,409.4	13.1	12.0	-175.45	54.9	96.9	241.4	217.4	23.96	10.076	
3,500.0	3,476.0	3,513.1	3,508.4	13.5	12.4	-175.40	59.7	110.0	241.4	216.7	24.68	9.781	
3,600.0	3,575.0	3,613.1	3,607.5	13.9	12.7	-175.36	64.6	123.0	241.4	216.0	25.41	9.502	
3,700.0	3,674.0	3,713.1	3,706.5	14.4	13.1	-175.32	69.4	136.1	241.5	215.3	26.13	9.239	
3,800.0	3,773.1	3,813.1	3,805.5	14.8	13.5	-175.28	74.2	149.1	241.5	214.6	26.86	8.989	
3,900.0	3,872.1	3,913.1	3,904.6	15.2	13.9	-175.23	79.1	162.2	241.5	213.9	27.59	8.753	
4,000.0	3,971.1	4,013.1	4,003.6	15.6	14.3	-175.19	83.9	175.2	241.5	213.2	28.32	8.528	
4,100.0	4,070.2	4,113.1	4,102.6	16.0	14.6	-175.15	88.8	188.3	241.5	212.5	29.05	8.314	
4,200.0	4,169.2	4,213.1	4,201.6	16.4	15.0	-175.11	93.6	201.3	241.5	211.8	29.78	8.111	
4,300.0	4,268.2	4,313.1	4,300.7	16.9	15.4	-175.06	98.4	214.4	241.5	211.0	30.51	7.917	
4,400.0	4,367.2	4,413.1	4,399.7	17.3	15.8	-175.02	103.3	227.4	241.6	210.3	31.24	7.732	
4,500.0	4,466.3	4,513.1	4,498.7	17.7	16.2	-174.98	108.1	240.5	241.6	209.6	31.97	7.555	
4,600.0	4,565.3	4,613.1	4,597.7	18.1	16.6	-174.94	113.0	253.5	241.6	208.9	32.71	7.387	
4,700.0	4,664.3	4,713.1	4,696.8	18.5	17.0	-174.90	117.8	266.6	241.6	208.2	33.44	7.225	
4,800.0	4,763.3	4,813.1	4,795.8	19.0	17.4	-174.85	122.6	279.6	241.6	207.5	34.17	7.071	
4,900.0	4,862.4	4,913.1	4,894.8	19.4	17.8	-174.81	127.5	292.6	241.7	206.7	34.91	6.922	
5,000.0	4,961.4	5,013.1	4,993.8	19.8	18.2	-174.77	132.3	305.7	241.7	206.0	35.64	6.780	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #134H - 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	5,060.4	5,113.1	5,092.9	20.2	18.6	-174.73	137.2	318.7	241.7	205.3	36.38	6.644	
5,200.0	5,159.4	5,213.1	5,191.9	20.6	19.0	-174.68	142.0	331.8	241.7	204.6	37.11	6.512	
5,300.0	5,258.5	5,313.1	5,290.9	21.0	19.4	-174.64	146.8	344.8	241.7	203.9	37.85	6.386	
5,400.0	5,357.5	5,413.1	5,390.0	21.5	19.8	-174.60	151.7	357.9	241.7	203.2	38.59	6.265	
5,500.0	5,456.5	5,513.1	5,489.0	21.9	20.2	-174.56	156.5	370.9	241.8	202.4	39.32	6.148	
5,600.0	5,555.6	5,613.1	5,588.0	22.3	20.6	-174.52	161.4	384.0	241.8	201.7	40.06	6.035	
5,700.0	5,654.6	5,713.1	5,687.0	22.7	21.0	-174.47	166.2	397.0	241.8	201.0	40.80	5.927	
5,800.0	5,753.6	5,813.1	5,786.1	23.1	21.4	-174.43	171.0	410.1	241.8	200.3	41.53	5.822	
5,868.5	5,821.4	5,881.6	5,853.9	23.4	21.7	-174.40	174.3	419.0	241.8	199.8	42.04	5.752	
5,900.0	5,852.7	5,913.1	5,885.1	23.6	21.8	-174.39	175.9	423.1	241.7	199.4	42.27	5.718	
6,000.0	5,952.0	6,013.1	5,984.1	24.0	22.2	-174.29	180.7	436.2	239.6	196.6	43.01	5.571	
6,100.0	6,051.5	6,113.0	6,083.0	24.4	22.6	-174.12	185.5	449.2	234.9	191.2	43.74	5.371	
6,200.0	6,151.3	6,212.7	6,181.8	24.7	23.0	-173.88	190.4	462.2	227.6	183.1	44.46	5.119	
6,300.0	6,251.2	6,312.2	6,280.3	25.1	23.4	-173.54	195.2	475.2	217.7	172.5	45.18	4.818	
6,401.8	6,353.0	6,413.2	6,380.3	25.4	23.8	-102.67	200.1	488.4	205.0	159.1	45.90	4.465	
6,500.0	6,451.2	6,510.4	6,476.6	25.7	24.2	-102.12	204.8	501.1	191.4	144.8	46.60	4.109	
6,600.0	6,551.2	6,609.5	6,574.6	26.0	24.6	-101.48	209.6	514.0	177.7	130.4	47.30	3.756	
6,700.0	6,651.2	6,708.5	6,672.7	26.3	25.1	-100.73	214.4	526.9	163.9	115.9	48.01	3.415	
6,800.0	6,751.2	6,807.5	6,770.8	26.6	25.5	-99.85	219.2	539.8	150.2	101.5	48.72	3.084	
6,900.0	6,851.2	6,906.5	6,868.8	27.0	25.9	-98.78	223.9	552.8	136.6	87.1	49.44	2.762	
7,000.0	6,951.2	7,005.6	6,966.9	27.3	26.3	-97.48	228.7	565.7	123.0	72.8	50.16	2.451	
7,100.0	7,051.2	7,103.5	7,064.0	27.6	26.7	-95.90	233.4	578.3	109.6	58.7	50.91	2.153	
7,125.8	7,077.0	7,128.4	7,088.7	27.7	26.8	-95.48	234.5	581.2	106.5	55.3	51.11	2.083	
7,150.0	7,101.2	7,151.8	7,111.9	27.7	26.9	85.68	235.5	583.9	103.6	52.3	51.30	2.020	
7,200.0	7,151.0	7,199.9	7,159.7	27.9	27.1	89.50	237.3	588.9	98.1	46.4	51.74	1.897	
7,250.0	7,200.2	7,247.5	7,207.1	28.0	27.2	95.87	239.0	593.2	93.9	41.6	52.28	1.796	
7,294.7	7,243.5	7,289.4	7,248.8	28.1	27.4	103.52	240.2	596.6	92.4	39.5	52.92	1.746	
7,300.0	7,248.5	7,294.3	7,253.6	28.1	27.4	104.50	240.4	597.0	92.4	39.4	53.00	1.744	SF
7,350.0	7,295.5	7,339.9	7,299.1	28.3	27.6	114.43	241.5	600.2	95.5	41.6	53.90	1.771	
7,400.0	7,340.9	7,383.9	7,343.1	28.4	27.8	124.24	242.5	602.7	104.6	49.8	54.81	1.908	
7,450.0	7,384.2	7,426.2	7,385.3	28.4	27.9	132.76	243.2	604.7	120.3	64.7	55.58	2.164	
7,500.0	7,425.2	7,466.3	7,425.4	28.5	28.0	139.51	243.8	606.2	142.2	86.0	56.14	2.533	
7,550.0	7,463.5	7,504.0	7,463.1	28.6	28.2	144.50	244.2	607.3	169.5	112.9	56.52	2.998	
7,600.0	7,498.9	7,539.0	7,498.1	28.7	28.3	147.98	244.4	608.0	201.3	144.5	56.79	3.545	
7,650.0	7,531.1	7,571.0	7,530.1	28.7	28.4	150.19	244.5	608.3	237.0	180.0	56.99	4.159	
7,700.0	7,559.8	7,599.8	7,558.8	28.8	28.5	151.29	244.6	608.4	276.0	218.8	57.14	4.829	
7,750.0	7,584.9	7,624.8	7,583.9	28.8	28.6	151.30	244.6	608.4	317.7	260.4	57.26	5.548	
7,800.0	7,606.0	7,646.0	7,605.0	28.9	28.7	150.08	244.6	608.4	361.7	304.4	57.34	6.308	
7,850.0	7,623.2	7,663.2	7,622.2	28.9	28.7	147.14	244.6	608.4	407.7	350.3	57.40	7.102	
7,900.0	7,636.2	7,676.2	7,635.2	29.0	28.8	141.37	244.6	608.4	455.2	397.7	57.44	7.924	
7,950.0	7,645.0	7,684.9	7,644.0	29.1	28.8	130.06	244.6	608.4	503.7	446.3	57.46	8.766	
8,000.0	7,649.4	7,689.4	7,648.4	29.2	28.8	107.51	244.6	608.4	553.0	495.5	57.46	9.623	
8,025.8	7,650.0	7,689.9	7,649.0	29.3	28.8	90.00	244.6	608.4	578.5	521.0	57.46	10.068	
8,039.4	7,650.0	7,689.9	7,649.0	29.4	28.8	90.00	244.6	608.4	592.0	534.6	57.45	10.304	
8,100.0	7,650.0	7,689.9	7,649.0	29.6	28.8	90.00	244.6	608.4	652.1	594.7	57.44	11.354	
8,200.0	7,650.0	7,689.9	7,649.0	30.0	28.8	90.00	244.6	608.4	751.6	694.2	57.42	13.089	
8,300.0	7,650.0	7,689.9	7,649.0	30.6	28.8	90.00	244.6	608.4	851.1	793.7	57.40	14.827	
8,400.0	7,650.0	7,689.9	7,649.0	31.2	28.8	90.00	244.6	608.4	950.8	893.4	57.39	16.566	
8,500.0	7,650.0	7,689.9	7,649.0	31.9	28.8	90.00	244.6	608.4	1,050.5	993.1	57.39	18.305	
8,600.0	7,650.0	7,689.9	7,649.0	32.7	28.8	90.00	244.6	608.4	1,150.3	1,092.9	57.39	20.044	
8,700.0	7,650.0	7,689.9	7,649.0	33.5	28.8	90.00	244.6	608.4	1,250.1	1,192.7	57.39	21.783	
8,800.0	7,650.0	7,689.9	7,649.0	34.4	28.8	90.00	244.6	608.4	1,349.9	1,292.5	57.39	23.522	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #134H - 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
8,900.0	7,650.0	7,689.9	7,649.0	35.4	28.8	90.00	244.6	608.4	1,449.7	1,392.4	57.39	25.260	
9,000.0	7,650.0	7,689.9	7,649.0	36.4	28.8	90.00	244.6	608.4	1,549.6	1,492.2	57.40	26.997	
9,100.0	7,650.0	7,689.9	7,649.0	37.4	28.8	90.00	244.6	608.4	1,649.5	1,592.1	57.41	28.733	
9,200.0	7,650.0	7,689.9	7,649.0	38.5	28.8	90.00	244.6	608.4	1,749.4	1,692.0	57.42	30.469	
9,300.0	7,650.0	7,689.9	7,649.0	39.6	28.8	90.00	244.6	608.4	1,849.3	1,791.9	57.43	32.203	
9,400.0	7,650.0	7,689.9	7,649.0	40.8	28.8	90.01	244.6	608.4	1,949.2	1,891.8	57.44	33.936	
9,500.0	7,650.0	7,689.9	7,649.0	42.0	28.8	90.01	244.6	608.4	2,049.2	1,991.7	57.45	35.667	
9,600.0	7,650.0	7,689.9	7,649.0	43.2	28.8	90.01	244.6	608.4	2,149.1	2,091.6	57.47	37.397	
9,700.0	7,650.0	7,689.9	7,649.0	44.5	28.8	90.01	244.6	608.4	2,249.0	2,191.6	57.48	39.125	
9,800.0	7,650.0	7,689.9	7,649.0	45.8	28.8	90.01	244.6	608.4	2,349.0	2,291.5	57.50	40.852	
9,900.0	7,650.0	7,689.9	7,649.0	47.1	28.8	90.01	244.6	608.4	2,448.9	2,391.4	57.52	42.577	
10,000.0	7,650.0	7,689.9	7,649.0	48.4	28.8	90.01	244.6	608.4	2,548.9	2,491.4	57.54	44.300	
10,100.0	7,650.0	7,689.9	7,649.0	49.7	28.8	90.01	244.6	608.4	2,648.9	2,591.3	57.56	46.021	
10,200.0	7,650.0	7,689.9	7,649.0	51.1	28.8	90.01	244.6	608.4	2,748.8	2,691.2	57.58	47.740	
10,300.0	7,650.0	7,689.9	7,649.0	52.5	28.8	90.01	244.6	608.4	2,848.8	2,791.2	57.60	49.457	
10,400.0	7,650.0	7,689.9	7,649.0	53.9	28.8	90.01	244.6	608.4	2,948.7	2,891.1	57.62	51.171	
10,500.0	7,650.0	7,689.9	7,649.0	55.3	28.8	90.01	244.6	608.4	3,048.7	2,991.1	57.65	52.884	
10,600.0	7,650.0	7,689.9	7,649.0	56.7	28.8	90.01	244.6	608.4	3,148.7	3,091.0	57.67	54.594	
10,700.0	7,650.0	7,689.9	7,649.0	58.1	28.8	90.01	244.6	608.4	3,248.7	3,191.0	57.70	56.302	
10,800.0	7,650.0	7,689.9	7,649.0	59.6	28.8	90.01	244.6	608.4	3,348.6	3,290.9	57.73	58.007	
10,900.0	7,650.0	7,689.9	7,649.0	61.0	28.8	90.01	244.6	608.4	3,448.6	3,390.9	57.76	59.709	
11,000.0	7,650.0	14,505.5	11,159.0	62.5	68.8	-179.99	-3,302.4	713.5	3,510.0	3,449.4	60.61	57.908	
11,100.0	7,650.0	14,605.5	11,159.0	63.9	70.2	-179.99	-3,402.4	714.3	3,510.0	3,448.0	62.05	56.568	
11,200.0	7,650.0	14,705.5	11,159.0	65.4	71.5	-179.99	-3,502.4	715.1	3,510.0	3,446.5	63.49	55.282	
11,300.0	7,650.0	14,805.5	11,159.0	66.9	72.9	-179.99	-3,602.4	716.0	3,510.0	3,445.1	64.94	54.050	
11,400.0	7,650.0	14,905.5	11,159.0	68.4	74.3	-179.99	-3,702.4	716.8	3,510.0	3,443.6	66.39	52.866	
11,500.0	7,650.0	15,005.5	11,159.0	69.9	75.7	-179.99	-3,802.4	717.6	3,510.0	3,442.1	67.85	51.730	
11,600.0	7,650.0	15,105.5	11,159.0	71.4	77.1	-179.99	-3,902.4	718.4	3,510.0	3,440.7	69.32	50.638	
11,700.0	7,650.0	15,205.5	11,159.0	72.9	78.5	-179.99	-4,002.4	719.2	3,510.0	3,439.2	70.78	49.588	
11,800.0	7,650.0	15,305.5	11,159.0	74.5	79.9	-179.99	-4,102.4	720.1	3,510.0	3,437.7	72.25	48.578	
11,900.0	7,650.0	15,405.5	11,159.0	76.0	81.4	-179.99	-4,202.4	720.9	3,510.0	3,436.3	73.73	47.606	
12,000.0	7,650.0	15,505.5	11,159.0	77.5	82.8	-179.99	-4,302.4	721.7	3,510.0	3,434.8	75.21	46.669	
12,100.0	7,650.0	15,605.5	11,159.0	79.1	84.2	-179.99	-4,402.4	722.5	3,510.0	3,433.3	76.69	45.767	
12,200.0	7,650.0	15,705.5	11,159.0	80.6	85.7	-179.99	-4,502.4	723.3	3,510.0	3,431.8	78.18	44.897	
12,300.0	7,650.0	15,805.5	11,159.0	82.2	87.1	-179.99	-4,602.4	724.2	3,510.0	3,430.3	79.67	44.058	
12,400.0	7,650.0	15,905.5	11,159.0	83.7	88.6	-179.99	-4,702.4	725.0	3,510.0	3,428.8	81.16	43.248	
12,500.0	7,650.0	16,005.5	11,159.0	85.3	90.1	-179.99	-4,802.4	725.8	3,510.0	3,427.3	82.65	42.466	
12,600.0	7,650.0	16,105.5	11,159.0	86.8	91.6	-179.99	-4,902.4	726.6	3,510.0	3,425.8	84.15	41.710	
12,700.0	7,650.0	16,205.5	11,159.0	88.4	93.1	-179.99	-5,002.4	727.4	3,510.0	3,424.3	85.65	40.979	
12,800.0	7,650.0	16,305.5	11,159.0	89.9	94.5	-179.99	-5,102.4	728.3	3,510.0	3,422.8	87.16	40.273	
12,900.0	7,650.0	16,405.5	11,159.0	91.5	96.0	-179.99	-5,202.4	729.1	3,510.0	3,421.3	88.66	39.589	
13,000.0	7,650.0	16,505.5	11,159.0	93.1	97.5	-179.99	-5,302.4	729.9	3,510.0	3,419.8	90.17	38.928	
13,100.0	7,650.0	16,605.5	11,159.0	94.7	99.1	-179.99	-5,402.4	730.7	3,510.0	3,418.3	91.68	38.287	
13,200.0	7,650.0	16,705.5	11,159.0	96.2	100.6	-179.99	-5,502.4	731.5	3,510.0	3,416.8	93.19	37.666	
13,300.0	7,650.0	16,805.5	11,159.0	97.8	102.1	-179.99	-5,602.4	732.3	3,510.0	3,415.3	94.70	37.065	
13,400.0	7,650.0	16,905.5	11,159.0	99.4	103.6	-179.99	-5,702.4	733.2	3,510.0	3,413.8	96.21	36.481	
13,500.0	7,650.0	17,005.5	11,159.0	101.0	105.1	-179.99	-5,802.4	734.0	3,510.0	3,412.3	97.73	35.915	
13,600.0	7,650.0	17,105.5	11,159.0	102.6	106.6	-179.99	-5,902.4	734.8	3,510.0	3,410.8	99.25	35.366	
13,700.0	7,650.0	17,205.5	11,159.0	104.1	108.2	-179.99	-6,002.4	735.6	3,510.0	3,409.2	100.77	34.833	
13,800.0	7,650.0	17,305.5	11,159.0	105.7	109.7	-179.99	-6,102.3	736.4	3,510.0	3,407.7	102.29	34.315	
13,900.0	7,650.0	17,405.5	11,159.0	107.3	111.3	-179.99	-6,202.3	737.3	3,510.0	3,406.2	103.81	33.811	
14,000.0	7,650.0	17,505.5	11,159.0	108.9	112.8	-179.99	-6,302.3	738.1	3,510.0	3,404.7	105.33	33.322	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #134H - 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	7,650.0	17,605.5	11,159.0	110.5	114.3	-179.99	-6,402.3	738.9	3,510.0	3,403.1	106.86	32.847	
14,200.0	7,650.0	17,705.5	11,159.0	112.1	115.9	-179.99	-6,502.3	739.7	3,510.0	3,401.6	108.39	32.384	
14,300.0	7,650.0	17,805.5	11,159.0	113.7	117.4	-179.99	-6,602.3	740.5	3,510.0	3,400.1	109.91	31.934	
14,400.0	7,650.0	17,905.5	11,159.0	115.3	119.0	-180.00	-6,702.3	741.4	3,510.0	3,398.6	111.44	31.496	
14,500.0	7,650.0	18,005.5	11,159.0	116.9	120.5	-180.00	-6,802.3	742.2	3,510.0	3,397.0	112.97	31.070	
14,600.0	7,650.0	18,105.5	11,159.0	118.5	122.1	-180.00	-6,902.3	743.0	3,510.0	3,395.5	114.50	30.654	
14,700.0	7,650.0	18,205.5	11,159.0	120.1	123.7	-180.00	-7,002.3	743.8	3,510.0	3,394.0	116.04	30.249	
14,800.0	7,650.0	18,305.5	11,159.0	121.7	125.2	-180.00	-7,102.3	744.6	3,510.0	3,392.4	117.57	29.855	
14,900.0	7,650.0	18,405.5	11,159.0	123.3	126.8	-180.00	-7,202.3	745.5	3,510.0	3,390.9	119.10	29.471	
15,000.0	7,650.0	18,505.5	11,159.0	124.9	128.4	-180.00	-7,302.3	746.3	3,510.0	3,389.4	120.64	29.096	
15,100.0	7,650.0	18,605.5	11,159.0	126.5	129.9	-180.00	-7,402.3	747.1	3,510.0	3,387.8	122.17	28.730	
15,200.0	7,650.0	18,705.5	11,159.0	128.2	131.5	-180.00	-7,502.3	747.9	3,510.0	3,386.3	123.71	28.373	
15,300.0	7,650.0	18,805.5	11,159.0	129.8	133.1	-180.00	-7,602.3	748.7	3,510.0	3,384.8	125.25	28.025	
15,400.0	7,650.0	18,905.5	11,159.0	131.4	134.6	-180.00	-7,702.3	749.5	3,510.0	3,383.2	126.78	27.685	
15,500.0	7,650.0	19,005.5	11,159.0	133.0	136.2	-180.00	-7,802.3	750.4	3,510.0	3,381.7	128.32	27.353	
15,600.0	7,650.0	19,105.5	11,159.0	134.6	137.8	-180.00	-7,902.3	751.2	3,510.0	3,380.1	129.86	27.029	
15,700.0	7,650.0	19,205.5	11,159.0	136.2	139.4	-180.00	-8,002.3	752.0	3,510.0	3,378.6	131.40	26.712	
15,800.0	7,650.0	19,305.5	11,159.0	137.8	141.0	-180.00	-8,102.3	752.8	3,510.0	3,377.1	132.94	26.402	
15,900.0	7,650.0	19,405.5	11,159.0	139.5	142.6	-180.00	-8,202.3	753.6	3,510.0	3,375.5	134.48	26.100	
16,000.0	7,650.0	19,505.5	11,159.0	141.1	144.1	-180.00	-8,302.3	754.5	3,510.0	3,374.0	136.03	25.804	
16,100.0	7,650.0	19,605.5	11,159.0	142.7	145.7	-180.00	-8,402.3	755.3	3,510.0	3,372.4	137.57	25.514	
16,200.0	7,650.0	19,705.5	11,159.0	144.3	147.3	-180.00	-8,502.3	756.1	3,510.0	3,370.9	139.11	25.231	
16,300.0	7,650.0	19,805.5	11,159.0	145.9	148.9	-180.00	-8,602.3	756.9	3,510.0	3,369.3	140.66	24.954	
16,400.0	7,650.0	19,905.5	11,159.0	147.6	150.5	-180.00	-8,702.3	757.7	3,510.0	3,367.8	142.20	24.683	
16,500.0	7,650.0	20,005.5	11,159.0	149.2	152.1	-180.00	-8,802.3	758.6	3,510.0	3,366.3	143.75	24.418	
16,600.0	7,650.0	20,105.5	11,159.0	150.8	153.7	-180.00	-8,902.3	759.4	3,510.0	3,364.7	145.29	24.158	
16,700.0	7,650.0	20,205.5	11,159.0	152.4	155.3	-180.00	-9,002.3	760.2	3,510.0	3,363.2	146.84	23.904	
16,800.0	7,650.0	20,305.5	11,159.0	154.0	156.9	-180.00	-9,102.2	761.0	3,510.0	3,361.6	148.38	23.655	
16,900.0	7,650.0	20,405.5	11,159.0	155.7	158.5	-180.00	-9,202.2	761.8	3,510.0	3,360.1	149.93	23.411	
17,000.0	7,650.0	20,505.5	11,159.0	157.3	160.1	-180.00	-9,302.2	762.7	3,510.0	3,358.5	151.48	23.172	
17,100.0	7,650.0	20,605.5	11,159.0	158.9	161.7	-180.00	-9,402.2	763.5	3,510.0	3,357.0	153.03	22.937	
17,200.0	7,650.0	20,705.5	11,159.0	160.5	163.3	-180.00	-9,502.2	764.3	3,510.0	3,355.4	154.58	22.707	
17,300.0	7,650.0	20,805.5	11,159.0	162.2	164.9	-180.00	-9,602.2	765.1	3,510.0	3,353.9	156.12	22.482	
17,400.0	7,650.0	20,905.5	11,159.0	163.8	166.5	-180.00	-9,702.2	765.9	3,510.0	3,352.3	157.67	22.261	
17,500.0	7,650.0	21,005.5	11,159.0	165.4	168.1	-180.00	-9,802.2	766.7	3,510.0	3,350.8	159.22	22.045	
17,600.0	7,650.0	21,105.5	11,159.0	167.0	169.7	-180.00	-9,902.2	767.6	3,510.0	3,349.2	160.77	21.832	
17,700.0	7,650.0	21,205.5	11,159.0	168.7	171.3	-180.00	-10,002.2	768.4	3,510.0	3,347.7	162.32	21.624	
17,800.0	7,650.0	21,305.5	11,159.0	170.3	172.9	-180.00	-10,102.2	769.2	3,510.0	3,346.1	163.87	21.419	
17,900.0	7,650.0	21,405.5	11,159.0	171.9	174.5	-180.00	-10,202.2	770.0	3,510.0	3,344.6	165.43	21.218	
18,000.0	7,650.0	21,505.5	11,159.0	173.6	176.1	-180.00	-10,302.2	770.8	3,510.0	3,343.0	166.98	21.021	
18,100.0	7,650.0	21,605.5	11,159.0	175.2	177.7	-180.00	-10,402.2	771.7	3,510.0	3,341.5	168.53	20.827	
18,200.0	7,650.0	21,705.5	11,159.0	176.8	179.3	-180.00	-10,502.2	772.5	3,510.0	3,339.9	170.08	20.637	
18,300.0	7,650.0	21,805.5	11,159.0	178.5	180.9	-180.00	-10,602.2	773.3	3,510.0	3,338.4	171.63	20.451	
18,400.0	7,650.0	21,905.5	11,159.0	180.1	182.5	-180.00	-10,702.2	774.1	3,510.0	3,336.8	173.19	20.267	
18,500.0	7,650.0	22,005.5	11,159.0	181.7	184.2	-180.00	-10,802.2	774.9	3,510.0	3,335.3	174.74	20.087	
18,600.0	7,650.0	22,105.5	11,159.0	183.3	185.8	-180.00	-10,902.2	775.8	3,510.0	3,333.7	176.29	19.910	
18,700.0	7,650.0	22,205.5	11,159.0	185.0	187.4	-180.00	-11,002.2	776.6	3,510.0	3,332.2	177.85	19.736	
18,800.0	7,650.0	22,305.5	11,159.0	186.6	189.0	-180.00	-11,102.2	777.4	3,510.0	3,330.6	179.40	19.565	
18,900.0	7,650.0	22,405.5	11,159.0	188.2	190.6	-180.00	-11,202.2	778.2	3,510.0	3,329.0	180.95	19.397	
19,000.0	7,650.0	22,505.5	11,159.0	189.9	192.2	-180.00	-11,302.2	779.0	3,510.0	3,327.5	182.51	19.232	
19,100.0	7,650.0	22,605.5	11,159.0	191.5	193.8	180.00	-11,402.2	779.8	3,510.0	3,325.9	184.06	19.070	
19,200.0	7,650.0	22,705.5	11,159.0	193.1	195.5	180.00	-11,502.2	780.7	3,510.0	3,324.4	185.62	18.910	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #134H - 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
19,300.0	7,650.0	22,805.5	11,159.0	194.8	197.1	180.00	-11,602.2	781.5	3,510.0	3,322.8	187.17	18.753	
19,400.0	7,650.0	22,905.5	11,159.0	196.4	198.7	180.00	-11,702.2	782.3	3,510.0	3,321.3	188.73	18.598	
19,500.0	7,650.0	23,005.5	11,159.0	198.1	200.3	180.00	-11,802.2	783.1	3,510.0	3,319.7	190.28	18.446	
19,600.0	7,650.0	23,105.5	11,159.0	199.7	201.9	180.00	-11,902.2	783.9	3,510.0	3,318.2	191.84	18.297	
19,700.0	7,650.0	23,205.5	11,159.0	201.3	203.6	180.00	-12,002.2	784.8	3,510.0	3,316.6	193.40	18.149	
19,800.0	7,650.0	23,305.5	11,159.0	203.0	205.2	180.00	-12,102.1	785.6	3,510.0	3,315.0	194.95	18.004	
19,900.0	7,650.0	23,405.5	11,159.0	204.6	206.8	180.00	-12,202.1	786.4	3,510.0	3,313.5	196.51	17.862	
20,000.0	7,650.0	23,505.5	11,159.0	206.2	208.4	180.00	-12,302.1	787.2	3,510.0	3,311.9	198.06	17.721	
20,100.0	7,650.0	23,605.5	11,159.0	207.9	210.0	180.00	-12,402.1	788.0	3,510.0	3,310.4	199.60	17.585	
20,139.1	7,650.0	23,644.6	11,159.0	208.5	210.6	180.00	-12,441.2	788.4	3,510.0	3,309.9	200.06	17.545	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #204H - 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	3.0	-3.0	0.0	0.0	81.85	31.5	219.9	222.1				
100.0	100.0	103.0	97.0	0.1	0.1	81.85	31.5	219.9	222.1	221.8	0.27	831.701	
200.0	200.0	203.0	197.0	0.5	0.5	81.85	31.5	219.9	222.1	221.1	0.98	225.726	
300.0	300.0	303.0	297.0	0.8	0.9	81.85	31.5	219.9	222.1	220.4	1.70	130.583	
400.0	400.0	403.0	397.0	1.2	1.2	81.85	31.5	219.9	222.1	219.7	2.42	91.863	
500.0	500.0	497.0	497.0	1.6	1.6	81.85	31.5	219.9	222.1	219.0	3.11	71.343	
600.0	600.0	594.1	594.1	1.9	1.9	11.39	32.0	220.4	221.9	218.1	3.81	58.197	
700.0	700.0	691.1	691.1	2.3	2.2	11.14	33.8	222.1	221.3	216.8	4.51	49.087	
800.0	799.9	788.2	788.0	2.6	2.6	10.71	36.7	224.9	220.3	215.1	5.21	42.316	
900.0	899.7	885.1	884.8	3.0	2.9	10.10	40.8	228.9	219.0	213.1	5.91	37.072	
1,000.0	999.4	982.1	981.5	3.3	3.3	9.30	46.1	233.9	217.4	210.8	6.61	32.881	
1,100.0	1,098.9	1,079.0	1,078.0	3.7	3.6	8.31	52.5	240.2	215.5	208.2	7.32	29.446	
1,200.0	1,198.3	1,175.9	1,174.3	4.1	4.0	7.12	60.1	247.5	213.3	205.3	8.03	26.580	
1,300.0	1,297.4	1,272.7	1,270.3	4.5	4.4	5.71	68.9	256.0	210.9	202.2	8.74	24.145	
1,400.0	1,396.4	1,371.6	1,368.3	4.9	4.8	4.09	78.8	265.5	208.9	199.4	9.46	22.084	
1,500.0	1,495.5	1,471.4	1,467.2	5.3	5.2	2.41	88.8	275.1	207.1	196.9	10.19	20.325	
1,600.0	1,594.5	1,571.2	1,566.0	5.7	5.6	0.70	98.8	284.8	205.5	194.6	10.92	18.815	
1,700.0	1,693.5	1,671.0	1,664.8	6.1	6.0	-1.03	108.8	294.4	204.1	192.4	11.66	17.509	
1,800.0	1,792.5	1,770.8	1,763.6	6.5	6.4	-2.78	118.8	304.1	202.8	190.4	12.39	16.372	
1,900.0	1,891.6	1,870.6	1,862.5	6.9	6.8	-4.55	128.8	313.7	201.8	188.7	13.12	15.375	
2,000.0	1,990.6	1,970.4	1,961.3	7.3	7.2	-6.34	138.8	323.3	200.9	187.1	13.86	14.497	
2,100.0	2,089.6	2,070.2	2,060.1	7.7	7.6	-8.15	148.8	333.0	200.3	185.7	14.60	13.719	
2,200.0	2,188.6	2,170.0	2,158.9	8.1	8.0	-9.96	158.8	342.6	199.8	184.5	15.34	13.029	
2,300.0	2,287.7	2,269.8	2,257.8	8.5	8.4	-11.78	168.8	352.3	199.6	183.5	16.08	12.412	
2,372.0	2,359.0	2,341.6	2,328.9	8.8	8.7	-13.09	176.0	359.2	199.5	182.9	16.62	12.009	
2,400.0	2,386.7	2,369.6	2,356.6	8.9	8.8	-13.60	178.8	361.9	199.6	182.7	16.83	11.860	
2,500.0	2,485.7	2,469.4	2,455.4	9.4	9.2	-15.43	188.8	371.5	199.7	182.1	17.57	11.365	
2,600.0	2,584.8	2,569.2	2,554.2	9.8	9.6	-17.24	198.8	381.2	200.1	181.8	18.32	10.919	
2,700.0	2,683.8	2,669.0	2,653.1	10.2	10.0	-19.05	208.8	390.8	200.6	181.6	19.08	10.517	
2,800.0	2,782.8	2,770.4	2,753.5	10.6	10.5	-20.87	218.9	400.5	201.3	181.4	19.85	10.141	
2,900.0	2,881.8	2,875.7	2,858.1	11.0	10.9	-22.71	227.8	409.1	200.1	179.4	20.64	9.693	
3,000.0	2,980.9	2,980.9	2,962.9	11.4	11.3	-24.55	234.6	415.7	196.3	174.8	21.42	9.164	
3,100.0	3,079.9	3,085.9	3,067.6	11.9	11.7	-26.45	239.3	420.2	189.9	167.7	22.18	8.563	
3,200.0	3,178.9	3,190.3	3,172.0	12.3	12.0	-28.52	241.9	422.8	181.1	158.1	22.93	7.896	
3,300.0	3,277.9	3,306.7	3,274.9	12.7	12.4	-30.83	242.6	423.4	169.8	146.1	23.72	7.158	
3,400.0	3,377.0	3,407.7	3,374.0	13.1	12.8	-33.42	242.6	423.4	158.0	133.5	24.50	6.446	
3,500.0	3,476.0	3,508.7	3,473.0	13.5	13.1	-36.40	242.6	423.4	146.5	121.2	25.31	5.789	
3,600.0	3,575.0	3,609.6	3,572.0	13.9	13.4	-39.88	242.6	423.4	135.5	109.4	26.14	5.185	
3,700.0	3,674.0	3,689.4	3,671.0	14.4	13.7	-43.96	242.6	423.4	125.1	98.2	26.92	4.648	
3,800.0	3,773.1	3,788.4	3,770.1	14.8	14.0	-48.73	242.6	423.4	115.4	87.6	27.80	4.153	
3,900.0	3,872.1	3,887.4	3,869.1	15.2	14.4	-54.32	242.6	423.4	106.7	78.0	28.71	3.717	
4,000.0	3,971.1	3,986.5	3,968.1	15.6	14.7	-60.81	242.6	423.4	99.2	69.5	29.65	3.345	
4,100.0	4,070.2	4,085.5	4,067.2	16.0	15.0	-68.24	242.6	423.4	93.1	62.5	30.61	3.043	
4,200.0	4,169.2	4,184.5	4,166.2	16.4	15.4	-76.53	242.6	423.4	88.9	57.3	31.55	2.817	
4,300.0	4,268.2	4,283.5	4,265.2	16.9	15.7	-85.42	242.6	423.4	86.7	54.2	32.44	2.672	
4,350.2	4,317.9	4,333.2	4,314.9	17.1	15.9	-90.00	242.6	423.4	86.4	53.5	32.86	2.630	CC
4,400.0	4,367.2	4,382.6	4,364.2	17.3	16.0	-94.54	242.6	423.4	86.7	53.4	33.24	2.607	ES, SF
4,500.0	4,466.3	4,481.6	4,463.3	17.7	16.4	-103.44	242.6	423.4	88.9	54.9	33.95	2.618	
4,600.0	4,565.3	4,580.6	4,562.3	18.1	16.7	-111.73	242.6	423.4	93.1	58.6	34.57	2.694	
4,700.0	4,664.3	4,679.6	4,661.3	18.5	17.1	-119.16	242.6	423.4	99.2	64.0	35.13	2.823	
4,800.0	4,763.3	4,778.7	4,760.3	19.0	17.4	-125.66	242.6	423.4	106.7	71.0	35.67	2.991	
4,900.0	4,862.4	4,877.7	4,859.4	19.4	17.7	-131.25	242.6	423.4	115.4	79.2	36.22	3.187	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #204H - 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	4,961.4	4,976.7	4,958.4	19.8	18.1	-136.03	242.6	423.4	125.1	88.3	36.77	3.401	
5,100.0	5,060.4	5,075.8	5,057.4	20.2	18.4	-140.10	242.6	423.4	135.5	98.1	37.34	3.628	
5,200.0	5,159.4	5,174.8	5,156.4	20.6	18.8	-143.59	242.6	423.4	146.5	108.5	37.94	3.861	
5,300.0	5,258.5	5,273.8	5,255.5	21.0	19.1	-146.58	242.6	423.4	157.9	119.4	38.55	4.097	
5,400.0	5,357.5	5,372.8	5,354.5	21.5	19.4	-149.16	242.6	423.4	169.7	130.6	39.17	4.333	
5,500.0	5,456.5	5,471.9	5,453.5	21.9	19.8	-151.40	242.6	423.4	181.9	142.0	39.81	4.568	
5,600.0	5,555.6	5,570.9	5,552.6	22.3	20.1	-153.36	242.6	423.4	194.2	153.8	40.46	4.800	
5,700.0	5,654.6	5,669.9	5,651.6	22.7	20.5	-155.09	242.6	423.4	206.8	165.6	41.12	5.028	
5,800.0	5,753.6	5,768.9	5,750.6	23.1	20.8	-156.62	242.6	423.4	219.5	177.7	41.79	5.252	
5,868.5	5,821.4	5,836.8	5,818.4	23.4	21.1	-157.57	242.6	423.4	228.3	186.0	42.26	5.403	
5,900.0	5,852.7	5,868.0	5,849.7	23.6	21.2	-157.99	242.6	423.4	232.2	189.8	42.47	5.468	
6,000.0	5,952.0	5,967.3	5,949.0	24.0	21.5	-159.09	242.6	423.4	243.2	200.1	43.15	5.636	
6,100.0	6,051.5	6,066.9	6,048.5	24.4	21.9	-159.88	242.6	423.4	251.8	208.0	43.84	5.744	
6,200.0	6,151.3	6,166.6	6,148.3	24.7	22.2	-160.41	242.6	423.4	258.0	213.5	44.54	5.794	
6,300.0	6,251.2	6,266.6	6,248.2	25.1	22.6	-160.72	242.6	423.4	261.8	216.6	45.23	5.788	
6,401.8	6,353.0	6,368.4	6,350.0	25.4	22.9	-90.44	242.6	423.4	263.1	217.1	45.93	5.727	
6,500.0	6,451.2	6,466.5	6,448.2	25.7	23.3	-90.44	242.6	423.4	263.1	216.5	46.61	5.644	
6,600.0	6,551.2	6,566.5	6,548.2	26.0	23.6	-90.44	242.6	423.4	263.1	215.8	47.30	5.562	
6,700.0	6,651.2	6,666.5	6,648.2	26.3	24.0	-90.44	242.6	423.4	263.1	215.1	47.99	5.482	
6,800.0	6,751.2	6,766.5	6,748.2	26.6	24.3	-90.44	242.6	423.4	263.1	214.4	48.67	5.405	
6,900.0	6,851.2	6,866.5	6,848.2	27.0	24.7	-90.44	242.6	423.4	263.1	213.7	49.36	5.329	
7,000.0	6,951.2	6,966.5	6,948.2	27.3	25.0	-90.44	242.6	423.4	263.1	213.0	50.06	5.256	
7,100.0	7,051.2	7,066.5	7,048.2	27.6	25.4	-90.44	242.6	423.4	263.1	212.3	50.75	5.184	
7,125.8	7,077.0	7,107.7	7,074.0	27.7	25.5	-90.44	242.6	423.4	263.1	212.1	50.98	5.160	
7,150.0	7,101.2	7,116.5	7,098.2	27.7	25.5	89.87	242.6	423.4	263.1	212.0	51.09	5.149	
7,161.3	7,112.5	7,127.8	7,109.5	27.8	25.6	90.00	242.6	423.4	263.1	211.9	51.17	5.141	
7,200.0	7,151.0	7,166.3	7,148.0	27.9	25.7	90.80	242.6	423.4	263.1	211.6	51.45	5.114	
7,250.0	7,200.2	7,215.6	7,197.2	28.0	25.9	92.62	242.6	423.4	263.4	211.5	51.82	5.082	
7,300.0	7,248.5	7,263.9	7,245.5	28.1	26.1	95.22	242.6	423.4	264.3	212.1	52.20	5.062	
7,350.0	7,295.5	7,310.9	7,292.5	28.3	26.2	98.44	242.6	423.4	266.4	213.8	52.60	5.065	
7,400.0	7,340.9	7,356.2	7,337.9	28.4	26.4	102.05	242.6	423.4	270.6	217.6	53.01	5.104	
7,450.0	7,384.2	7,400.5	7,381.2	28.4	26.5	105.80	242.6	423.4	277.5	224.0	53.43	5.193	
7,500.0	7,425.2	7,440.5	7,422.2	28.5	26.7	109.43	242.6	423.4	287.8	234.0	53.84	5.347	
7,550.0	7,463.5	7,478.8	7,460.5	28.6	26.8	112.68	242.6	423.4	302.3	248.1	54.22	5.575	
7,600.0	7,498.9	7,514.2	7,495.9	28.7	26.9	115.35	242.6	423.4	321.1	266.6	54.57	5.885	
7,650.0	7,531.1	7,546.4	7,528.1	28.7	27.1	117.28	242.6	423.4	344.5	289.6	54.87	6.279	
7,700.0	7,559.8	7,575.1	7,556.8	28.8	27.2	118.33	242.6	423.4	372.2	317.1	55.12	6.754	
7,750.0	7,584.9	7,600.2	7,581.9	28.8	27.2	118.35	242.6	423.4	404.0	348.7	55.31	7.304	
7,800.0	7,606.0	7,621.4	7,603.0	28.9	27.3	117.18	242.6	423.4	439.3	383.9	55.46	7.922	
7,850.0	7,623.2	7,638.5	7,620.2	28.9	27.4	114.60	242.6	423.4	477.8	422.2	55.56	8.599	
7,900.0	7,636.2	7,651.5	7,633.2	29.0	27.4	110.31	242.6	423.4	518.7	463.1	55.63	9.325	
7,950.0	7,645.0	7,660.3	7,642.0	29.1	27.5	103.97	242.6	423.4	561.7	506.0	55.66	10.092	
8,000.0	7,649.4	7,664.7	7,646.4	29.2	27.5	95.34	242.6	423.4	606.1	550.5	55.67	10.889	
8,025.8	7,650.0	7,665.3	7,647.0	29.3	27.5	90.00	242.6	423.4	629.5	573.8	55.66	11.309	
8,039.4	7,650.0	7,665.3	7,647.0	29.4	27.5	90.00	242.6	423.4	641.9	586.2	55.65	11.534	
8,100.0	7,650.0	7,665.3	7,647.0	29.6	27.5	90.00	242.6	423.4	697.7	642.1	55.63	12.541	
8,200.0	7,650.0	7,665.3	7,647.0	30.0	27.5	90.00	242.6	423.4	791.4	735.8	55.60	14.233	
8,300.0	7,650.0	7,665.3	7,647.0	30.6	27.5	90.00	242.6	423.4	886.4	830.8	55.57	15.950	
8,400.0	7,650.0	7,665.3	7,647.0	31.2	27.5	90.00	242.6	423.4	982.4	926.9	55.55	17.685	
8,500.0	7,650.0	7,665.3	7,647.0	31.9	27.5	90.00	242.6	423.4	1,079.2	1,023.6	55.53	19.433	
8,600.0	7,650.0	7,665.3	7,647.0	32.7	27.5	90.00	242.6	423.4	1,176.5	1,121.0	55.52	21.190	
8,700.0	7,650.0	7,665.3	7,647.0	33.5	27.5	90.00	242.6	423.4	1,274.2	1,218.7	55.51	22.954	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #204H - 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
8,800.0	7,650.0	7,665.3	7,647.0	34.4	27.5	90.00	242.6	423.4	1,372.2	1,316.7	55.51	24.723	
8,900.0	7,650.0	7,665.3	7,647.0	35.4	27.5	90.00	242.6	423.4	1,470.5	1,415.0	55.50	26.495	
9,000.0	7,650.0	7,665.3	7,647.0	36.4	27.5	90.00	242.6	423.4	1,569.1	1,513.6	55.50	28.271	
9,100.0	7,650.0	7,665.3	7,647.0	37.4	27.5	90.00	242.6	423.4	1,667.8	1,612.3	55.50	30.048	
9,200.0	7,650.0	7,665.3	7,647.0	38.5	27.5	90.00	242.6	423.4	1,766.6	1,711.1	55.51	31.826	
9,300.0	7,650.0	7,665.3	7,647.0	39.6	27.5	90.00	242.6	423.4	1,865.6	1,810.1	55.51	33.606	
9,400.0	7,650.0	7,665.3	7,647.0	40.8	27.5	90.00	242.6	423.4	1,964.6	1,909.1	55.52	35.385	
9,500.0	7,650.0	7,665.3	7,647.0	42.0	27.5	90.00	242.6	423.4	2,063.8	2,008.3	55.53	37.165	
9,600.0	7,650.0	7,665.3	7,647.0	43.2	27.5	90.00	242.6	423.4	2,163.0	2,107.5	55.54	38.944	
9,700.0	7,650.0	7,665.3	7,647.0	44.5	27.5	90.00	242.6	423.4	2,262.3	2,206.8	55.55	40.723	
9,800.0	7,650.0	7,665.3	7,647.0	45.8	27.5	90.00	242.6	423.4	2,361.7	2,306.1	55.57	42.501	
9,900.0	7,650.0	7,665.3	7,647.0	47.1	27.5	90.00	242.6	423.4	2,461.1	2,405.5	55.58	44.277	
10,000.0	7,650.0	7,665.3	7,647.0	48.4	27.5	90.00	242.6	423.4	2,560.6	2,505.0	55.60	46.053	
10,100.0	7,650.0	7,665.3	7,647.0	49.7	27.5	90.00	242.6	423.4	2,660.1	2,604.5	55.62	47.827	
10,200.0	7,650.0	7,665.3	7,647.0	51.1	27.5	90.00	242.6	423.4	2,759.6	2,704.0	55.64	49.599	
10,300.0	7,650.0	7,665.3	7,647.0	52.5	27.5	90.00	242.6	423.4	2,859.2	2,803.5	55.66	51.370	
10,400.0	7,650.0	7,665.3	7,647.0	53.9	27.5	90.00	242.6	423.4	2,958.8	2,903.1	55.68	53.139	
10,500.0	7,650.0	7,665.3	7,647.0	55.3	27.5	90.00	242.6	423.4	3,058.4	3,002.7	55.70	54.905	
10,600.0	7,650.0	7,665.3	7,647.0	56.7	27.5	90.00	242.6	423.4	3,158.1	3,102.3	55.73	56.670	
10,700.0	7,650.0	7,665.3	7,647.0	58.1	27.5	90.00	242.6	423.4	3,257.7	3,202.0	55.75	58.432	
10,800.0	7,650.0	7,665.3	7,647.0	59.6	27.5	90.00	242.6	423.4	3,357.4	3,301.6	55.78	60.192	
10,900.0	7,650.0	7,665.3	7,647.0	61.0	27.5	90.00	242.6	423.4	3,457.1	3,401.3	55.81	61.949	
11,000.0	7,650.0	7,665.3	7,647.0	62.5	27.5	90.00	242.6	423.4	3,556.9	3,501.0	55.83	63.704	
11,100.0	7,650.0	7,665.3	7,647.0	63.9	27.5	90.00	242.6	423.4	3,656.6	3,600.7	55.86	65.455	
11,200.0	7,650.0	14,908.8	11,386.0	65.4	71.2	174.96	-3,505.1	385.0	3,753.5	3,688.4	65.12	57.638	
11,300.0	7,650.0	15,008.8	11,386.0	66.9	72.5	174.96	-3,605.1	385.9	3,753.5	3,686.9	66.57	56.380	
11,400.0	7,650.0	15,108.8	11,386.0	68.4	73.9	174.96	-3,705.1	386.7	3,753.5	3,685.5	68.03	55.171	
11,500.0	7,650.0	15,208.8	11,386.0	69.9	75.3	174.96	-3,805.1	387.5	3,753.5	3,684.0	69.50	54.008	
11,600.0	7,650.0	15,308.8	11,386.0	71.4	76.7	174.96	-3,905.1	388.3	3,753.5	3,682.5	70.97	52.889	
11,700.0	7,650.0	15,408.8	11,386.0	72.9	78.1	174.96	-4,005.1	389.1	3,753.5	3,681.1	72.44	51.813	
11,800.0	7,650.0	15,508.8	11,386.0	74.5	79.6	174.96	-4,105.1	390.0	3,753.5	3,679.6	73.92	50.775	
11,900.0	7,650.0	15,608.8	11,386.0	76.0	81.0	174.96	-4,205.1	390.8	3,753.5	3,678.1	75.41	49.776	
12,000.0	7,650.0	15,708.8	11,386.0	77.5	82.4	174.96	-4,305.1	391.6	3,753.5	3,676.6	76.90	48.813	
12,100.0	7,650.0	15,808.8	11,386.0	79.1	83.9	174.96	-4,405.1	392.4	3,753.5	3,675.1	78.39	47.884	
12,200.0	7,650.0	15,908.8	11,386.0	80.6	85.3	174.96	-4,505.1	393.2	3,753.5	3,673.6	79.88	46.987	
12,300.0	7,650.0	16,008.8	11,386.0	82.2	86.8	174.96	-4,605.1	394.1	3,753.5	3,672.1	81.38	46.121	
12,400.0	7,650.0	16,108.8	11,386.0	83.7	88.2	174.96	-4,705.1	394.9	3,753.5	3,670.6	82.89	45.285	
12,500.0	7,650.0	16,208.8	11,386.0	85.3	89.7	174.96	-4,805.1	395.7	3,753.5	3,669.1	84.39	44.477	
12,600.0	7,650.0	16,308.8	11,386.0	86.8	91.2	174.96	-4,905.1	396.5	3,753.5	3,667.6	85.90	43.696	
12,700.0	7,650.0	16,408.8	11,386.0	88.4	92.7	174.96	-5,005.1	397.4	3,753.5	3,666.1	87.41	42.940	
12,800.0	7,650.0	16,508.8	11,386.0	89.9	94.2	174.96	-5,105.1	398.2	3,753.5	3,664.6	88.93	42.209	
12,900.0	7,650.0	16,608.8	11,386.0	91.5	95.7	174.96	-5,205.1	399.0	3,753.5	3,663.1	90.44	41.501	
13,000.0	7,650.0	16,708.8	11,386.0	93.1	97.2	174.96	-5,305.1	399.8	3,753.5	3,661.5	91.96	40.816	
13,100.0	7,650.0	16,808.8	11,386.0	94.7	98.7	174.96	-5,405.1	400.6	3,753.5	3,660.0	93.48	40.151	
13,200.0	7,650.0	16,908.8	11,386.0	96.2	100.2	174.96	-5,505.1	401.5	3,753.5	3,658.5	95.01	39.507	
13,300.0	7,650.0	17,008.8	11,386.0	97.8	101.7	174.96	-5,605.1	402.3	3,753.5	3,657.0	96.53	38.883	
13,400.0	7,650.0	17,108.8	11,386.0	99.4	103.2	174.96	-5,705.1	403.1	3,753.5	3,655.4	98.06	38.277	
13,500.0	7,650.0	17,208.8	11,386.0	101.0	104.8	174.96	-5,805.1	403.9	3,753.5	3,653.9	99.59	37.689	
13,600.0	7,650.0	17,308.8	11,386.0	102.6	106.3	174.96	-5,905.1	404.7	3,753.5	3,652.4	101.12	37.118	
13,700.0	7,650.0	17,408.8	11,386.0	104.1	107.8	174.96	-6,005.1	405.6	3,753.5	3,650.9	102.66	36.563	
13,800.0	7,650.0	17,508.8	11,386.0	105.7	109.3	174.96	-6,105.1	406.4	3,753.5	3,649.3	104.19	36.025	
13,900.0	7,650.0	17,608.8	11,386.0	107.3	110.9	174.96	-6,205.1	407.2	3,753.5	3,647.8	105.73	35.501	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #204H - 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	7,650.0	17,708.8	11,386.0	108.9	112.4	174.96	-6,305.1	408.0	3,753.5	3,646.2	107.27	34.992	
14,100.0	7,650.0	17,808.8	11,386.0	110.5	114.0	174.96	-6,405.0	408.9	3,753.5	3,644.7	108.81	34.497	
14,200.0	7,650.0	17,908.8	11,386.0	112.1	115.5	174.96	-6,505.0	409.7	3,753.5	3,643.2	110.35	34.015	
14,300.0	7,650.0	18,008.8	11,386.0	113.7	117.1	174.96	-6,605.0	410.5	3,753.5	3,641.6	111.89	33.546	
14,400.0	7,650.0	18,108.8	11,386.0	115.3	118.6	174.96	-6,705.0	411.3	3,753.5	3,640.1	113.44	33.089	
14,500.0	7,650.0	18,208.8	11,386.0	116.9	120.2	174.96	-6,805.0	412.1	3,753.5	3,638.5	114.98	32.645	
14,600.0	7,650.0	18,308.8	11,386.0	118.5	121.7	174.96	-6,905.0	413.0	3,753.5	3,637.0	116.53	32.211	
14,700.0	7,650.0	18,408.8	11,386.0	120.1	123.3	174.96	-7,005.0	413.8	3,753.5	3,635.4	118.08	31.789	
14,800.0	7,650.0	18,508.8	11,386.0	121.7	124.9	174.96	-7,105.0	414.6	3,753.5	3,633.9	119.62	31.378	
14,900.0	7,650.0	18,608.8	11,386.0	123.3	126.4	174.96	-7,205.0	415.4	3,753.5	3,632.3	121.17	30.976	
15,000.0	7,650.0	18,708.8	11,386.0	124.9	128.0	174.96	-7,305.0	416.2	3,753.5	3,630.8	122.72	30.585	
15,100.0	7,650.0	18,808.8	11,386.0	126.5	129.6	174.96	-7,405.0	417.1	3,753.5	3,629.2	124.28	30.203	
15,200.0	7,650.0	18,908.8	11,386.0	128.2	131.1	174.96	-7,505.0	417.9	3,753.5	3,627.7	125.83	29.830	
15,300.0	7,650.0	19,008.8	11,386.0	129.8	132.7	174.96	-7,605.0	418.7	3,753.5	3,626.1	127.38	29.466	
15,400.0	7,650.0	19,108.8	11,386.0	131.4	134.3	174.96	-7,705.0	419.5	3,753.5	3,624.6	128.94	29.111	
15,500.0	7,650.0	19,208.8	11,386.0	133.0	135.9	174.96	-7,805.0	420.4	3,753.5	3,623.0	130.49	28.764	
15,600.0	7,650.0	19,308.8	11,386.0	134.6	137.4	174.96	-7,905.0	421.2	3,753.5	3,621.5	132.05	28.425	
15,700.0	7,650.0	19,408.8	11,386.0	136.2	139.0	174.96	-8,005.0	422.0	3,753.5	3,619.9	133.61	28.094	
15,800.0	7,650.0	19,508.8	11,386.0	137.8	140.6	174.96	-8,105.0	422.8	3,753.5	3,618.4	135.16	27.770	
15,900.0	7,650.0	19,608.8	11,386.0	139.5	142.2	174.96	-8,205.0	423.6	3,753.5	3,616.8	136.72	27.453	
16,000.0	7,650.0	19,708.8	11,386.0	141.1	143.8	174.96	-8,305.0	424.5	3,753.5	3,615.2	138.28	27.144	
16,100.0	7,650.0	19,808.8	11,386.0	142.7	145.4	174.96	-8,405.0	425.3	3,753.5	3,613.7	139.84	26.841	
16,200.0	7,650.0	19,908.8	11,386.0	144.3	146.9	174.96	-8,505.0	426.1	3,753.5	3,612.1	141.40	26.545	
16,300.0	7,650.0	20,008.8	11,386.0	145.9	148.5	174.96	-8,605.0	426.9	3,753.5	3,610.6	142.96	26.255	
16,400.0	7,650.0	20,108.8	11,386.0	147.6	150.1	174.96	-8,705.0	427.7	3,753.5	3,609.0	144.53	25.971	
16,500.0	7,650.0	20,208.8	11,386.0	149.2	151.7	174.96	-8,805.0	428.6	3,753.5	3,607.4	146.09	25.693	
16,600.0	7,650.0	20,308.8	11,386.0	150.8	153.3	174.96	-8,905.0	429.4	3,753.5	3,605.9	147.65	25.421	
16,700.0	7,650.0	20,408.8	11,386.0	152.4	154.9	174.96	-9,005.0	430.2	3,753.5	3,604.3	149.22	25.155	
16,800.0	7,650.0	20,508.8	11,386.0	154.0	156.5	174.96	-9,105.0	431.0	3,753.5	3,602.7	150.78	24.894	
16,900.0	7,650.0	20,608.8	11,386.0	155.7	158.1	174.96	-9,205.0	431.9	3,753.5	3,601.2	152.35	24.638	
17,000.0	7,650.0	20,708.8	11,386.0	157.3	159.7	174.96	-9,305.0	432.7	3,753.5	3,599.6	153.91	24.388	
17,100.0	7,650.0	20,808.8	11,386.0	158.9	161.3	174.96	-9,404.9	433.5	3,753.5	3,598.0	155.48	24.142	
17,200.0	7,650.0	20,908.8	11,386.0	160.5	162.9	174.96	-9,504.9	434.3	3,753.5	3,596.5	157.04	23.901	
17,300.0	7,650.0	21,008.8	11,386.0	162.2	164.5	174.96	-9,604.9	435.1	3,753.5	3,594.9	158.61	23.665	
17,400.0	7,650.0	21,108.8	11,386.0	163.8	166.1	174.96	-9,704.9	436.0	3,753.5	3,593.3	160.18	23.433	
17,500.0	7,650.0	21,208.8	11,386.0	165.4	167.7	174.96	-9,804.9	436.8	3,753.5	3,591.8	161.75	23.206	
17,600.0	7,650.0	21,308.8	11,386.0	167.0	169.3	174.96	-9,904.9	437.6	3,753.5	3,590.2	163.31	22.984	
17,700.0	7,650.0	21,408.8	11,386.0	168.7	170.9	174.96	-10,004.9	438.4	3,753.5	3,588.6	164.88	22.765	
17,800.0	7,650.0	21,508.8	11,386.0	170.3	172.5	174.96	-10,104.9	439.2	3,753.5	3,587.1	166.45	22.550	
17,900.0	7,650.0	21,608.8	11,386.0	171.9	174.1	174.96	-10,204.9	440.1	3,753.5	3,585.5	168.02	22.340	
18,000.0	7,650.0	21,708.8	11,386.0	173.6	175.7	174.96	-10,304.9	440.9	3,753.5	3,583.9	169.59	22.133	
18,100.0	7,650.0	21,808.8	11,386.0	175.2	177.4	174.96	-10,404.9	441.7	3,753.5	3,582.4	171.16	21.930	
18,200.0	7,650.0	21,908.8	11,386.0	176.8	179.0	174.96	-10,504.9	442.5	3,753.5	3,580.8	172.73	21.730	
18,300.0	7,650.0	22,008.8	11,386.0	178.5	180.6	174.96	-10,604.9	443.4	3,753.5	3,579.2	174.30	21.534	
18,400.0	7,650.0	22,108.8	11,386.0	180.1	182.2	174.96	-10,704.9	444.2	3,753.5	3,577.7	175.87	21.342	
18,500.0	7,650.0	22,208.8	11,386.0	181.7	183.8	174.96	-10,804.9	445.0	3,753.5	3,576.1	177.45	21.153	
18,600.0	7,650.0	22,308.8	11,386.0	183.3	185.4	174.96	-10,904.9	445.8	3,753.5	3,574.5	179.02	20.967	
18,700.0	7,650.0	22,408.8	11,386.0	185.0	187.0	174.96	-11,004.9	446.6	3,753.5	3,572.9	180.59	20.785	
18,800.0	7,650.0	22,508.8	11,386.0	186.6	188.6	174.96	-11,104.9	447.5	3,753.5	3,571.4	182.16	20.605	
18,900.0	7,650.0	22,608.8	11,386.0	188.2	190.3	174.96	-11,204.9	448.3	3,753.5	3,569.8	183.74	20.429	
19,000.0	7,650.0	22,708.8	11,386.0	189.9	191.9	174.96	-11,304.9	449.1	3,753.5	3,568.2	185.31	20.255	
19,100.0	7,650.0	22,808.8	11,386.0	191.5	193.5	174.96	-11,404.9	449.9	3,753.5	3,566.6	186.88	20.085	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #204H - 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
19,200.0	7,650.0	22,908.8	11,386.0	193.1	195.1	174.96	-11,504.9	450.7	3,753.5	3,565.1	188.46	19.917	
19,300.0	7,650.0	23,008.8	11,386.0	194.8	196.7	174.96	-11,604.9	451.6	3,753.5	3,563.5	190.03	19.752	
19,400.0	7,650.0	23,108.8	11,386.0	196.4	198.3	174.96	-11,704.9	452.4	3,753.5	3,561.9	191.61	19.590	
19,500.0	7,650.0	23,208.8	11,386.0	198.1	200.0	174.96	-11,804.9	453.2	3,753.5	3,560.4	193.18	19.430	
19,600.0	7,650.0	23,308.8	11,386.0	199.7	201.6	174.96	-11,904.9	454.0	3,753.5	3,558.8	194.76	19.273	
19,700.0	7,650.0	23,408.8	11,386.0	201.3	203.2	174.96	-12,004.9	454.9	3,753.5	3,557.2	196.33	19.118	
19,800.0	7,650.0	23,508.8	11,386.0	203.0	204.8	174.96	-12,104.9	455.7	3,753.5	3,555.6	197.91	18.966	
19,900.0	7,650.0	23,608.8	11,386.0	204.6	206.4	174.96	-12,204.9	456.5	3,753.5	3,554.1	199.48	18.816	
20,000.0	7,650.0	23,708.8	11,386.0	206.2	208.1	174.96	-12,304.8	457.3	3,753.5	3,552.5	201.06	18.669	
20,100.0	7,650.0	23,705.7	11,386.0	207.9	208.0	174.96	-12,301.7	457.3	3,754.9	3,553.4	201.58	18.627	
20,139.1	7,650.0	23,705.7	11,386.0	208.5	208.0	174.96	-12,301.7	457.3	3,756.2	3,554.5	201.77	18.617	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #218H - 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	4.0	-4.0	0.0	0.0	89.61	1.7	250.1	250.1				
100.0	100.0	104.0	96.0	0.1	0.1	89.61	1.7	250.1	250.1	249.8	0.27	917.986	
200.0	200.0	204.0	196.0	0.5	0.5	89.61	1.7	250.1	250.1	249.1	0.99	252.779	
300.0	300.0	304.0	296.0	0.8	0.9	89.61	1.7	250.1	250.1	248.4	1.71	146.569	
400.0	400.0	404.0	396.0	1.2	1.2	89.61	1.7	250.1	250.1	247.7	2.42	103.206	
500.0	500.0	504.0	496.0	1.6	1.6	89.61	1.7	250.1	250.1	247.0	3.14	79.643	
600.0	600.0	604.0	596.0	1.9	1.9	19.29	1.7	250.1	249.3	245.4	3.85	64.717	
700.0	700.0	704.0	696.0	2.3	2.3	19.50	1.7	250.1	246.8	242.2	4.56	54.113	
800.0	799.9	804.1	795.9	2.6	2.7	19.86	1.7	250.1	242.7	237.4	5.27	46.026	
900.0	899.7	904.3	895.7	3.0	3.0	20.38	1.7	250.1	237.0	231.0	5.99	39.577	
1,000.0	999.4	1,004.6	995.4	3.3	3.4	21.09	1.7	250.1	229.6	222.9	6.70	34.252	
1,100.0	1,098.9	1,105.1	1,094.9	3.7	3.7	22.02	1.7	250.1	220.7	213.3	7.42	29.732	
1,200.0	1,198.3	1,205.7	1,194.3	4.1	4.1	23.22	1.7	250.1	210.2	202.1	8.14	25.813	
1,300.0	1,297.4	1,306.6	1,293.4	4.5	4.5	24.75	1.7	250.1	198.3	189.4	8.87	22.354	
1,400.0	1,396.4	1,407.6	1,392.4	4.9	4.8	26.55	1.7	250.1	185.7	176.1	9.60	19.347	
1,500.0	1,495.5	1,508.5	1,491.5	5.3	5.2	28.60	1.7	250.1	173.4	163.0	10.33	16.780	
1,600.0	1,594.5	1,609.5	1,590.5	5.7	5.5	30.96	1.7	250.1	161.3	150.2	11.07	14.569	
1,700.0	1,693.5	1,689.5	1,689.5	6.1	5.8	33.70	1.7	250.1	149.5	137.7	11.74	12.735	
1,800.0	1,792.5	1,788.5	1,788.5	6.5	6.2	36.89	1.7	250.1	138.1	125.6	12.48	11.063	
1,900.0	1,891.6	1,887.6	1,887.6	6.9	6.5	40.64	1.7	250.1	127.2	113.9	13.23	9.611	
2,000.0	1,990.6	1,986.6	1,986.6	7.3	6.9	45.07	1.7	250.1	116.9	102.9	13.99	8.353	
2,100.0	2,089.6	2,085.6	2,085.6	7.7	7.2	50.30	1.7	250.1	107.5	92.7	14.77	7.275	
2,200.0	2,188.6	2,184.6	2,184.6	8.1	7.6	56.46	1.7	250.1	99.1	83.5	15.57	6.367	
2,300.0	2,287.7	2,283.7	2,283.7	8.5	8.0	63.64	1.7	250.1	92.1	75.7	16.37	5.624	
2,400.0	2,386.7	2,382.7	2,382.7	8.9	8.3	71.83	1.7	250.1	86.8	69.6	17.19	5.047	
2,500.0	2,485.7	2,481.7	2,481.7	9.4	8.7	80.86	1.7	250.1	83.4	65.4	18.00	4.634	
2,596.1	2,580.9	2,576.9	2,576.9	9.8	9.0	90.00	1.7	250.1	82.4	63.6	18.77	4.388	
2,600.0	2,584.8	2,580.8	2,580.8	9.8	9.0	90.37	1.7	250.1	82.4	63.6	18.80	4.381	
2,700.0	2,683.8	2,679.8	2,679.8	10.2	9.4	99.86	1.7	250.1	83.6	64.1	19.56	4.275	
2,800.0	2,782.8	2,778.8	2,778.8	10.6	9.7	108.84	1.7	250.1	87.1	66.8	20.28	4.295	
2,900.0	2,881.8	2,877.8	2,877.8	11.0	10.1	116.95	1.7	250.1	92.6	71.6	20.98	4.413	
3,000.0	2,980.9	2,976.9	2,976.9	11.4	10.4	124.05	1.7	250.1	99.7	78.1	21.66	4.604	
3,100.0	3,079.9	3,076.8	3,076.8	11.9	10.8	129.98	1.9	250.6	107.8	85.5	22.33	4.829	
3,200.0	3,178.9	3,177.5	3,177.4	12.3	11.1	134.47	2.6	252.7	115.7	92.7	23.02	5.028	
3,300.0	3,277.9	3,278.5	3,278.4	12.7	11.5	137.84	4.0	256.5	122.9	99.2	23.71	5.185	
3,400.0	3,377.0	3,379.8	3,379.6	13.1	11.9	140.32	5.9	261.9	129.2	104.7	24.42	5.290	
3,500.0	3,476.0	3,481.5	3,480.9	13.5	12.2	142.11	8.5	269.1	134.2	109.0	25.13	5.340	
3,600.0	3,575.0	3,583.3	3,582.3	13.9	12.6	143.33	11.7	278.0	137.9	112.0	25.84	5.336	
3,700.0	3,674.0	3,685.2	3,683.6	14.4	12.9	144.06	15.5	288.6	140.2	113.6	26.56	5.278	
3,800.0	3,773.1	3,787.3	3,784.8	14.8	13.3	144.34	19.9	300.9	141.1	113.8	27.29	5.171	
3,900.0	3,872.1	3,887.5	3,884.1	15.2	13.7	144.35	24.6	314.0	141.1	113.1	28.03	5.033	
4,000.0	3,971.1	3,987.5	3,983.1	15.6	14.0	144.36	29.3	327.1	141.1	112.3	28.78	4.902	
4,100.0	4,070.2	4,087.5	4,082.1	16.0	14.4	144.37	34.0	340.2	141.1	111.5	29.53	4.777	
4,200.0	4,169.2	4,187.5	4,181.2	16.4	14.8	144.37	38.7	353.4	141.0	110.8	30.28	4.658	
4,300.0	4,268.2	4,287.5	4,280.2	16.9	15.2	144.38	43.4	366.5	141.0	110.0	31.03	4.544	
4,400.0	4,367.2	4,387.5	4,379.2	17.3	15.5	144.39	48.1	379.6	141.0	109.2	31.79	4.436	
4,500.0	4,466.3	4,487.5	4,478.2	17.7	15.9	144.40	52.8	392.7	141.0	108.5	32.54	4.332	
4,600.0	4,565.3	4,587.5	4,577.3	18.1	16.3	144.41	57.5	405.8	141.0	107.7	33.30	4.234	
4,700.0	4,664.3	4,687.5	4,676.3	18.5	16.7	144.42	62.2	418.9	141.0	106.9	34.06	4.139	
4,800.0	4,763.3	4,787.5	4,775.3	19.0	17.1	144.42	66.9	432.0	141.0	106.1	34.82	4.048	
4,900.0	4,862.4	4,887.5	4,874.3	19.4	17.5	144.43	71.6	445.1	140.9	105.4	35.58	3.961	
5,000.0	4,961.4	4,987.5	4,973.4	19.8	17.8	144.44	76.3	458.2	140.9	104.6	36.34	3.878	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #218H - 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	5,060.4	5,087.5	5,072.4	20.2	18.2	144.45	81.0	471.3	140.9	103.8	37.10	3.798	
5,200.0	5,159.4	5,187.5	5,171.4	20.6	18.6	144.46	85.6	484.4	140.9	103.0	37.86	3.721	
5,300.0	5,258.5	5,287.5	5,270.5	21.0	19.0	144.47	90.3	497.5	140.9	102.3	38.63	3.647	
5,400.0	5,357.5	5,387.5	5,369.5	21.5	19.4	144.47	95.0	510.6	140.9	101.5	39.39	3.576	
5,500.0	5,456.5	5,487.5	5,468.5	21.9	19.8	144.48	99.7	523.7	140.8	100.7	40.15	3.508	
5,600.0	5,555.6	5,587.5	5,567.5	22.3	20.2	144.49	104.4	536.8	140.8	99.9	40.92	3.442	
5,700.0	5,654.6	5,687.5	5,666.6	22.7	20.6	144.50	109.1	549.9	140.8	99.1	41.68	3.378	
5,800.0	5,753.6	5,787.5	5,765.6	23.1	21.0	144.51	113.8	563.0	140.8	98.4	42.45	3.317	
5,868.5	5,821.4	5,856.0	5,833.4	23.4	21.3	144.51	117.0	571.9	140.8	97.8	42.98	3.276	
5,900.0	5,852.7	5,887.5	5,864.6	23.6	21.4	144.49	118.5	576.1	140.7	97.5	43.22	3.255	
6,000.0	5,952.0	5,987.5	5,963.6	24.0	21.8	143.97	123.2	589.2	138.9	94.9	44.00	3.157	
6,100.0	6,051.5	6,087.4	6,062.5	24.4	22.2	142.76	127.9	602.3	135.1	90.3	44.81	3.015	
6,200.0	6,151.3	6,187.1	6,161.3	24.7	22.6	140.74	132.6	615.3	129.3	83.6	45.66	2.832	
6,300.0	6,251.2	6,286.6	6,259.8	25.1	23.0	137.71	137.3	628.4	121.7	75.2	46.55	2.615	
6,401.8	6,353.0	6,387.6	6,359.8	25.4	23.4	-156.38	142.0	641.6	112.5	65.0	47.51	2.368	
6,500.0	6,451.2	6,484.8	6,456.1	25.7	23.8	-161.85	146.6	654.3	103.6	55.1	48.48	2.136	
6,600.0	6,551.2	6,583.9	6,554.2	26.0	24.2	-168.41	151.2	667.3	95.6	46.1	49.51	1.931	
6,700.0	6,651.2	6,682.9	6,652.2	26.3	24.6	-176.01	155.9	680.3	89.1	38.6	50.53	1.763	
6,800.0	6,751.2	6,781.9	6,750.3	26.6	25.0	175.39	160.5	693.3	84.4	32.9	51.50	1.639	
6,900.0	6,851.2	6,880.9	6,848.4	27.0	25.4	166.03	165.2	706.2	81.9	29.5	52.34	1.564	
6,959.5	6,910.7	6,939.9	6,906.7	27.1	25.6	160.28	167.9	713.9	81.5	28.7	52.77	1.544	
7,000.0	6,951.2	6,980.0	6,946.4	27.3	25.8	156.36	169.8	719.2	81.6	28.6	53.02	1.540	
7,100.0	7,051.2	7,079.0	7,044.5	27.6	26.2	146.91	174.5	732.2	83.8	30.2	53.54	1.565	
7,125.8	7,077.0	7,104.5	7,069.8	27.7	26.3	144.57	175.7	735.5	84.7	31.0	53.65	1.578	
7,150.0	7,101.2	7,128.5	7,093.5	27.7	26.4	-37.55	176.8	738.7	85.3	31.5	53.73	1.587	
7,200.0	7,151.0	7,177.6	7,142.1	27.9	26.6	-43.73	179.1	745.1	84.5	30.7	53.81	1.571	
7,250.0	7,200.2	7,226.0	7,190.0	28.0	26.8	-52.19	181.4	751.4	82.1	28.4	53.69	1.529	
7,300.0	7,248.5	7,273.2	7,236.8	28.1	27.0	-63.28	183.6	757.6	79.5	26.1	53.35	1.490	Level 3
7,331.3	7,278.2	7,302.0	7,265.4	28.2	27.1	-71.46	184.9	761.4	78.8	25.8	53.04	1.486	Level 3, CC, ES, SF
7,350.0	7,295.5	7,318.9	7,282.1	28.3	27.2	-76.66	185.7	763.6	79.1	26.2	52.87	1.497	Level 3
7,400.0	7,340.9	7,362.8	7,325.6	28.4	27.4	-90.86	187.8	769.4	83.8	31.2	52.60	1.593	
7,450.0	7,384.2	7,404.6	7,366.9	28.4	27.5	-103.82	189.7	774.8	95.5	42.6	52.86	1.806	
7,500.0	7,425.2	7,443.8	7,405.8	28.5	27.7	-114.20	191.6	780.0	114.5	61.0	53.52	2.140	
7,550.0	7,463.5	7,480.3	7,441.9	28.6	27.8	-121.76	193.3	784.7	140.0	85.7	54.28	2.580	
7,600.0	7,498.9	7,513.7	7,475.0	28.7	28.0	-126.85	194.9	789.1	170.8	115.9	54.97	3.108	
7,650.0	7,531.1	7,543.8	7,504.8	28.7	28.1	-129.89	196.3	793.1	205.9	150.4	55.53	3.708	
7,700.0	7,559.8	7,570.3	7,531.1	28.8	28.2	-131.13	197.5	796.5	244.5	188.5	55.99	4.367	
7,750.0	7,584.9	7,606.9	7,553.6	28.8	28.4	-130.62	198.6	799.5	285.9	229.5	56.41	5.069	
7,800.0	7,606.0	7,612.0	7,572.3	28.9	28.4	-128.14	199.5	802.0	329.7	273.1	56.65	5.820	
7,850.0	7,623.2	7,626.8	7,587.0	28.9	28.4	-123.12	200.2	803.9	375.3	318.5	56.89	6.598	
7,900.0	7,636.2	7,637.5	7,597.5	29.0	28.5	-114.50	200.7	805.3	422.4	365.3	57.07	7.401	
7,950.0	7,645.0	7,643.8	7,603.8	29.1	28.5	-100.89	201.0	806.2	470.3	413.1	57.20	8.222	
8,000.0	7,649.4	7,645.9	7,605.9	29.2	28.5	-82.01	201.1	806.4	518.8	461.5	57.30	9.055	
8,025.8	7,650.0	7,645.3	7,605.3	29.3	28.5	-71.23	201.0	806.4	543.9	486.6	57.33	9.486	
8,039.4	7,650.0	7,644.6	7,604.6	29.4	28.5	-71.32	201.0	806.3	557.2	499.8	57.35	9.715	
8,100.0	7,650.0	7,641.9	7,601.9	29.6	28.5	-70.11	200.9	805.9	616.2	558.8	57.41	10.733	
8,200.0	7,650.0	7,637.3	7,597.3	30.0	28.5	-68.15	200.7	805.3	714.3	656.8	57.49	12.424	
8,300.0	7,650.0	7,632.7	7,592.8	30.6	28.5	-66.22	200.5	804.7	812.8	755.3	57.54	14.125	
8,400.0	7,650.0	7,628.1	7,588.3	31.2	28.4	-64.33	200.2	804.1	911.6	854.0	57.58	15.831	
8,500.0	7,650.0	7,623.5	7,583.7	31.9	28.4	-62.48	200.0	803.5	1,010.6	953.0	57.61	17.543	
8,600.0	7,650.0	7,618.9	7,579.2	32.7	28.4	-60.66	199.8	802.9	1,109.8	1,052.2	57.63	19.257	
8,700.0	7,650.0	7,614.3	7,574.6	33.5	28.4	-58.90	199.6	802.3	1,209.1	1,151.5	57.65	20.974	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #218H - 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
8,800.0	7,650.0	7,609.8	7,570.1	34.4	28.4	-57.18	199.4	801.7	1,308.5	1,250.8	57.66	22.694	
8,900.0	7,650.0	7,605.2	7,565.5	35.4	28.3	-55.51	199.2	801.1	1,408.0	1,350.3	57.67	24.415	
9,000.0	7,650.0	7,600.6	7,561.0	36.4	28.3	-53.88	199.0	800.5	1,507.5	1,449.8	57.68	26.137	
9,100.0	7,650.0	7,604.0	7,556.5	37.4	28.3	-52.31	198.7	799.9	1,607.0	1,549.3	57.72	27.844	
9,200.0	7,650.0	7,608.6	7,551.9	38.5	28.4	-50.78	198.5	799.3	1,706.6	1,648.9	57.76	29.548	
9,300.0	7,650.0	7,586.8	7,547.4	39.6	28.3	-49.30	198.3	798.7	1,806.3	1,748.6	57.70	31.307	
9,400.0	7,650.0	7,582.2	7,542.8	40.8	28.3	-47.87	198.1	798.1	1,905.9	1,848.2	57.70	33.032	
9,500.0	7,650.0	7,577.7	7,538.3	42.0	28.2	-46.49	197.9	797.5	2,005.6	1,947.9	57.71	34.756	
9,600.0	7,650.0	7,573.1	7,533.8	43.2	28.2	-45.15	197.7	796.9	2,105.3	2,047.6	57.71	36.481	
9,700.0	7,650.0	7,568.5	7,529.2	44.5	28.2	-43.86	197.4	796.3	2,205.0	2,147.3	57.72	38.205	
9,800.0	7,650.0	7,563.9	7,524.7	45.8	28.2	-42.62	197.2	795.7	2,304.8	2,247.1	57.72	39.929	
9,900.0	7,650.0	7,559.3	7,520.1	47.1	28.2	-41.42	197.0	795.1	2,404.5	2,346.8	57.73	41.653	
10,000.0	7,650.0	7,554.7	7,515.6	48.4	28.1	-40.26	196.8	794.5	2,504.3	2,446.6	57.73	43.376	
10,100.0	7,650.0	7,550.1	7,511.0	49.7	28.1	-39.14	196.6	793.9	2,604.1	2,546.3	57.74	45.099	
10,200.0	7,650.0	7,545.5	7,506.5	51.1	28.1	-38.06	196.4	793.3	2,703.9	2,646.1	57.75	46.821	
10,300.0	7,650.0	7,541.0	7,502.0	52.5	28.1	-37.02	196.2	792.7	2,803.6	2,745.9	57.76	48.542	
10,400.0	7,650.0	7,536.4	7,497.4	53.9	28.1	-36.02	195.9	792.1	2,903.4	2,845.7	57.77	50.263	
10,500.0	7,650.0	7,531.8	7,492.9	55.3	28.0	-35.05	195.7	791.5	3,003.2	2,945.5	57.77	51.982	
10,600.0	7,650.0	7,527.2	7,488.3	56.7	28.0	-34.12	195.5	790.9	3,103.0	3,045.3	57.78	53.700	
10,700.0	7,650.0	7,522.6	7,483.8	58.1	28.0	-33.21	195.3	790.3	3,202.9	3,145.1	57.80	55.417	
10,800.0	7,650.0	7,518.0	7,479.2	59.6	28.0	-32.35	195.1	789.7	3,302.7	3,244.9	57.81	57.133	
10,900.0	7,650.0	7,513.4	7,474.7	61.0	28.0	-31.51	194.9	789.1	3,402.5	3,344.7	57.82	58.848	
11,000.0	7,650.0	7,508.9	7,470.2	62.5	28.0	-30.70	194.6	788.5	3,502.3	3,444.5	57.83	60.561	
11,100.0	7,650.0	7,504.3	7,465.6	63.9	27.9	-29.92	194.4	787.9	3,602.2	3,544.3	57.84	62.273	
11,200.0	7,650.0	7,500.3	7,461.1	65.4	27.9	-29.16	194.2	787.3	3,702.0	3,644.1	57.86	63.980	
11,300.0	7,650.0	7,504.9	7,456.5	66.9	27.9	-28.43	194.0	786.7	3,801.8	3,743.9	57.91	65.647	
11,400.0	7,650.0	7,509.5	7,452.0	68.4	28.0	-27.73	193.8	786.1	3,901.7	3,843.7	57.97	67.310	
11,500.0	7,650.0	15,459.9	11,606.0	69.9	76.4	-175.23	-3,799.7	1,047.3	3,973.7	3,905.5	68.27	58.206	
11,600.0	7,650.0	15,559.9	11,606.0	71.4	77.8	-175.23	-3,899.7	1,048.1	3,973.7	3,904.0	69.74	56.979	
11,700.0	7,650.0	15,659.9	11,606.0	72.9	79.2	-175.23	-3,999.7	1,049.0	3,973.7	3,902.5	71.21	55.799	
11,800.0	7,650.0	15,759.9	11,606.0	74.5	80.6	-175.23	-4,099.7	1,049.8	3,973.7	3,901.0	72.69	54.664	
11,900.0	7,650.0	15,859.9	11,606.0	76.0	82.0	-175.23	-4,199.7	1,050.6	3,973.7	3,899.6	74.18	53.570	
12,000.0	7,650.0	15,959.9	11,606.0	77.5	83.4	-175.23	-4,299.7	1,051.4	3,973.7	3,898.1	75.67	52.517	
12,100.0	7,650.0	16,059.9	11,606.0	79.1	84.9	-175.23	-4,399.7	1,052.2	3,973.7	3,896.6	77.16	51.502	
12,200.0	7,650.0	16,159.9	11,606.0	80.6	86.3	-175.23	-4,499.7	1,053.1	3,973.7	3,895.1	78.65	50.523	
12,300.0	7,650.0	16,259.9	11,606.0	82.2	87.8	-175.23	-4,599.7	1,053.9	3,973.7	3,893.6	80.15	49.579	
12,400.0	7,650.0	16,359.9	11,606.0	83.7	89.2	-175.23	-4,699.7	1,054.7	3,973.7	3,892.1	81.65	48.667	
12,500.0	7,650.0	16,459.9	11,606.0	85.3	90.7	-175.23	-4,799.7	1,055.5	3,973.7	3,890.6	83.16	47.786	
12,600.0	7,650.0	16,559.9	11,606.0	86.8	92.1	-175.23	-4,899.7	1,056.4	3,973.7	3,889.1	84.66	46.935	
12,700.0	7,650.0	16,659.9	11,606.0	88.4	93.6	-175.23	-4,999.7	1,057.2	3,973.7	3,887.6	86.18	46.112	
12,800.0	7,650.0	16,759.9	11,606.0	89.9	95.1	-175.23	-5,099.7	1,058.0	3,973.7	3,886.1	87.69	45.317	
12,900.0	7,650.0	16,859.9	11,606.0	91.5	96.6	-175.23	-5,199.7	1,058.8	3,973.7	3,884.5	89.20	44.547	
13,000.0	7,650.0	16,959.9	11,606.0	93.1	98.0	-175.23	-5,299.7	1,059.7	3,973.7	3,883.0	90.72	43.801	
13,100.0	7,650.0	17,059.9	11,606.0	94.7	99.5	-175.23	-5,399.7	1,060.5	3,973.7	3,881.5	92.24	43.079	
13,200.0	7,650.0	17,159.9	11,606.0	96.2	101.0	-175.23	-5,499.7	1,061.3	3,973.7	3,880.0	93.77	42.380	
13,300.0	7,650.0	17,259.9	11,606.0	97.8	102.5	-175.23	-5,599.7	1,062.1	3,973.7	3,878.4	95.29	41.702	
13,400.0	7,650.0	17,359.9	11,606.0	99.4	104.0	-175.23	-5,699.6	1,062.9	3,973.7	3,876.9	96.82	41.044	
13,500.0	7,650.0	17,459.9	11,606.0	101.0	105.6	-175.23	-5,799.6	1,063.8	3,973.7	3,875.4	98.34	40.406	
13,600.0	7,650.0	17,559.9	11,606.0	102.6	107.1	-175.23	-5,899.6	1,064.6	3,973.7	3,873.9	99.88	39.787	
13,700.0	7,650.0	17,659.9	11,606.0	104.1	108.6	-175.23	-5,999.6	1,065.4	3,973.7	3,872.3	101.41	39.186	
13,800.0	7,650.0	17,759.9	11,606.0	105.7	110.1	-175.23	-6,099.6	1,066.2	3,973.7	3,870.8	102.94	38.602	
13,900.0	7,650.0	17,859.9	11,606.0	107.3	111.6	-175.23	-6,199.6	1,067.1	3,973.7	3,869.3	104.48	38.035	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #218H - 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	7,650.0	17,959.9	11,606.0	108.9	113.2	-175.23	-6,299.6	1,067.9	3,973.7	3,867.7	106.01	37.484	
14,100.0	7,650.0	18,059.9	11,606.0	110.5	114.7	-175.23	-6,399.6	1,068.7	3,973.7	3,866.2	107.55	36.948	
14,200.0	7,650.0	18,159.9	11,606.0	112.1	116.2	-175.23	-6,499.6	1,069.5	3,973.7	3,864.6	109.09	36.426	
14,300.0	7,650.0	18,259.9	11,606.0	113.7	117.8	-175.23	-6,599.6	1,070.3	3,973.7	3,863.1	110.63	35.919	
14,400.0	7,650.0	18,359.9	11,606.0	115.3	119.3	-175.23	-6,699.6	1,071.2	3,973.7	3,861.6	112.17	35.425	
14,500.0	7,650.0	18,459.9	11,606.0	116.9	120.9	-175.23	-6,799.6	1,072.0	3,973.7	3,860.0	113.72	34.944	
14,600.0	7,650.0	18,559.9	11,606.0	118.5	122.4	-175.23	-6,899.6	1,072.8	3,973.7	3,858.5	115.26	34.476	
14,700.0	7,650.0	18,659.9	11,606.0	120.1	124.0	-175.23	-6,999.6	1,073.6	3,973.7	3,856.9	116.81	34.020	
14,800.0	7,650.0	18,759.9	11,606.0	121.7	125.5	-175.23	-7,099.6	1,074.5	3,973.7	3,855.4	118.35	33.575	
14,900.0	7,650.0	18,859.9	11,606.0	123.3	127.1	-175.23	-7,199.6	1,075.3	3,973.7	3,853.8	119.90	33.142	
15,000.0	7,650.0	18,959.9	11,606.0	124.9	128.6	-175.23	-7,299.6	1,076.1	3,973.7	3,852.3	121.45	32.719	
15,100.0	7,650.0	19,059.9	11,606.0	126.5	130.2	-175.23	-7,399.6	1,076.9	3,973.7	3,850.7	123.00	32.307	
15,200.0	7,650.0	19,159.9	11,606.0	128.2	131.8	-175.23	-7,499.6	1,077.7	3,973.7	3,849.2	124.55	31.904	
15,300.0	7,650.0	19,259.9	11,606.0	129.8	133.3	-175.24	-7,599.6	1,078.6	3,973.7	3,847.6	126.10	31.512	
15,400.0	7,650.0	19,359.9	11,606.0	131.4	134.9	-175.24	-7,699.6	1,079.4	3,973.7	3,846.1	127.66	31.129	
15,500.0	7,650.0	19,459.9	11,606.0	133.0	136.5	-175.24	-7,799.6	1,080.2	3,973.7	3,844.5	129.21	30.754	
15,600.0	7,650.0	19,559.9	11,606.0	134.6	138.0	-175.24	-7,899.6	1,081.0	3,973.7	3,843.0	130.76	30.389	
15,700.0	7,650.0	19,659.9	11,606.0	136.2	139.6	-175.24	-7,999.6	1,081.9	3,973.7	3,841.4	132.32	30.032	
15,800.0	7,650.0	19,759.9	11,606.0	137.8	141.2	-175.24	-8,099.6	1,082.7	3,973.7	3,839.9	133.87	29.683	
15,900.0	7,650.0	19,859.9	11,606.0	139.5	142.8	-175.24	-8,199.6	1,083.5	3,973.7	3,838.3	135.43	29.342	
16,000.0	7,650.0	19,959.9	11,606.0	141.1	144.3	-175.24	-8,299.6	1,084.3	3,973.7	3,836.7	136.99	29.008	
16,100.0	7,650.0	20,059.9	11,606.0	142.7	145.9	-175.24	-8,399.6	1,085.1	3,973.7	3,835.2	138.55	28.682	
16,200.0	7,650.0	20,159.9	11,606.0	144.3	147.5	-175.24	-8,499.6	1,086.0	3,973.7	3,833.6	140.10	28.363	
16,300.0	7,650.0	20,259.9	11,606.0	145.9	149.1	-175.24	-8,599.5	1,086.8	3,973.7	3,832.1	141.66	28.051	
16,400.0	7,650.0	20,359.9	11,606.0	147.6	150.7	-175.24	-8,699.5	1,087.6	3,973.7	3,830.5	143.22	27.745	
16,500.0	7,650.0	20,459.9	11,606.0	149.2	152.3	-175.24	-8,799.5	1,088.4	3,973.7	3,828.9	144.78	27.446	
16,600.0	7,650.0	20,559.9	11,606.0	150.8	153.9	-175.24	-8,899.5	1,089.3	3,973.7	3,827.4	146.34	27.153	
16,700.0	7,650.0	20,659.9	11,606.0	152.4	155.4	-175.24	-8,999.5	1,090.1	3,973.7	3,825.8	147.91	26.867	
16,800.0	7,650.0	20,759.9	11,606.0	154.0	157.0	-175.24	-9,099.5	1,090.9	3,973.7	3,824.3	149.47	26.586	
16,900.0	7,650.0	20,859.9	11,606.0	155.7	158.6	-175.24	-9,199.5	1,091.7	3,973.7	3,822.7	151.03	26.311	
17,000.0	7,650.0	20,959.9	11,606.0	157.3	160.2	-175.24	-9,299.5	1,092.5	3,973.7	3,821.1	152.59	26.041	
17,100.0	7,650.0	21,059.9	11,606.0	158.9	161.8	-175.24	-9,399.5	1,093.4	3,973.7	3,819.6	154.16	25.777	
17,200.0	7,650.0	21,159.9	11,606.0	160.5	163.4	-175.24	-9,499.5	1,094.2	3,973.7	3,818.0	155.72	25.518	
17,300.0	7,650.0	21,259.9	11,606.0	162.2	165.0	-175.24	-9,599.5	1,095.0	3,973.7	3,816.4	157.29	25.264	
17,400.0	7,650.0	21,359.9	11,606.0	163.8	166.6	-175.24	-9,699.5	1,095.8	3,973.7	3,814.9	158.85	25.015	
17,500.0	7,650.0	21,459.9	11,606.0	165.4	168.2	-175.24	-9,799.5	1,096.7	3,973.7	3,813.3	160.42	24.771	
17,600.0	7,650.0	21,559.9	11,606.0	167.0	169.8	-175.24	-9,899.5	1,097.5	3,973.7	3,811.7	161.98	24.532	
17,700.0	7,650.0	21,659.9	11,606.0	168.7	171.4	-175.24	-9,999.5	1,098.3	3,973.7	3,810.2	163.55	24.297	
17,800.0	7,650.0	21,759.9	11,606.0	170.3	173.0	-175.24	-10,099.5	1,099.1	3,973.7	3,808.6	165.12	24.066	
17,900.0	7,650.0	21,859.9	11,606.0	171.9	174.6	-175.24	-10,199.5	1,099.9	3,973.7	3,807.0	166.68	23.840	
18,000.0	7,650.0	21,959.9	11,606.0	173.6	176.2	-175.24	-10,299.5	1,100.8	3,973.7	3,805.5	168.25	23.618	
18,100.0	7,650.0	22,059.9	11,606.0	175.2	177.8	-175.24	-10,399.5	1,101.6	3,973.7	3,803.9	169.82	23.400	
18,200.0	7,650.0	22,159.9	11,606.0	176.8	179.4	-175.24	-10,499.5	1,102.4	3,973.7	3,802.3	171.39	23.186	
18,300.0	7,650.0	22,259.9	11,606.0	178.5	181.0	-175.24	-10,599.5	1,103.2	3,973.7	3,800.8	172.95	22.976	
18,400.0	7,650.0	22,359.9	11,606.0	180.1	182.6	-175.24	-10,699.5	1,104.1	3,973.7	3,799.2	174.52	22.769	
18,500.0	7,650.0	22,459.9	11,606.0	181.7	184.2	-175.24	-10,799.5	1,104.9	3,973.7	3,797.6	176.09	22.566	
18,600.0	7,650.0	22,559.9	11,606.0	183.3	185.8	-175.24	-10,899.5	1,105.7	3,973.7	3,796.1	177.66	22.367	
18,700.0	7,650.0	22,659.9	11,606.0	185.0	187.5	-175.24	-10,999.5	1,106.5	3,973.7	3,794.5	179.23	22.171	
18,800.0	7,650.0	22,759.9	11,606.0	186.6	189.1	-175.24	-11,099.5	1,107.4	3,973.7	3,792.9	180.80	21.978	
18,900.0	7,650.0	22,859.9	11,606.0	188.2	190.7	-175.24	-11,199.5	1,108.2	3,973.7	3,791.4	182.37	21.789	
19,000.0	7,650.0	22,959.9	11,606.0	189.9	192.3	-175.24	-11,299.5	1,109.0	3,973.7	3,789.8	183.94	21.603	
19,100.0	7,650.0	23,059.9	11,606.0	191.5	193.9	-175.24	-11,399.5	1,109.8	3,973.7	3,788.2	185.51	21.420	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #218H - 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
19,200.0	7,650.0	23,159.9	11,606.0	193.1	195.5	-175.24	-11,499.5	1,110.6	3,973.7	3,786.6	187.09	21.240	
19,300.0	7,650.0	23,259.9	11,606.0	194.8	197.1	-175.24	-11,599.4	1,111.5	3,973.7	3,785.1	188.66	21.063	
19,400.0	7,650.0	23,359.9	11,606.0	196.4	198.7	-175.24	-11,699.4	1,112.3	3,973.7	3,783.5	190.23	20.889	
19,500.0	7,650.0	23,459.9	11,606.0	198.1	200.4	-175.24	-11,799.4	1,113.1	3,973.7	3,781.9	191.80	20.718	
19,600.0	7,650.0	23,559.9	11,606.0	199.7	202.0	-175.24	-11,899.4	1,113.9	3,973.7	3,780.3	193.37	20.549	
19,700.0	7,650.0	23,659.9	11,606.0	201.3	203.6	-175.24	-11,999.4	1,114.8	3,973.7	3,778.8	194.95	20.384	
19,800.0	7,650.0	23,759.9	11,606.0	203.0	205.2	-175.24	-12,099.4	1,115.6	3,973.7	3,777.2	196.52	20.220	
19,900.0	7,650.0	23,859.9	11,606.0	204.6	206.8	-175.24	-12,199.4	1,116.4	3,973.7	3,775.6	198.09	20.060	
20,000.0	7,650.0	23,959.9	11,606.0	206.2	208.4	-175.24	-12,299.4	1,117.2	3,973.7	3,774.1	199.67	19.902	
20,004.1	7,650.0	23,963.9	11,606.0	206.3	208.5	-175.24	-12,303.5	1,117.3	3,973.7	3,774.0	199.73	19.895	
20,100.0	7,650.0	23,958.1	11,606.0	207.9	208.4	-175.24	-12,297.7	1,117.2	3,975.0	3,774.7	200.34	19.841	
20,139.1	7,650.0	23,958.1	11,606.0	208.5	208.4	-175.24	-12,297.7	1,117.2	3,976.2	3,775.6	200.58	19.823	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #224H - 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	2.0	-2.0	0.0	0.0	77.55	30.9	139.9	143.2				
100.0	100.0	102.0	98.0	0.1	0.1	77.55	30.9	139.9	143.2	143.0	0.26	543.603	
200.0	200.0	202.0	198.0	0.5	0.5	77.55	30.9	139.9	143.2	142.2	0.98	146.087	
300.0	300.0	302.0	298.0	0.8	0.9	77.55	30.9	139.9	143.2	141.5	1.70	84.382	
400.0	400.0	402.0	398.0	1.2	1.2	77.55	30.9	139.9	143.2	140.8	2.41	59.324	
500.0	500.0	502.0	498.0	1.6	1.6	77.55	30.9	139.9	143.2	140.1	3.13	45.741	
600.0	600.0	602.0	598.0	1.9	1.9	7.21	30.9	139.9	142.4	138.5	3.84	37.047	
700.0	700.0	702.0	698.0	2.3	2.3	7.35	30.9	139.9	139.8	135.2	4.55	30.703	
800.0	799.9	802.1	797.9	2.6	2.6	7.59	30.9	139.9	135.4	130.2	5.26	25.728	
900.0	899.7	902.3	897.7	3.0	3.0	7.95	30.9	139.9	129.4	123.4	5.98	21.643	
1,000.0	999.4	1,002.6	997.4	3.3	3.4	8.48	30.9	139.9	121.6	114.9	6.69	18.167	
1,100.0	1,098.9	1,103.1	1,096.9	3.7	3.7	9.21	30.9	139.9	112.2	104.7	7.41	15.130	
1,200.0	1,198.3	1,203.7	1,196.3	4.1	4.1	10.26	30.9	139.9	101.0	92.9	8.13	12.418	
1,300.0	1,297.4	1,304.6	1,295.4	4.5	4.4	11.80	30.9	139.9	88.2	79.3	8.86	9.958	
1,400.0	1,396.4	1,405.6	1,394.4	4.9	4.8	13.98	30.9	139.9	74.6	65.0	9.58	7.788	
1,500.0	1,495.5	1,506.5	1,493.5	5.3	5.2	17.13	30.9	139.9	61.2	50.9	10.31	5.937	
1,600.0	1,594.5	1,607.5	1,592.5	5.7	5.5	22.02	30.9	139.9	48.0	37.0	11.04	4.352	
1,700.0	1,693.5	1,708.5	1,691.5	6.1	5.9	30.45	30.9	139.9	35.5	23.7	11.79	3.011	
1,800.0	1,792.5	1,809.5	1,790.5	6.5	6.3	47.09	30.9	139.9	24.5	11.9	12.60	1.944	
1,900.0	1,891.6	1,889.6	1,889.6	6.9	6.5	81.03	30.9	139.9	18.1	4.7	13.42	1.347	Level 3
1,920.4	1,911.8	1,909.8	1,909.8	7.0	6.6	90.00	30.9	139.9	17.9	4.3	13.59	1.314	Level 3, CC, ES, SF
2,000.0	1,990.6	1,988.6	1,988.6	7.3	6.9	121.55	30.9	139.9	21.0	6.9	14.12	1.488	Level 3
2,100.0	2,089.6	2,087.6	2,087.6	7.7	7.3	144.18	30.9	139.9	30.7	16.0	14.72	2.086	
2,200.0	2,188.6	2,186.6	2,186.6	8.1	7.6	155.13	30.9	139.9	42.8	27.4	15.38	2.783	
2,300.0	2,287.7	2,285.7	2,285.7	8.5	8.0	161.15	30.9	139.9	55.8	39.7	16.07	3.470	
2,400.0	2,386.7	2,384.7	2,384.7	8.9	8.3	164.88	30.9	139.9	69.1	52.3	16.77	4.119	
2,500.0	2,485.7	2,483.7	2,483.7	9.4	8.7	167.40	30.9	139.9	82.6	65.1	17.48	4.725	
2,600.0	2,584.8	2,582.8	2,582.8	9.8	9.0	169.20	30.9	139.9	96.2	78.0	18.20	5.289	
2,700.0	2,683.8	2,681.8	2,681.8	10.2	9.4	170.56	30.9	139.9	110.0	91.0	18.91	5.813	
2,800.0	2,782.8	2,780.8	2,780.8	10.6	9.7	171.62	30.9	139.9	123.7	104.1	19.63	6.301	
2,900.0	2,881.8	2,879.8	2,879.8	11.0	10.1	172.46	30.9	139.9	137.5	117.1	20.35	6.756	
3,000.0	2,980.9	2,978.9	2,978.9	11.4	10.4	173.16	30.9	139.9	151.3	130.2	21.07	7.181	
3,100.0	3,079.9	3,077.9	3,077.9	11.9	10.8	173.73	30.9	139.9	165.1	143.3	21.79	7.578	
3,200.0	3,178.9	3,176.9	3,176.9	12.3	11.2	174.22	30.9	139.9	179.0	156.5	22.51	7.950	
3,300.0	3,277.9	3,275.9	3,275.9	12.7	11.5	174.63	30.9	139.9	192.8	169.6	23.23	8.300	
3,400.0	3,377.0	3,375.0	3,375.0	13.1	11.9	174.99	30.9	139.9	206.7	182.7	23.95	8.628	
3,500.0	3,476.0	3,474.0	3,474.0	13.5	12.2	175.31	30.9	139.9	220.6	195.9	24.68	8.938	
3,600.0	3,575.0	3,573.0	3,573.0	13.9	12.6	175.59	30.9	139.9	234.4	209.0	25.40	9.231	
3,700.0	3,674.0	3,672.0	3,672.0	14.4	12.9	175.84	30.9	139.9	248.3	222.2	26.12	9.507	
3,800.0	3,773.1	3,771.1	3,771.1	14.8	13.3	176.06	30.9	139.9	262.2	235.4	26.84	9.768	
3,900.0	3,872.1	3,870.1	3,870.1	15.2	13.6	176.25	30.9	139.9	276.1	248.5	27.56	10.016	
4,000.0	3,971.1	3,969.1	3,969.1	15.6	14.0	176.43	30.9	139.9	290.0	261.7	28.28	10.252	
4,100.0	4,070.2	4,071.2	4,071.2	16.0	14.4	176.65	31.3	140.1	303.5	274.5	29.03	10.455	
4,200.0	4,169.2	4,174.9	4,174.9	16.4	14.7	177.05	33.2	141.2	315.7	285.9	29.78	10.601	
4,300.0	4,268.2	4,278.9	4,278.8	16.9	15.1	177.62	36.7	143.3	326.5	296.0	30.53	10.695	
4,400.0	4,367.2	4,383.1	4,382.8	17.3	15.5	178.35	41.9	146.3	335.9	304.6	31.27	10.742	
4,500.0	4,466.3	4,487.5	4,486.9	17.7	15.8	179.25	48.8	150.3	343.9	311.9	32.01	10.746	
4,600.0	4,565.3	4,591.9	4,590.9	18.1	16.2	-179.70	57.3	155.3	350.7	317.9	32.74	10.710	
4,700.0	4,664.3	4,696.4	4,694.7	18.5	16.6	-178.49	67.4	161.2	356.1	322.6	33.47	10.640	
4,800.0	4,763.3	4,800.8	4,798.2	19.0	17.0	-177.11	79.1	168.0	360.4	326.2	34.20	10.538	
4,900.0	4,862.4	4,900.3	4,896.7	19.4	17.3	-175.73	91.1	175.0	364.2	329.3	34.93	10.426	
5,000.0	4,961.4	4,999.9	4,995.3	19.8	17.7	-174.38	103.1	182.0	368.2	332.5	35.67	10.324	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #224H - 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	5,060.4	5,099.4	5,093.9	20.2	18.1	-173.06	115.0	189.0	372.4	336.0	36.41	10.230	
5,200.0	5,159.4	5,201.0	5,192.5	20.6	18.4	-171.77	127.0	195.9	376.8	339.7	37.16	10.142	
5,300.0	5,258.5	5,298.5	5,291.1	21.0	18.8	-170.52	139.0	202.9	381.5	343.6	37.90	10.066	
5,400.0	5,357.5	5,398.0	5,389.6	21.5	19.2	-169.29	150.9	209.9	386.2	347.6	38.65	9.994	
5,500.0	5,456.5	5,502.4	5,488.2	21.9	19.6	-168.09	162.9	216.9	391.2	351.8	39.42	9.924	
5,600.0	5,555.6	5,602.9	5,586.8	22.3	19.9	-166.92	174.9	223.9	396.3	356.1	40.18	9.863	
5,700.0	5,654.6	5,703.3	5,685.4	22.7	20.3	-165.78	186.8	230.9	401.6	360.7	40.95	9.807	
5,800.0	5,753.6	5,803.8	5,783.9	23.1	20.7	-164.67	198.8	237.8	407.0	365.3	41.72	9.757	
5,868.5	5,821.4	5,864.4	5,851.4	23.4	20.9	-163.93	207.0	242.6	410.9	368.6	42.22	9.732	
5,900.0	5,852.7	5,895.8	5,882.5	23.6	21.1	-163.60	210.8	244.8	412.5	370.0	42.46	9.716	
6,000.0	5,952.0	5,989.7	5,975.7	24.0	21.4	-162.68	221.0	250.8	416.9	373.7	43.20	9.650	
6,100.0	6,051.5	6,083.9	6,069.4	24.4	21.8	-161.94	229.3	255.6	420.2	376.3	43.93	9.566	
6,200.0	6,151.3	6,178.4	6,163.6	24.7	22.1	-161.37	235.6	259.3	422.4	377.8	44.63	9.464	
6,300.0	6,251.2	6,272.9	6,258.0	25.1	22.5	-160.97	239.9	261.8	423.5	378.2	45.32	9.344	
6,401.8	6,353.0	6,369.2	6,354.3	25.4	22.8	-90.32	242.2	263.2	423.3	377.3	45.99	9.204	
6,487.6	6,438.8	6,451.8	6,436.8	25.7	23.1	-90.27	242.6	263.4	423.1	376.5	46.55	9.088	
6,500.0	6,451.2	6,464.2	6,449.2	25.7	23.1	-90.27	242.6	263.4	423.1	376.4	46.64	9.072	
6,600.0	6,551.2	6,564.2	6,549.2	26.0	23.5	-90.27	242.6	263.4	423.1	375.8	47.33	8.940	
6,700.0	6,651.2	6,664.2	6,649.2	26.3	23.8	-90.27	242.6	263.4	423.1	375.1	48.02	8.811	
6,800.0	6,751.2	6,764.2	6,749.2	26.6	24.2	-90.27	242.6	263.4	423.1	374.4	48.71	8.686	
6,900.0	6,851.2	6,864.2	6,849.2	27.0	24.6	-90.27	242.6	263.4	423.1	373.7	49.40	8.565	
7,000.0	6,951.2	6,964.2	6,949.2	27.3	24.9	-90.27	242.6	263.4	423.1	373.0	50.09	8.446	
7,100.0	7,051.2	7,064.2	7,049.2	27.6	25.3	-90.27	242.6	263.4	423.1	372.3	50.78	8.331	
7,125.8	7,077.0	7,090.0	7,075.0	27.7	25.4	-90.27	242.6	263.4	423.1	372.1	50.96	8.302	
7,150.0	7,101.2	7,114.2	7,099.2	27.7	25.4	90.00	242.6	263.4	423.1	372.0	51.13	8.275	
7,150.8	7,102.0	7,115.0	7,100.0	27.7	25.4	90.00	242.6	263.4	423.1	371.9	51.13	8.274	
7,200.0	7,151.0	7,164.0	7,149.0	27.9	25.6	90.57	242.6	263.4	423.1	371.6	51.47	8.220	
7,250.0	7,200.2	7,213.2	7,198.2	28.0	25.8	91.70	242.6	263.4	423.3	371.5	51.82	8.169	
7,300.0	7,248.5	7,261.5	7,246.5	28.1	26.0	93.32	242.6	263.4	423.9	371.7	52.17	8.125	
7,350.0	7,295.5	7,308.5	7,293.5	28.3	26.1	95.34	242.6	263.4	425.2	372.7	52.51	8.098	
7,400.0	7,340.9	7,353.8	7,338.9	28.4	26.3	97.63	242.6	263.4	427.9	375.0	52.86	8.095	
7,450.0	7,384.2	7,402.8	7,382.2	28.4	26.5	100.04	242.6	263.4	432.3	379.1	53.22	8.123	
7,500.0	7,425.2	7,438.1	7,423.2	28.5	26.6	102.43	242.6	263.4	439.1	385.5	53.53	8.202	
7,550.0	7,463.5	7,476.5	7,461.5	28.6	26.7	104.62	242.6	263.4	448.7	394.9	53.85	8.333	
7,600.0	7,498.9	7,511.9	7,496.9	28.7	26.8	106.46	242.6	263.4	461.7	407.5	54.14	8.527	
7,650.0	7,531.1	7,544.0	7,529.1	28.7	27.0	107.82	242.6	263.4	478.2	423.8	54.41	8.789	
7,700.0	7,559.8	7,572.8	7,557.8	28.8	27.1	108.57	242.6	263.4	498.6	444.0	54.65	9.124	
7,750.0	7,584.9	7,602.2	7,582.9	28.8	27.2	108.58	242.6	263.4	522.8	468.0	54.87	9.529	
7,800.0	7,606.0	7,619.0	7,604.0	28.9	27.2	107.74	242.6	263.4	550.6	495.6	55.01	10.010	
7,850.0	7,623.2	7,636.2	7,621.2	28.9	27.3	105.91	242.6	263.4	581.8	526.7	55.13	10.553	
7,900.0	7,636.2	7,649.2	7,634.2	29.0	27.3	102.98	242.6	263.4	615.9	560.7	55.21	11.155	
7,950.0	7,645.0	7,657.9	7,643.0	29.1	27.4	98.80	242.6	263.4	652.6	597.3	55.26	11.809	
8,000.0	7,649.4	7,662.3	7,647.4	29.2	27.4	93.33	242.6	263.4	691.2	636.0	55.28	12.505	
8,025.8	7,650.0	7,662.9	7,648.0	29.3	27.4	90.00	242.6	263.4	711.8	656.5	55.27	12.878	
8,039.4	7,650.0	7,662.9	7,648.0	29.4	27.4	90.00	242.6	263.4	722.8	667.6	55.27	13.078	
8,100.0	7,650.0	7,662.9	7,648.0	29.6	27.4	90.00	242.6	263.4	772.9	717.7	55.25	13.989	
8,200.0	7,650.0	7,662.9	7,648.0	30.0	27.4	90.00	242.6	263.4	858.6	803.3	55.22	15.547	
8,300.0	7,650.0	7,662.9	7,648.0	30.6	27.4	90.00	242.6	263.4	947.0	891.8	55.20	17.156	
8,400.0	7,650.0	7,662.9	7,648.0	31.2	27.4	90.00	242.6	263.4	1,037.6	982.4	55.18	18.804	
8,500.0	7,650.0	7,662.9	7,648.0	31.9	27.4	90.00	242.6	263.4	1,129.7	1,074.6	55.16	20.481	
8,600.0	7,650.0	7,662.9	7,648.0	32.7	27.4	90.00	242.6	263.4	1,223.1	1,168.0	55.14	22.180	
8,700.0	7,650.0	7,662.9	7,648.0	33.5	27.4	90.00	242.6	263.4	1,317.5	1,262.3	55.13	23.896	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #224H - 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
8,800.0	7,650.0	7,662.9	7,648.0	34.4	27.4	90.00	242.6	263.4	1,412.6	1,357.5	55.13	25.625	
8,900.0	7,650.0	7,662.9	7,648.0	35.4	27.4	90.00	242.6	263.4	1,508.4	1,453.3	55.12	27.365	
9,000.0	7,650.0	7,662.9	7,648.0	36.4	27.4	90.00	242.6	263.4	1,604.7	1,549.5	55.12	29.113	
9,100.0	7,650.0	7,662.9	7,648.0	37.4	27.4	90.00	242.6	263.4	1,701.4	1,646.2	55.12	30.867	
9,200.0	7,650.0	7,662.9	7,648.0	38.5	27.4	90.00	242.6	263.4	1,798.4	1,743.3	55.12	32.627	
9,300.0	7,650.0	7,662.9	7,648.0	39.6	27.4	90.00	242.6	263.4	1,895.8	1,840.7	55.13	34.391	
9,400.0	7,650.0	7,662.9	7,648.0	40.8	27.4	90.00	242.6	263.4	1,993.4	1,938.3	55.13	36.158	
9,500.0	7,650.0	7,662.9	7,648.0	42.0	27.4	90.00	242.6	263.4	2,091.3	2,036.2	55.14	37.927	
9,600.0	7,650.0	7,662.9	7,648.0	43.2	27.4	90.00	242.6	263.4	2,189.4	2,134.2	55.15	39.698	
9,700.0	7,650.0	7,662.9	7,648.0	44.5	27.4	90.00	242.6	263.4	2,287.6	2,232.4	55.16	41.470	
9,800.0	7,650.0	7,662.9	7,648.0	45.8	27.4	90.00	242.6	263.4	2,385.9	2,330.8	55.18	43.243	
9,900.0	7,650.0	7,662.9	7,648.0	47.1	27.4	90.00	242.6	263.4	2,484.4	2,429.3	55.19	45.016	
10,000.0	7,650.0	7,662.9	7,648.0	48.4	27.4	90.00	242.6	263.4	2,583.1	2,527.9	55.21	46.789	
10,100.0	7,650.0	7,662.9	7,648.0	49.7	27.4	90.00	242.6	263.4	2,681.8	2,626.5	55.22	48.562	
10,200.0	7,650.0	7,662.9	7,648.0	51.1	27.4	90.00	242.6	263.4	2,780.6	2,725.3	55.24	50.334	
10,300.0	7,650.0	7,662.9	7,648.0	52.5	27.4	90.00	242.6	263.4	2,879.5	2,824.2	55.26	52.105	
10,400.0	7,650.0	7,662.9	7,648.0	53.9	27.4	90.00	242.6	263.4	2,978.4	2,923.2	55.28	53.875	
10,500.0	7,650.0	7,662.9	7,648.0	55.3	27.4	90.00	242.6	263.4	3,077.5	3,022.2	55.31	55.644	
10,600.0	7,650.0	7,662.9	7,648.0	56.7	27.4	90.00	242.6	263.4	3,176.6	3,121.2	55.33	57.411	
10,700.0	7,650.0	7,662.9	7,648.0	58.1	27.4	90.00	242.6	263.4	3,275.7	3,220.4	55.36	59.176	
10,800.0	7,650.0	7,662.9	7,648.0	59.6	27.4	90.00	242.6	263.4	3,374.9	3,319.5	55.38	60.940	
10,900.0	7,650.0	7,662.9	7,648.0	61.0	27.4	90.00	242.6	263.4	3,474.2	3,418.7	55.41	62.701	
11,000.0	7,650.0	7,662.9	7,648.0	62.5	27.4	90.00	242.6	263.4	3,573.4	3,518.0	55.44	64.460	
11,100.0	7,650.0	7,662.9	7,648.0	63.9	27.4	90.00	242.6	263.4	3,672.8	3,617.3	55.47	66.217	
11,200.0	7,650.0	7,662.9	7,648.0	65.4	27.4	90.00	242.6	263.4	3,772.1	3,716.6	55.50	67.971	
11,300.0	7,650.0	7,662.9	7,648.0	66.9	27.4	90.00	242.6	263.4	3,871.5	3,816.0	55.53	69.723	
11,400.0	7,650.0	7,662.9	7,648.0	68.4	27.4	90.00	242.6	263.4	3,970.9	3,915.4	55.56	71.472	
11,500.0	7,650.0	7,662.9	7,648.0	69.9	27.4	90.00	242.6	263.4	4,070.4	4,014.8	55.59	73.218	
11,600.0	7,650.0	7,662.9	7,648.0	71.4	27.4	90.00	242.6	263.4	4,169.9	4,114.2	55.63	74.961	
11,700.0	7,650.0	7,662.9	7,648.0	72.9	27.4	90.00	242.6	263.4	4,269.4	4,213.7	55.66	76.701	
11,800.0	7,650.0	7,662.9	7,648.0	74.5	27.4	90.00	242.6	263.4	4,368.9	4,313.2	55.70	78.438	
11,900.0	7,650.0	7,662.9	7,648.0	76.0	27.4	90.00	242.6	263.4	4,468.4	4,412.7	55.74	80.171	
12,000.0	7,650.0	7,662.9	7,648.0	77.5	27.4	90.00	242.6	263.4	4,568.0	4,512.2	55.77	81.901	
12,100.0	7,650.0	7,662.9	7,648.0	79.1	27.4	90.00	242.6	263.4	4,667.6	4,611.8	55.81	83.628	
12,200.0	7,650.0	7,662.9	7,648.0	80.6	27.4	90.00	242.6	263.4	4,767.2	4,711.3	55.85	85.351	
12,300.0	7,650.0	7,662.9	7,648.0	82.2	27.4	90.00	242.6	263.4	4,866.8	4,810.9	55.89	87.071	
12,400.0	7,650.0	17,236.8	12,514.0	83.7	90.5	176.13	-4,705.1	395.4	4,877.1	4,793.3	83.82	58.186	
12,500.0	7,650.0	17,336.8	12,514.0	85.3	91.9	176.13	-4,805.1	396.2	4,877.1	4,791.8	85.29	57.181	
12,600.0	7,650.0	17,436.8	12,514.0	86.8	93.3	176.13	-4,905.1	397.0	4,877.1	4,790.4	86.77	56.208	
12,700.0	7,650.0	17,536.8	12,514.0	88.4	94.8	176.13	-5,005.1	397.8	4,877.1	4,788.9	88.25	55.265	
12,800.0	7,650.0	17,636.8	12,514.0	89.9	96.3	176.13	-5,105.1	398.7	4,877.1	4,787.4	89.73	54.351	
12,900.0	7,650.0	17,736.8	12,514.0	91.5	97.7	176.13	-5,205.1	399.5	4,877.1	4,785.9	91.22	53.465	
13,000.0	7,650.0	17,836.8	12,514.0	93.1	99.2	176.13	-5,305.1	400.3	4,877.1	4,784.4	92.71	52.606	
13,100.0	7,650.0	17,936.8	12,514.0	94.7	100.7	176.13	-5,405.1	401.1	4,877.1	4,782.9	94.20	51.772	
13,200.0	7,650.0	18,036.8	12,514.0	96.2	102.2	176.13	-5,505.0	401.9	4,877.1	4,781.4	95.70	50.963	
13,300.0	7,650.0	18,136.8	12,514.0	97.8	103.7	176.13	-5,605.0	402.7	4,877.1	4,779.9	97.20	50.178	
13,400.0	7,650.0	18,236.8	12,514.0	99.4	105.2	176.13	-5,705.0	403.5	4,877.1	4,778.4	98.70	49.415	
13,500.0	7,650.0	18,336.8	12,514.0	101.0	106.7	176.13	-5,805.0	404.4	4,877.1	4,776.9	100.20	48.673	
13,600.0	7,650.0	18,436.8	12,514.0	102.6	108.2	176.13	-5,905.0	405.2	4,877.1	4,775.4	101.71	47.953	
13,700.0	7,650.0	18,536.8	12,514.0	104.1	109.7	176.13	-6,005.0	406.0	4,877.1	4,773.9	103.21	47.252	
13,800.0	7,650.0	18,636.8	12,514.0	105.7	111.2	176.13	-6,105.0	406.8	4,877.1	4,772.4	104.72	46.571	
13,900.0	7,650.0	18,736.8	12,514.0	107.3	112.7	176.13	-6,205.0	407.6	4,877.1	4,770.9	106.24	45.908	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #224H - 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	7,650.0	18,836.8	12,514.0	108.9	114.2	176.13	-6,305.0	408.4	4,877.1	4,769.4	107.75	45.263	
14,100.0	7,650.0	18,936.8	12,514.0	110.5	115.7	176.13	-6,405.0	409.2	4,877.1	4,767.9	109.27	44.635	
14,200.0	7,650.0	19,036.8	12,514.0	112.1	117.3	176.13	-6,505.0	410.1	4,877.1	4,766.3	110.78	44.024	
14,300.0	7,650.0	19,136.8	12,514.0	113.7	118.8	176.13	-6,605.0	410.9	4,877.1	4,764.8	112.30	43.428	
14,400.0	7,650.0	19,236.8	12,514.0	115.3	120.3	176.13	-6,705.0	411.7	4,877.1	4,763.3	113.82	42.848	
14,500.0	7,650.0	19,336.8	12,514.0	116.9	121.9	176.13	-6,805.0	412.5	4,877.1	4,761.8	115.35	42.282	
14,600.0	7,650.0	19,436.8	12,514.0	118.5	123.4	176.13	-6,905.0	413.3	4,877.1	4,760.3	116.87	41.731	
14,700.0	7,650.0	19,536.8	12,514.0	120.1	125.0	176.13	-7,005.0	414.1	4,877.1	4,758.7	118.40	41.193	
14,800.0	7,650.0	19,636.8	12,514.0	121.7	126.5	176.13	-7,105.0	414.9	4,877.1	4,757.2	119.92	40.669	
14,900.0	7,650.0	19,736.8	12,514.0	123.3	128.1	176.13	-7,205.0	415.8	4,877.1	4,755.7	121.45	40.157	
15,000.0	7,650.0	19,836.8	12,514.0	124.9	129.6	176.13	-7,305.0	416.6	4,877.1	4,754.2	122.98	39.657	
15,100.0	7,650.0	19,936.8	12,514.0	126.5	131.2	176.13	-7,405.0	417.4	4,877.1	4,752.6	124.51	39.170	
15,200.0	7,650.0	20,036.8	12,514.0	128.2	132.7	176.13	-7,505.0	418.2	4,877.1	4,751.1	126.05	38.694	
15,300.0	7,650.0	20,136.8	12,514.0	129.8	134.3	176.13	-7,605.0	419.0	4,877.1	4,749.6	127.58	38.228	
15,400.0	7,650.0	20,236.8	12,514.0	131.4	135.8	176.13	-7,705.0	419.8	4,877.1	4,748.0	129.11	37.774	
15,500.0	7,650.0	20,336.8	12,514.0	133.0	137.4	176.13	-7,805.0	420.6	4,877.1	4,746.5	130.65	37.330	
15,600.0	7,650.0	20,436.8	12,514.0	134.6	139.0	176.13	-7,905.0	421.5	4,877.1	4,745.0	132.19	36.896	
15,700.0	7,650.0	20,536.8	12,514.0	136.2	140.5	176.13	-8,005.0	422.3	4,877.1	4,743.4	133.72	36.472	
15,800.0	7,650.0	20,636.8	12,514.0	137.8	142.1	176.13	-8,105.0	423.1	4,877.1	4,741.9	135.26	36.057	
15,900.0	7,650.0	20,736.8	12,514.0	139.5	143.7	176.13	-8,205.0	423.9	4,877.1	4,740.3	136.80	35.651	
16,000.0	7,650.0	20,836.8	12,514.0	141.1	145.2	176.13	-8,305.0	424.7	4,877.1	4,738.8	138.34	35.254	
16,100.0	7,650.0	20,936.8	12,514.0	142.7	146.8	176.13	-8,405.0	425.5	4,877.1	4,737.3	139.89	34.865	
16,200.0	7,650.0	21,036.8	12,514.0	144.3	148.4	176.13	-8,504.9	426.3	4,877.1	4,735.7	141.43	34.485	
16,300.0	7,650.0	21,136.8	12,514.0	145.9	150.0	176.13	-8,604.9	427.2	4,877.1	4,734.2	142.97	34.113	
16,400.0	7,650.0	21,236.8	12,514.0	147.6	151.5	176.13	-8,704.9	428.0	4,877.1	4,732.6	144.52	33.748	
16,500.0	7,650.0	21,336.8	12,514.0	149.2	153.1	176.12	-8,804.9	428.8	4,877.2	4,731.1	146.06	33.391	
16,600.0	7,650.0	21,436.8	12,514.0	150.8	154.7	176.12	-8,904.9	429.6	4,877.2	4,729.5	147.61	33.042	
16,700.0	7,650.0	21,536.8	12,514.0	152.4	156.3	176.12	-9,004.9	430.4	4,877.2	4,728.0	149.15	32.699	
16,800.0	7,650.0	21,636.8	12,514.0	154.0	157.9	176.12	-9,104.9	431.2	4,877.2	4,726.5	150.70	32.363	
16,900.0	7,650.0	21,736.8	12,514.0	155.7	159.5	176.12	-9,204.9	432.0	4,877.2	4,724.9	152.25	32.034	
17,000.0	7,650.0	21,836.8	12,514.0	157.3	161.0	176.12	-9,304.9	432.9	4,877.2	4,723.4	153.80	31.712	
17,100.0	7,650.0	21,936.8	12,514.0	158.9	162.6	176.12	-9,404.9	433.7	4,877.2	4,721.8	155.35	31.395	
17,200.0	7,650.0	22,036.8	12,514.0	160.5	164.2	176.12	-9,504.9	434.5	4,877.2	4,720.3	156.90	31.085	
17,300.0	7,650.0	22,136.8	12,514.0	162.2	165.8	176.12	-9,604.9	435.3	4,877.2	4,718.7	158.45	30.781	
17,400.0	7,650.0	22,236.8	12,514.0	163.8	167.4	176.12	-9,704.9	436.1	4,877.2	4,717.2	160.00	30.482	
17,500.0	7,650.0	22,336.8	12,514.0	165.4	169.0	176.12	-9,804.9	436.9	4,877.2	4,715.6	161.55	30.190	
17,600.0	7,650.0	22,436.8	12,514.0	167.0	170.6	176.12	-9,904.9	437.8	4,877.2	4,714.1	163.10	29.902	
17,700.0	7,650.0	22,536.8	12,514.0	168.7	172.2	176.12	-10,004.9	438.6	4,877.2	4,712.5	164.66	29.620	
17,800.0	7,650.0	22,636.8	12,514.0	170.3	173.8	176.12	-10,104.9	439.4	4,877.2	4,711.0	166.21	29.343	
17,900.0	7,650.0	22,736.8	12,514.0	171.9	175.4	176.12	-10,204.9	440.2	4,877.2	4,709.4	167.76	29.072	
18,000.0	7,650.0	22,836.8	12,514.0	173.6	177.0	176.12	-10,304.9	441.0	4,877.2	4,707.8	169.32	28.805	
18,100.0	7,650.0	22,936.8	12,514.0	175.2	178.6	176.12	-10,404.9	441.8	4,877.2	4,706.3	170.87	28.543	
18,200.0	7,650.0	23,036.8	12,514.0	176.8	180.2	176.12	-10,504.9	442.6	4,877.2	4,704.7	172.43	28.285	
18,300.0	7,650.0	23,136.8	12,514.0	178.5	181.8	176.12	-10,604.9	443.5	4,877.2	4,703.2	173.99	28.032	
18,400.0	7,650.0	23,236.8	12,514.0	180.1	183.4	176.12	-10,704.9	444.3	4,877.2	4,701.6	175.54	27.783	
18,500.0	7,650.0	23,336.8	12,514.0	181.7	185.0	176.12	-10,804.9	445.1	4,877.2	4,700.1	177.10	27.539	
18,600.0	7,650.0	23,436.8	12,514.0	183.3	186.6	176.12	-10,904.9	445.9	4,877.2	4,698.5	178.66	27.299	
18,700.0	7,650.0	23,536.8	12,514.0	185.0	188.2	176.12	-11,004.9	446.7	4,877.2	4,697.0	180.21	27.063	
18,800.0	7,650.0	23,636.8	12,514.0	186.6	189.8	176.12	-11,104.9	447.5	4,877.2	4,695.4	181.77	26.831	
18,900.0	7,650.0	23,736.8	12,514.0	188.2	191.4	176.12	-11,204.9	448.3	4,877.2	4,693.8	183.33	26.603	
19,000.0	7,650.0	23,836.8	12,514.0	189.9	193.0	176.12	-11,304.9	449.2	4,877.2	4,692.3	184.89	26.379	
19,100.0	7,650.0	23,936.8	12,514.0	191.5	194.6	176.12	-11,404.9	450.0	4,877.2	4,690.7	186.45	26.158	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #224H - 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
19,200.0	7,650.0	24,036.8	12,514.0	193.1	196.2	176.12	-11,504.8	450.8	4,877.2	4,689.2	188.01	25.941	
19,300.0	7,650.0	24,136.8	12,514.0	194.8	197.9	176.12	-11,604.8	451.6	4,877.2	4,687.6	189.57	25.728	
19,400.0	7,650.0	24,236.8	12,514.0	196.4	199.5	176.12	-11,704.8	452.4	4,877.2	4,686.0	191.13	25.518	
19,500.0	7,650.0	24,336.8	12,514.0	198.1	201.1	176.12	-11,804.8	453.2	4,877.2	4,684.5	192.69	25.311	
19,600.0	7,650.0	24,436.8	12,514.0	199.7	202.7	176.12	-11,904.8	454.0	4,877.2	4,682.9	194.25	25.107	
19,700.0	7,650.0	24,536.8	12,514.0	201.3	204.3	176.12	-12,004.8	454.9	4,877.2	4,681.4	195.81	24.907	
19,800.0	7,650.0	24,636.8	12,514.0	203.0	205.9	176.12	-12,104.8	455.7	4,877.2	4,679.8	197.38	24.710	
19,900.0	7,650.0	24,736.8	12,514.0	204.6	207.5	176.12	-12,204.8	456.5	4,877.2	4,678.2	198.94	24.516	
19,909.3	7,650.0	24,746.1	12,514.0	204.7	207.7	176.12	-12,214.2	456.6	4,877.2	4,678.1	199.08	24.498	
20,000.0	7,650.0	24,833.3	12,514.0	206.2	209.1	176.12	-12,301.3	457.3	4,877.2	4,676.7	200.47	24.329	
20,100.0	7,650.0	24,833.3	12,514.0	207.9	209.1	176.12	-12,301.3	457.3	4,878.3	4,677.2	201.06	24.262	
20,139.1	7,650.0	24,833.3	12,514.0	208.5	209.1	176.12	-12,301.3	457.3	4,879.3	4,678.0	201.28	24.242	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #228H - 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	2.0	-2.0	0.0	0.0	89.63	0.9	140.1	140.1				
100.0	100.0	102.0	98.0	0.1	0.1	89.63	0.9	140.1	140.1	139.8	0.26	531.769	
200.0	200.0	202.0	198.0	0.5	0.5	89.63	0.9	140.1	140.1	139.1	0.98	142.907	
300.0	300.0	302.0	298.0	0.8	0.9	89.63	0.9	140.1	140.1	138.4	1.70	82.545	
400.0	400.0	402.0	398.0	1.2	1.2	89.63	0.9	140.1	140.1	137.7	2.41	58.033	
500.0	500.0	502.0	498.0	1.6	1.6	89.63	0.9	140.1	140.1	137.0	3.13	44.745	
600.0	600.0	602.0	598.0	1.9	1.9	19.36	0.9	140.1	139.3	135.4	3.84	36.247	
700.0	700.0	702.0	698.0	2.3	2.3	19.74	0.9	140.1	136.8	132.3	4.55	30.057	
800.0	799.9	802.1	797.9	2.6	2.6	20.39	0.9	140.1	132.7	127.5	5.26	25.213	
900.0	899.7	902.3	897.7	3.0	3.0	21.37	0.9	140.1	127.0	121.0	5.98	21.246	
1,000.0	999.4	1,002.6	997.4	3.3	3.4	22.76	0.9	140.1	119.7	113.0	6.70	17.885	
1,100.0	1,098.9	1,103.1	1,096.9	3.7	3.7	24.71	0.9	140.1	111.0	103.5	7.41	14.965	
1,200.0	1,198.3	1,203.7	1,196.3	4.1	4.1	27.45	0.9	140.1	100.8	92.6	8.14	12.384	
1,300.0	1,297.4	1,304.6	1,295.4	4.5	4.4	31.36	0.9	140.1	89.4	80.5	8.87	10.079	
1,400.0	1,396.4	1,405.6	1,394.4	4.9	4.8	36.68	0.9	140.1	77.8	68.2	9.61	8.099	
1,500.0	1,495.5	1,506.5	1,493.5	5.3	5.2	43.77	0.9	140.1	67.1	56.7	10.36	6.479	
1,600.0	1,594.5	1,607.5	1,592.5	5.7	5.5	53.29	0.9	140.1	57.8	46.7	11.13	5.195	
1,700.0	1,693.5	1,708.5	1,691.5	6.1	5.9	65.91	0.9	140.1	50.7	38.7	11.92	4.250	
1,800.0	1,792.5	1,809.5	1,790.5	6.5	6.3	81.54	0.9	140.1	46.7	34.0	12.73	3.669	
1,849.8	1,841.9	1,839.9	1,839.9	6.7	6.4	90.00	0.9	140.1	46.2	33.1	13.05	3.538	CC, ES
1,900.0	1,891.6	1,889.6	1,889.6	6.9	6.5	98.52	0.9	140.1	46.7	33.3	13.43	3.477	SF
2,000.0	1,990.6	1,988.6	1,988.6	7.3	6.9	114.14	0.9	140.1	50.7	36.5	14.15	3.581	
2,100.0	2,089.6	2,087.6	2,087.6	7.7	7.3	126.75	0.9	140.1	57.8	43.0	14.84	3.897	
2,200.0	2,188.6	2,186.6	2,186.6	8.1	7.6	136.26	0.9	140.1	67.1	51.6	15.52	4.326	
2,300.0	2,287.7	2,285.7	2,285.7	8.5	8.0	143.34	0.9	140.1	77.8	61.6	16.20	4.803	
2,400.0	2,386.7	2,384.7	2,384.7	8.9	8.3	148.66	0.9	140.1	89.4	72.5	16.90	5.292	
2,500.0	2,485.7	2,483.7	2,483.7	9.4	8.7	152.74	0.9	140.1	101.6	84.0	17.59	5.775	
2,600.0	2,584.8	2,582.8	2,582.8	9.8	9.0	155.93	0.9	140.1	114.2	95.9	18.30	6.240	
2,700.0	2,683.8	2,681.8	2,681.8	10.2	9.4	158.49	0.9	140.1	127.0	108.0	19.00	6.684	
2,800.0	2,782.8	2,780.8	2,780.8	10.6	9.7	160.58	0.9	140.1	140.1	120.4	19.71	7.106	
2,900.0	2,881.8	2,879.8	2,879.8	11.0	10.1	162.30	0.9	140.1	153.3	132.9	20.42	7.505	
3,000.0	2,980.9	2,978.9	2,978.9	11.4	10.4	163.76	0.9	140.1	166.6	145.5	21.14	7.882	
3,100.0	3,079.9	3,077.9	3,077.9	11.9	10.8	165.00	0.9	140.1	180.0	158.2	21.85	8.238	
3,200.0	3,178.9	3,176.9	3,176.9	12.3	11.2	166.06	0.9	140.1	193.5	170.9	22.57	8.574	
3,300.0	3,277.9	3,275.9	3,275.9	12.7	11.5	166.99	0.9	140.1	207.0	183.8	23.29	8.891	
3,400.0	3,377.0	3,375.0	3,375.0	13.1	11.9	167.80	0.9	140.1	220.6	196.6	24.00	9.191	
3,500.0	3,476.0	3,474.0	3,474.0	13.5	12.2	168.52	0.9	140.1	234.3	209.5	24.72	9.475	
3,600.0	3,575.0	3,573.0	3,573.0	13.9	12.6	169.16	0.9	140.1	247.9	222.5	25.44	9.744	
3,700.0	3,674.0	3,672.0	3,672.0	14.4	12.9	169.74	0.9	140.1	261.6	235.4	26.16	9.999	
3,800.0	3,773.1	3,771.1	3,771.1	14.8	13.3	170.25	0.9	140.1	275.3	248.4	26.88	10.242	
3,900.0	3,872.1	3,870.1	3,870.1	15.2	13.6	170.72	0.9	140.1	289.0	261.4	27.60	10.472	
4,000.0	3,971.1	3,969.1	3,969.1	15.6	14.0	171.14	0.9	140.1	302.8	274.5	28.32	10.691	
4,100.0	4,070.2	4,068.2	4,068.2	16.0	14.4	171.53	0.9	140.1	316.6	287.5	29.04	10.899	
4,200.0	4,169.2	4,167.2	4,167.2	16.4	14.7	171.89	0.9	140.1	330.3	300.6	29.76	11.098	
4,300.0	4,268.2	4,266.2	4,266.2	16.9	15.1	172.21	0.9	140.1	344.1	313.6	30.49	11.288	
4,400.0	4,367.2	4,365.2	4,365.2	17.3	15.4	172.51	0.9	140.1	357.9	326.7	31.21	11.469	
4,500.0	4,466.3	4,464.3	4,464.3	17.7	15.8	172.79	0.9	140.1	371.7	339.8	31.93	11.642	
4,600.0	4,565.3	4,563.3	4,563.3	18.1	16.1	173.05	0.9	140.1	385.5	352.9	32.65	11.808	
4,700.0	4,664.3	4,662.3	4,662.3	18.5	16.5	173.30	0.9	140.1	399.3	366.0	33.37	11.966	
4,800.0	4,763.3	4,761.3	4,761.3	19.0	16.8	173.52	0.9	140.1	413.2	379.1	34.09	12.118	
4,900.0	4,862.4	4,860.4	4,860.4	19.4	17.2	173.73	0.9	140.1	427.0	392.2	34.82	12.264	
5,000.0	4,961.4	4,959.4	4,959.4	19.8	17.5	173.93	0.9	140.1	440.8	405.3	35.54	12.405	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #228H - 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	5,060.4	5,058.4	5,058.4	20.2	17.9	174.11	0.9	140.1	454.7	418.4	36.26	12.539	
5,200.0	5,159.4	5,157.4	5,157.4	20.6	18.3	174.29	0.9	140.1	468.5	431.6	36.98	12.669	
5,300.0	5,258.5	5,256.5	5,256.5	21.0	18.6	174.45	0.9	140.1	482.4	444.7	37.71	12.793	
5,400.0	5,357.5	5,355.5	5,355.5	21.5	19.0	174.61	0.9	140.1	496.2	457.8	38.43	12.913	
5,500.0	5,456.5	5,454.5	5,454.5	21.9	19.3	174.76	0.9	140.1	510.1	470.9	39.15	13.029	
5,600.0	5,555.6	5,558.9	5,558.9	22.3	19.7	174.90	1.0	140.4	523.7	483.8	39.91	13.122	
5,700.0	5,654.6	5,668.3	5,668.2	22.7	20.1	175.02	1.7	142.4	535.6	494.9	40.69	13.163	
5,800.0	5,753.6	5,778.1	5,778.0	23.1	20.5	175.12	3.1	146.5	545.6	504.2	41.45	13.162	
5,868.5	5,821.4	5,853.5	5,853.3	23.4	20.7	175.17	4.5	150.4	551.4	509.4	41.97	13.137	
5,900.0	5,852.7	5,888.3	5,888.0	23.6	20.8	175.19	5.2	152.5	553.6	511.4	42.21	13.116	
6,000.0	5,952.0	5,998.9	5,998.2	24.0	21.2	175.23	8.0	160.6	557.7	514.7	42.95	12.985	
6,100.0	6,051.5	6,109.6	6,108.5	24.4	21.6	175.22	11.5	170.7	557.2	513.6	43.67	12.761	
6,200.0	6,151.3	6,220.1	6,218.2	24.7	22.0	175.15	15.7	182.8	552.2	507.9	44.37	12.447	
6,300.0	6,251.2	6,327.3	6,324.4	25.1	22.4	175.04	20.4	196.4	542.8	497.8	45.05	12.048	
6,401.8	6,353.0	6,428.3	6,424.5	25.4	22.8	-114.73	25.0	209.7	530.0	484.3	45.75	11.585	
6,500.0	6,451.2	6,525.5	6,520.7	25.7	23.1	-114.87	29.5	222.4	516.5	470.0	46.42	11.125	
6,600.0	6,551.2	6,624.6	6,618.8	26.0	23.5	-115.03	34.0	235.5	502.6	455.5	47.11	10.670	
6,700.0	6,651.2	6,723.6	6,716.9	26.3	23.8	-115.20	38.5	248.5	488.8	441.0	47.79	10.227	
6,800.0	6,751.2	6,822.6	6,814.9	26.6	24.2	-115.38	43.0	261.5	474.9	426.4	48.48	9.797	
6,900.0	6,851.2	6,921.6	6,913.0	27.0	24.5	-115.57	47.5	274.5	461.1	411.9	49.16	9.379	
7,000.0	6,951.2	7,020.7	7,011.0	27.3	24.9	-115.77	52.0	287.5	447.3	397.4	49.85	8.972	
7,100.0	7,051.2	7,119.7	7,109.1	27.6	25.3	-115.98	56.6	300.6	433.4	382.9	50.54	8.576	
7,125.8	7,077.0	7,145.2	7,134.4	27.7	25.4	-116.04	57.7	303.9	429.9	379.2	50.72	8.476	
7,150.0	7,101.2	7,169.2	7,158.1	27.7	25.5	64.50	58.8	307.1	426.3	375.4	50.88	8.378	
7,200.0	7,151.0	7,218.3	7,206.8	27.9	25.7	65.72	61.1	313.5	417.6	366.4	51.21	8.154	
7,250.0	7,200.2	7,266.7	7,254.7	28.0	25.8	67.70	63.3	319.9	407.2	355.7	51.53	7.902	
7,300.0	7,248.5	7,313.9	7,301.4	28.1	26.0	70.44	65.4	326.1	395.4	343.5	51.83	7.629	
7,350.0	7,295.5	7,359.7	7,346.8	28.3	26.2	73.93	67.5	332.1	382.6	330.5	52.12	7.342	
7,400.0	7,340.9	7,403.6	7,390.3	28.4	26.3	78.11	69.5	337.9	369.5	317.1	52.40	7.053	
7,450.0	7,384.2	7,445.4	7,431.6	28.4	26.5	82.82	71.4	343.4	356.9	304.3	52.67	6.777	
7,500.0	7,425.2	7,484.7	7,470.6	28.5	26.6	87.84	73.2	348.6	345.8	292.8	52.94	6.531	
7,550.0	7,463.5	7,521.2	7,506.7	28.6	26.8	92.88	74.9	353.4	337.3	284.0	53.23	6.336	
7,600.0	7,498.9	7,554.6	7,539.8	28.7	26.9	97.60	76.4	357.8	332.6	279.0	53.53	6.213	
7,622.3	7,513.7	7,568.5	7,553.6	28.7	27.0	99.53	77.0	359.6	332.0	278.4	53.67	6.187	
7,650.0	7,531.1	7,584.8	7,569.7	28.7	27.0	101.71	77.8	361.7	332.9	279.1	53.85	6.182	
7,700.0	7,559.8	7,611.4	7,596.0	28.8	27.1	104.97	79.0	365.2	339.1	285.0	54.17	6.261	
7,750.0	7,584.9	7,634.2	7,618.7	28.8	27.2	107.17	80.0	368.2	351.7	297.3	54.47	6.457	
7,800.0	7,606.0	7,653.2	7,637.4	28.9	27.3	108.18	80.9	370.7	370.7	315.9	54.74	6.771	
7,850.0	7,623.2	7,668.1	7,652.1	28.9	27.3	107.87	81.6	372.7	395.5	340.5	54.96	7.196	
7,900.0	7,636.2	7,678.8	7,662.7	29.0	27.4	106.09	82.1	374.1	425.4	370.3	55.12	7.718	
7,950.0	7,645.0	7,685.2	7,669.1	29.1	27.4	102.69	82.3	374.9	459.5	404.3	55.22	8.321	
8,000.0	7,649.4	7,687.3	7,671.2	29.2	27.4	97.53	82.4	375.2	496.9	441.6	55.28	8.988	
8,025.8	7,650.0	7,686.7	7,670.6	29.3	27.4	94.16	82.4	375.1	517.1	461.8	55.29	9.353	
8,039.4	7,650.0	7,686.1	7,670.0	29.4	27.4	94.07	82.4	375.0	528.1	472.8	55.29	9.550	
8,100.0	7,650.0	7,683.4	7,667.4	29.6	27.4	93.58	82.3	374.7	578.1	522.8	55.30	10.455	
8,200.0	7,650.0	7,679.0	7,663.0	30.0	27.4	92.76	82.1	374.1	664.6	609.3	55.29	12.020	
8,300.0	7,650.0	7,674.5	7,658.6	30.6	27.4	91.95	81.9	373.5	754.4	699.1	55.28	13.648	
8,400.0	7,650.0	7,670.1	7,654.1	31.2	27.4	91.14	81.7	372.9	846.5	791.2	55.26	15.319	
8,500.0	7,650.0	7,665.6	7,649.7	31.9	27.3	90.33	81.5	372.3	940.1	884.9	55.24	17.020	
8,600.0	7,650.0	7,661.2	7,645.3	32.7	27.3	89.52	81.3	371.8	1,035.0	979.8	55.22	18.744	
8,700.0	7,650.0	7,656.7	7,640.9	33.5	27.3	88.72	81.1	371.2	1,130.7	1,075.5	55.20	20.484	
8,800.0	7,650.0	7,652.3	7,636.5	34.4	27.3	87.92	80.8	370.6	1,227.0	1,171.9	55.18	22.237	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #228H - 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
8,900.0	7,650.0	7,647.8	7,632.1	35.4	27.3	87.12	80.6	370.0	1,323.9	1,268.8	55.17	23.999	
9,000.0	7,650.0	7,643.4	7,627.7	36.4	27.2	86.33	80.4	369.4	1,421.3	1,366.1	55.15	25.769	
9,100.0	7,650.0	7,638.9	7,623.3	37.4	27.2	85.54	80.2	368.8	1,518.9	1,463.8	55.14	27.545	
9,200.0	7,650.0	7,634.5	7,618.9	38.5	27.2	84.76	80.0	368.3	1,616.8	1,561.7	55.13	29.326	
9,300.0	7,650.0	7,630.0	7,614.5	39.6	27.2	83.98	79.8	367.7	1,715.0	1,659.9	55.13	31.111	
9,400.0	7,650.0	7,625.6	7,610.1	40.8	27.2	83.20	79.6	367.1	1,813.3	1,758.2	55.12	32.899	
9,500.0	7,650.0	7,621.1	7,605.7	42.0	27.2	82.44	79.4	366.5	1,911.8	1,856.7	55.11	34.689	
9,600.0	7,650.0	7,616.7	7,601.2	43.2	27.1	81.67	79.2	365.9	2,010.5	1,955.4	55.11	36.481	
9,700.0	7,650.0	7,612.2	7,596.8	44.5	27.1	80.92	79.0	365.3	2,109.2	2,054.1	55.11	38.274	
9,800.0	7,650.0	7,607.7	7,592.4	45.8	27.1	80.17	78.8	364.7	2,208.1	2,153.0	55.11	40.069	
9,900.0	7,650.0	7,603.3	7,588.0	47.1	27.1	79.42	78.6	364.2	2,307.1	2,251.9	55.11	41.864	
10,000.0	7,650.0	7,601.2	7,583.6	48.4	27.1	78.68	78.4	363.6	2,406.1	2,351.0	55.12	43.652	
10,100.0	7,650.0	7,605.6	7,579.2	49.7	27.1	77.95	78.2	363.0	2,505.2	2,450.0	55.16	45.420	
10,200.0	7,650.0	7,589.9	7,574.8	51.1	27.0	77.22	78.0	362.4	2,604.3	2,549.2	55.12	47.250	
10,300.0	7,650.0	7,585.5	7,570.4	52.5	27.0	76.51	77.8	361.8	2,703.6	2,648.4	55.12	49.045	
10,400.0	7,650.0	7,581.0	7,566.0	53.9	27.0	75.79	77.6	361.2	2,802.8	2,747.7	55.13	50.840	
10,500.0	7,650.0	7,576.6	7,561.6	55.3	27.0	75.09	77.4	360.6	2,902.1	2,847.0	55.14	52.633	
10,600.0	7,650.0	7,572.1	7,557.2	56.7	27.0	74.39	77.2	360.1	3,001.5	2,946.3	55.15	54.426	
10,700.0	7,650.0	7,567.7	7,552.8	58.1	27.0	73.70	77.0	359.5	3,100.9	3,045.7	55.16	56.218	
10,800.0	7,650.0	7,563.2	7,548.3	59.6	26.9	73.02	76.8	358.9	3,200.3	3,145.1	55.17	58.008	
10,900.0	7,650.0	7,558.8	7,543.9	61.0	26.9	72.34	76.6	358.3	3,299.7	3,244.5	55.18	59.798	
11,000.0	7,650.0	7,554.3	7,539.5	62.5	26.9	71.67	76.4	357.7	3,399.2	3,344.0	55.20	61.585	
11,100.0	7,650.0	7,549.9	7,535.1	63.9	26.9	71.01	76.2	357.1	3,498.7	3,443.5	55.21	63.371	
11,200.0	7,650.0	7,545.4	7,530.7	65.4	26.9	70.36	76.0	356.5	3,598.2	3,543.0	55.22	65.156	
11,300.0	7,650.0	7,541.0	7,526.3	66.9	26.9	69.71	75.8	356.0	3,697.8	3,642.5	55.24	66.938	
11,400.0	7,650.0	7,536.5	7,521.9	68.4	26.8	69.08	75.6	355.4	3,797.3	3,742.0	55.26	68.718	
11,500.0	7,650.0	7,532.1	7,517.5	69.9	26.8	68.45	75.4	354.8	3,896.9	3,841.6	55.28	70.497	
11,600.0	7,650.0	7,527.6	7,513.1	71.4	26.8	67.82	75.2	354.2	3,996.5	3,941.2	55.30	72.273	
11,700.0	7,650.0	7,523.2	7,508.7	72.9	26.8	67.21	75.0	353.6	4,096.1	4,040.8	55.32	74.047	
11,800.0	7,650.0	7,518.7	7,504.3	74.5	26.8	66.60	74.8	353.0	4,195.7	4,140.4	55.34	75.818	
11,900.0	7,650.0	7,514.3	7,499.8	76.0	26.8	66.00	74.6	352.4	4,295.3	4,240.0	55.36	77.587	
12,000.0	7,650.0	7,509.8	7,495.4	77.5	26.7	65.41	74.4	351.9	4,395.0	4,339.6	55.38	79.354	
12,100.0	7,650.0	7,505.4	7,491.0	79.1	26.7	64.82	74.1	351.3	4,494.6	4,439.2	55.41	81.117	
12,200.0	7,650.0	16,744.7	12,178.0	80.6	87.7	-175.82	-4,499.7	1,053.6	4,542.1	4,462.6	79.48	57.145	
12,300.0	7,650.0	16,844.7	12,178.0	82.2	89.1	-175.82	-4,599.7	1,054.4	4,542.1	4,461.1	80.96	56.100	
12,400.0	7,650.0	16,944.7	12,178.0	83.7	90.5	-175.82	-4,699.7	1,055.2	4,542.1	4,459.6	82.45	55.090	
12,500.0	7,650.0	17,044.7	12,178.0	85.3	92.0	-175.82	-4,799.7	1,056.0	4,542.1	4,458.1	83.94	54.114	
12,600.0	7,650.0	17,144.7	12,178.0	86.8	93.4	-175.83	-4,899.7	1,056.9	4,542.1	4,456.6	85.43	53.169	
12,700.0	7,650.0	17,244.7	12,178.0	88.4	94.9	-175.83	-4,999.7	1,057.7	4,542.1	4,455.1	86.92	52.255	
12,800.0	7,650.0	17,344.7	12,178.0	89.9	96.3	-175.83	-5,099.7	1,058.5	4,542.1	4,453.6	88.42	51.370	
12,900.0	7,650.0	17,444.7	12,178.0	91.5	97.8	-175.83	-5,199.7	1,059.3	4,542.1	4,452.1	89.92	50.513	
13,000.0	7,650.0	17,544.7	12,178.0	93.1	99.3	-175.83	-5,299.7	1,060.1	4,542.0	4,450.6	91.42	49.683	
13,100.0	7,650.0	17,644.7	12,178.0	94.7	100.7	-175.83	-5,399.7	1,060.9	4,542.0	4,449.1	92.93	48.878	
13,200.0	7,650.0	17,744.7	12,178.0	96.2	102.2	-175.83	-5,499.7	1,061.7	4,542.0	4,447.6	94.43	48.098	
13,300.0	7,650.0	17,844.7	12,178.0	97.8	103.7	-175.83	-5,599.7	1,062.6	4,542.0	4,446.1	95.94	47.341	
13,400.0	7,650.0	17,944.7	12,178.0	99.4	105.2	-175.83	-5,699.7	1,063.4	4,542.0	4,444.6	97.46	46.606	
13,500.0	7,650.0	18,044.7	12,178.0	101.0	106.7	-175.83	-5,799.7	1,064.2	4,542.0	4,443.1	98.97	45.893	
13,600.0	7,650.0	18,144.7	12,178.0	102.6	108.2	-175.83	-5,899.7	1,065.0	4,542.0	4,441.6	100.49	45.200	
13,700.0	7,650.0	18,244.7	12,178.0	104.1	109.7	-175.83	-5,999.7	1,065.8	4,542.0	4,440.0	102.01	44.527	
13,800.0	7,650.0	18,344.7	12,178.0	105.7	111.2	-175.83	-6,099.7	1,066.6	4,542.0	4,438.5	103.53	43.873	
13,900.0	7,650.0	18,444.7	12,178.0	107.3	112.7	-175.83	-6,199.6	1,067.5	4,542.0	4,437.0	105.05	43.238	
14,000.0	7,650.0	18,544.7	12,178.0	108.9	114.2	-175.83	-6,299.6	1,068.3	4,542.0	4,435.5	106.57	42.619	

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

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #228H - 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	7,650.0	18,644.7	12,178.0	110.5	115.8	-175.83	-6,399.6	1,069.1	4,542.0	4,433.9	108.10	42.018	
14,200.0	7,650.0	18,744.7	12,178.0	112.1	117.3	-175.83	-6,499.6	1,069.9	4,542.0	4,432.4	109.62	41.433	
14,300.0	7,650.0	18,844.7	12,178.0	113.7	118.8	-175.83	-6,599.6	1,070.7	4,542.0	4,430.9	111.15	40.863	
14,400.0	7,650.0	18,944.7	12,178.0	115.3	120.3	-175.83	-6,699.6	1,071.5	4,542.0	4,429.4	112.68	40.308	
14,500.0	7,650.0	19,044.7	12,178.0	116.9	121.9	-175.83	-6,799.6	1,072.3	4,542.0	4,427.8	114.22	39.767	
14,600.0	7,650.0	19,144.7	12,178.0	118.5	123.4	-175.83	-6,899.6	1,073.2	4,542.0	4,426.3	115.75	39.241	
14,700.0	7,650.0	19,244.7	12,178.0	120.1	125.0	-175.83	-6,999.6	1,074.0	4,542.0	4,424.8	117.28	38.727	
14,800.0	7,650.0	19,344.7	12,178.0	121.7	126.5	-175.83	-7,099.6	1,074.8	4,542.0	4,423.2	118.82	38.227	
14,900.0	7,650.0	19,444.7	12,178.0	123.3	128.0	-175.83	-7,199.6	1,075.6	4,542.0	4,421.7	120.35	37.739	
15,000.0	7,650.0	19,544.7	12,178.0	124.9	129.6	-175.83	-7,299.6	1,076.4	4,542.0	4,420.1	121.89	37.263	
15,100.0	7,650.0	19,644.7	12,178.0	126.5	131.1	-175.83	-7,399.6	1,077.2	4,542.0	4,418.6	123.43	36.798	
15,200.0	7,650.0	19,744.7	12,178.0	128.2	132.7	-175.83	-7,499.6	1,078.1	4,542.0	4,417.1	124.97	36.344	
15,300.0	7,650.0	19,844.7	12,178.0	129.8	134.3	-175.83	-7,599.6	1,078.9	4,542.0	4,415.5	126.51	35.902	
15,400.0	7,650.0	19,944.7	12,178.0	131.4	135.8	-175.83	-7,699.6	1,079.7	4,542.0	4,414.0	128.06	35.469	
15,500.0	7,650.0	20,044.7	12,178.0	133.0	137.4	-175.83	-7,799.6	1,080.5	4,542.0	4,412.4	129.60	35.047	
15,600.0	7,650.0	20,144.7	12,178.0	134.6	138.9	-175.83	-7,899.6	1,081.3	4,542.0	4,410.9	131.14	34.634	
15,700.0	7,650.0	20,244.7	12,178.0	136.2	140.5	-175.83	-7,999.6	1,082.1	4,542.0	4,409.3	132.69	34.231	
15,800.0	7,650.0	20,344.7	12,178.0	137.8	142.1	-175.83	-8,099.6	1,082.9	4,542.0	4,407.8	134.23	33.837	
15,900.0	7,650.0	20,444.7	12,178.0	139.5	143.6	-175.83	-8,199.6	1,083.8	4,542.0	4,406.2	135.78	33.451	
16,000.0	7,650.0	20,544.7	12,178.0	141.1	145.2	-175.83	-8,299.6	1,084.6	4,542.0	4,404.7	137.33	33.074	
16,100.0	7,650.0	20,644.7	12,178.0	142.7	146.8	-175.83	-8,399.6	1,085.4	4,542.0	4,403.2	138.88	32.706	
16,200.0	7,650.0	20,744.7	12,178.0	144.3	148.4	-175.83	-8,499.6	1,086.2	4,542.0	4,401.6	140.42	32.345	
16,300.0	7,650.0	20,844.7	12,178.0	145.9	149.9	-175.83	-8,599.6	1,087.0	4,542.0	4,400.1	141.97	31.992	
16,400.0	7,650.0	20,944.7	12,178.0	147.6	151.5	-175.83	-8,699.6	1,087.8	4,542.0	4,398.5	143.53	31.646	
16,500.0	7,650.0	21,044.7	12,178.0	149.2	153.1	-175.83	-8,799.6	1,088.7	4,542.0	4,396.9	145.08	31.308	
16,600.0	7,650.0	21,144.7	12,178.0	150.8	154.7	-175.83	-8,899.6	1,089.5	4,542.0	4,395.4	146.63	30.976	
16,700.0	7,650.0	21,244.7	12,178.0	152.4	156.3	-175.83	-8,999.6	1,090.3	4,542.0	4,393.8	148.18	30.652	
16,800.0	7,650.0	21,344.7	12,178.0	154.0	157.8	-175.83	-9,099.6	1,091.1	4,542.0	4,392.3	149.73	30.334	
16,900.0	7,650.0	21,444.7	12,178.0	155.7	159.4	-175.83	-9,199.5	1,091.9	4,542.0	4,390.7	151.29	30.022	
17,000.0	7,650.0	21,544.7	12,178.0	157.3	161.0	-175.83	-9,299.5	1,092.7	4,542.0	4,389.2	152.84	29.717	
17,100.0	7,650.0	21,644.7	12,178.0	158.9	162.6	-175.83	-9,399.5	1,093.5	4,542.0	4,387.6	154.40	29.418	
17,200.0	7,650.0	21,744.7	12,178.0	160.5	164.2	-175.83	-9,499.5	1,094.4	4,542.0	4,386.1	155.95	29.124	
17,300.0	7,650.0	21,844.7	12,178.0	162.2	165.8	-175.83	-9,599.5	1,095.2	4,542.0	4,384.5	157.51	28.837	
17,400.0	7,650.0	21,944.7	12,178.0	163.8	167.4	-175.83	-9,699.5	1,096.0	4,542.0	4,383.0	159.07	28.554	
17,500.0	7,650.0	22,044.7	12,178.0	165.4	169.0	-175.83	-9,799.5	1,096.8	4,542.0	4,381.4	160.62	28.278	
17,600.0	7,650.0	22,144.7	12,178.0	167.0	170.6	-175.83	-9,899.5	1,097.6	4,542.0	4,379.8	162.18	28.006	
17,700.0	7,650.0	22,244.7	12,178.0	168.7	172.1	-175.83	-9,999.5	1,098.4	4,542.0	4,378.3	163.74	27.739	
17,800.0	7,650.0	22,344.7	12,178.0	170.3	173.7	-175.83	-10,099.5	1,099.3	4,542.0	4,376.7	165.30	27.478	
17,900.0	7,650.0	22,444.7	12,178.0	171.9	175.3	-175.83	-10,199.5	1,100.1	4,542.0	4,375.2	166.86	27.221	
18,000.0	7,650.0	22,544.7	12,178.0	173.6	176.9	-175.83	-10,299.5	1,100.9	4,542.0	4,373.6	168.42	26.969	
18,100.0	7,650.0	22,644.7	12,178.0	175.2	178.5	-175.83	-10,399.5	1,101.7	4,542.0	4,372.0	169.98	26.722	
18,200.0	7,650.0	22,744.7	12,178.0	176.8	180.1	-175.83	-10,499.5	1,102.5	4,542.0	4,370.5	171.54	26.478	
18,300.0	7,650.0	22,844.7	12,178.0	178.5	181.7	-175.83	-10,599.5	1,103.3	4,542.0	4,368.9	173.10	26.240	
18,400.0	7,650.0	22,944.7	12,178.0	180.1	183.3	-175.83	-10,699.5	1,104.1	4,542.0	4,367.4	174.66	26.005	
18,500.0	7,650.0	23,044.7	12,178.0	181.7	184.9	-175.83	-10,799.5	1,105.0	4,542.0	4,365.8	176.22	25.775	
18,600.0	7,650.0	23,144.7	12,178.0	183.3	186.5	-175.83	-10,899.5	1,105.8	4,542.0	4,364.2	177.78	25.548	
18,700.0	7,650.0	23,244.7	12,178.0	185.0	188.1	-175.83	-10,999.5	1,106.6	4,542.0	4,362.7	179.34	25.326	
18,800.0	7,650.0	23,344.7	12,178.0	186.6	189.8	-175.83	-11,099.5	1,107.4	4,542.0	4,361.1	180.91	25.107	
18,900.0	7,650.0	23,444.7	12,178.0	188.2	191.4	-175.83	-11,199.5	1,108.2	4,542.0	4,359.5	182.47	24.892	
19,000.0	7,650.0	23,544.7	12,178.0	189.9	193.0	-175.83	-11,299.5	1,109.0	4,542.0	4,358.0	184.03	24.680	
19,100.0	7,650.0	23,644.7	12,178.0	191.5	194.6	-175.83	-11,399.5	1,109.8	4,542.0	4,356.4	185.60	24.472	
19,200.0	7,650.0	23,744.7	12,178.0	193.1	196.2	-175.83	-11,499.5	1,110.7	4,542.0	4,354.8	187.16	24.268	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #228H - 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
19,300.0	7,650.0	23,844.7	12,178.0	194.8	197.8	-175.83	-11,599.5	1,111.5	4,542.0	4,353.3	188.73	24.067	
19,400.0	7,650.0	23,944.7	12,178.0	196.4	199.4	-175.83	-11,699.5	1,112.3	4,542.0	4,351.7	190.29	23.869	
19,500.0	7,650.0	24,044.7	12,178.0	198.1	201.0	-175.83	-11,799.5	1,113.1	4,542.0	4,350.1	191.85	23.674	
19,600.0	7,650.0	24,144.7	12,178.0	199.7	202.6	-175.83	-11,899.5	1,113.9	4,542.0	4,348.6	193.42	23.483	
19,700.0	7,650.0	24,244.7	12,178.0	201.3	204.2	-175.83	-11,999.5	1,114.7	4,542.0	4,347.0	194.99	23.294	
19,800.0	7,650.0	24,344.7	12,178.0	203.0	205.8	-175.83	-12,099.5	1,115.6	4,542.0	4,345.4	196.55	23.108	
19,900.0	7,650.0	24,444.7	12,178.0	204.6	207.5	-175.83	-12,199.4	1,116.4	4,542.0	4,343.9	198.12	22.926	
20,000.0	7,650.0	24,544.7	12,178.0	206.2	209.1	-175.83	-12,299.4	1,117.2	4,542.0	4,342.3	199.68	22.746	
20,002.3	7,650.0	24,546.9	12,178.0	206.3	209.1	-175.83	-12,301.7	1,117.2	4,542.0	4,342.3	199.72	22.742	
20,100.0	7,650.0	24,542.7	12,178.0	207.9	209.0	-175.83	-12,297.5	1,117.2	4,543.1	4,342.8	200.36	22.675	
20,139.1	7,650.0	24,542.7	12,178.0	208.5	209.0	-175.83	-12,297.5	1,117.2	4,544.2	4,343.6	200.60	22.653	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #244H - 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	-0.29	29.9	-0.2	29.9				
100.0	100.0	100.0	100.0	0.1	0.1	-0.29	29.9	-0.2	29.9	29.6	0.26	116.529	
200.0	200.0	200.0	200.0	0.5	0.5	-0.29	29.9	-0.2	29.9	28.9	0.97	30.688	
300.0	300.0	300.0	300.0	0.8	0.8	-0.29	29.9	-0.2	29.9	28.2	1.69	17.671	
400.0	400.0	400.0	400.0	1.2	1.2	-0.29	29.9	-0.2	29.9	27.5	2.41	12.408	
500.0	500.0	500.0	500.0	1.6	1.6	-0.29	29.9	-0.2	29.9	26.7	3.12	9.560	
600.0	600.0	600.0	600.0	1.9	1.9	-72.28	29.9	-0.2	29.6	25.8	3.84	7.714	
700.0	700.0	700.0	700.0	2.3	2.3	-77.23	29.9	-0.2	28.9	24.4	4.55	6.359	
800.0	799.9	800.1	799.9	2.6	2.6	-85.89	29.9	-0.2	28.3	23.0	5.26	5.374	
836.5	836.3	836.3	836.3	2.8	2.8	-90.00	29.9	-0.2	28.2	22.7	5.52	5.107	CC
900.0	899.7	900.3	899.7	3.0	3.0	-98.21	29.9	-0.2	28.5	22.5	5.98	4.766	ES
1,000.0	999.4	1,000.6	999.4	3.3	3.4	-112.85	29.9	-0.2	30.6	23.9	6.70	4.570	SF
1,100.0	1,098.9	1,101.1	1,098.9	3.7	3.7	-127.19	29.9	-0.2	35.5	28.0	7.42	4.780	
1,200.0	1,198.3	1,201.7	1,198.3	4.1	4.1	-139.14	29.9	-0.2	43.3	35.1	8.14	5.316	
1,300.0	1,297.4	1,302.6	1,297.4	4.5	4.4	-148.19	29.9	-0.2	53.8	45.0	8.86	6.077	
1,400.0	1,396.4	1,403.6	1,396.4	4.9	4.8	-154.55	29.9	-0.2	66.1	56.5	9.58	6.899	
1,500.0	1,495.5	1,504.5	1,495.5	5.3	5.2	-158.89	29.9	-0.2	78.9	68.6	10.30	7.660	
1,600.0	1,594.5	1,605.5	1,594.5	5.7	5.5	-162.01	29.9	-0.2	92.1	81.0	11.03	8.349	
1,700.0	1,693.5	1,706.5	1,693.5	6.1	5.9	-164.34	29.9	-0.2	105.4	93.6	11.75	8.970	
1,800.0	1,792.5	1,807.5	1,792.5	6.5	6.2	-166.15	29.9	-0.2	118.9	106.4	12.47	9.530	
1,900.0	1,891.6	1,908.4	1,891.6	6.9	6.6	-167.59	29.9	-0.2	132.4	119.2	13.20	10.034	
2,000.0	1,990.6	2,009.4	1,990.6	7.3	7.0	-168.77	29.9	-0.2	146.0	132.1	13.92	10.490	
2,100.0	2,089.6	2,089.6	2,089.6	7.7	7.3	-169.74	29.9	-0.2	159.7	145.2	14.57	10.960	
2,200.0	2,188.6	2,188.6	2,188.6	8.1	7.6	-170.56	29.9	-0.2	173.4	158.1	15.29	11.342	
2,300.0	2,287.7	2,287.7	2,287.7	8.5	8.0	-171.26	29.9	-0.2	187.2	171.2	16.01	11.690	
2,400.0	2,386.7	2,386.7	2,386.7	8.9	8.3	-171.86	29.9	-0.2	201.0	184.2	16.73	12.010	
2,500.0	2,485.7	2,485.7	2,485.7	9.4	8.7	-172.38	29.9	-0.2	214.7	197.3	17.45	12.305	
2,600.0	2,584.8	2,584.8	2,584.8	9.8	9.0	-172.85	29.9	-0.2	228.5	210.4	18.17	12.576	
2,700.0	2,683.8	2,683.8	2,683.8	10.2	9.4	-173.26	29.9	-0.2	242.4	223.5	18.89	12.828	
2,800.0	2,782.8	2,782.8	2,782.8	10.6	9.7	-173.62	29.9	-0.2	256.2	236.6	19.61	13.061	
2,900.0	2,881.8	2,881.8	2,881.8	11.0	10.1	-173.95	29.9	-0.2	270.0	249.7	20.34	13.279	
3,000.0	2,980.9	2,980.9	2,980.9	11.4	10.5	-174.25	29.9	-0.2	283.9	262.8	21.06	13.481	
3,100.0	3,079.9	3,079.9	3,079.9	11.9	10.8	-174.51	29.9	-0.2	297.7	275.9	21.78	13.671	
3,200.0	3,178.9	3,178.9	3,178.9	12.3	11.2	-174.76	29.9	-0.2	311.6	289.1	22.50	13.848	
3,300.0	3,277.9	3,277.9	3,277.9	12.7	11.5	-174.98	29.9	-0.2	325.4	302.2	23.22	14.015	
3,400.0	3,377.0	3,377.0	3,377.0	13.1	11.9	-175.19	29.9	-0.2	339.3	315.4	23.94	14.171	
3,500.0	3,476.0	3,476.0	3,476.0	13.5	12.2	-175.38	29.9	-0.2	353.2	328.5	24.67	14.319	
3,600.0	3,575.0	3,575.0	3,575.0	13.9	12.6	-175.55	29.9	-0.2	367.1	341.7	25.39	14.458	
3,700.0	3,674.0	3,674.0	3,674.0	14.4	12.9	-175.72	29.9	-0.2	380.9	354.8	26.11	14.590	
3,800.0	3,773.1	3,773.1	3,773.1	14.8	13.3	-175.87	29.9	-0.2	394.8	368.0	26.83	14.714	
3,900.0	3,872.1	3,872.1	3,872.1	15.2	13.7	-176.01	29.9	-0.2	408.7	381.1	27.55	14.832	
4,000.0	3,971.1	3,971.1	3,971.1	15.6	14.0	-176.14	29.9	-0.2	422.6	394.3	28.28	14.944	
4,100.0	4,070.2	4,070.2	4,070.2	16.0	14.4	-176.26	29.9	-0.2	436.5	407.5	29.00	15.051	
4,200.0	4,169.2	4,169.2	4,169.2	16.4	14.7	-176.38	29.9	-0.2	450.4	420.6	29.72	15.152	
4,300.0	4,268.2	4,268.2	4,268.2	16.9	15.1	-176.49	29.9	-0.2	464.3	433.8	30.44	15.249	
4,400.0	4,367.2	4,367.2	4,367.2	17.3	15.4	-176.59	29.9	-0.2	478.1	447.0	31.17	15.341	
4,500.0	4,466.3	4,466.3	4,466.3	17.7	15.8	-176.68	29.9	-0.2	492.0	460.2	31.89	15.429	
4,600.0	4,565.3	4,565.3	4,565.3	18.1	16.1	-176.78	29.9	-0.2	505.9	473.3	32.61	15.513	
4,700.0	4,664.3	4,664.3	4,664.3	18.5	16.5	-176.86	29.9	-0.2	519.8	486.5	33.34	15.594	
4,800.0	4,763.3	4,763.3	4,763.3	19.0	16.8	-176.94	29.9	-0.2	533.7	499.7	34.06	15.671	
4,900.0	4,862.4	4,862.4	4,862.4	19.4	17.2	-177.02	29.9	-0.2	547.6	512.8	34.78	15.745	
5,000.0	4,961.4	4,961.4	4,961.4	19.8	17.6	-177.09	29.9	-0.2	561.5	526.0	35.50	15.816	

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 Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #244H - 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	5,060.4	5,060.4	5,060.4	20.2	17.9	-177.16	29.9	-0.2	575.4	539.2	36.23	15.884	
5,200.0	5,159.4	5,159.4	5,159.4	20.6	18.3	-177.23	29.9	-0.2	589.3	552.4	36.95	15.949	
5,300.0	5,258.5	5,258.5	5,258.5	21.0	18.6	-177.30	29.9	-0.2	603.2	565.6	37.67	16.012	
5,400.0	5,357.5	5,357.5	5,357.5	21.5	19.0	-177.36	29.9	-0.2	617.1	578.7	38.40	16.073	
5,500.0	5,456.5	5,456.5	5,456.5	21.9	19.3	-177.41	29.9	-0.2	631.0	591.9	39.12	16.131	
5,600.0	5,555.6	5,555.6	5,555.6	22.3	19.7	-177.47	29.9	-0.2	644.9	605.1	39.84	16.187	
5,700.0	5,654.6	5,654.6	5,654.6	22.7	20.0	-177.52	29.9	-0.2	658.8	618.3	40.57	16.241	
5,800.0	5,753.6	5,753.6	5,753.6	23.1	20.4	-177.58	29.9	-0.2	672.7	631.5	41.29	16.293	
5,868.5	5,821.4	5,821.4	5,821.4	23.4	20.6	-177.61	29.9	-0.2	682.3	640.5	41.78	16.328	
5,900.0	5,852.7	5,852.7	5,852.7	23.6	20.7	-177.63	29.9	-0.2	686.5	644.5	42.01	16.341	
6,000.0	5,952.0	5,952.0	5,952.0	24.0	21.1	-177.67	29.9	-0.2	698.3	655.6	42.73	16.341	
6,100.0	6,051.5	6,051.5	6,051.5	24.4	21.5	-177.71	29.9	-0.2	707.5	664.1	43.45	16.282	
6,200.0	6,151.3	6,151.3	6,151.3	24.7	21.8	-177.73	29.9	-0.2	714.1	669.9	44.17	16.168	
6,300.0	6,251.2	6,251.2	6,251.2	25.1	22.2	-177.75	29.9	-0.2	718.1	673.2	44.88	16.000	
6,401.8	6,353.0	6,353.0	6,353.0	25.4	22.5	-107.37	29.9	-0.2	719.4	673.8	45.60	15.778	
6,500.0	6,451.2	6,451.2	6,451.2	25.7	22.9	-107.37	29.9	-0.2	719.4	673.1	46.28	15.545	
6,600.0	6,551.2	6,551.2	6,551.2	26.0	23.3	-107.37	29.9	-0.2	719.4	672.4	46.97	15.315	
6,700.0	6,651.2	6,651.2	6,651.2	26.3	23.6	-107.37	29.9	-0.2	719.4	671.7	47.67	15.091	
6,800.0	6,751.2	6,751.2	6,751.2	26.6	24.0	-107.37	29.9	-0.2	719.4	671.0	48.37	14.874	
6,900.0	6,851.2	6,851.2	6,851.2	27.0	24.3	-107.37	29.9	-0.2	719.4	670.3	49.07	14.662	
7,000.0	6,951.2	6,951.2	6,951.2	27.3	24.7	-107.37	29.9	-0.2	719.4	669.6	49.77	14.456	
7,100.0	7,051.2	7,051.2	7,051.2	27.6	25.0	-107.37	29.9	-0.2	719.4	669.0	50.46	14.256	
7,125.8	7,077.0	7,077.0	7,077.0	27.7	25.1	-107.37	29.9	-0.2	719.4	668.8	50.64	14.205	
7,150.0	7,101.2	7,101.2	7,101.2	27.7	25.2	72.89	29.9	-0.2	719.3	668.5	50.81	14.156	
7,200.0	7,151.0	7,151.0	7,151.0	27.9	25.4	73.33	29.9	-0.2	718.0	666.9	51.15	14.038	
7,250.0	7,200.2	7,200.2	7,200.2	28.0	25.6	74.22	29.9	-0.2	715.6	664.1	51.48	13.900	
7,300.0	7,248.5	7,248.5	7,248.5	28.1	25.8	75.52	29.9	-0.2	712.1	660.3	51.80	13.747	
7,350.0	7,295.5	7,304.5	7,295.5	28.3	26.0	77.19	29.9	-0.2	707.8	655.7	52.14	13.575	
7,400.0	7,340.9	7,340.9	7,340.9	28.4	26.1	79.18	29.9	-0.2	703.1	650.7	52.41	13.414	
7,450.0	7,384.2	7,384.2	7,384.2	28.4	26.2	81.41	29.9	-0.2	698.3	645.6	52.71	13.249	
7,500.0	7,425.2	7,425.2	7,425.2	28.5	26.4	83.77	29.9	-0.2	693.8	640.8	52.99	13.094	
7,550.0	7,463.5	7,463.5	7,463.5	28.6	26.5	86.17	29.9	-0.2	690.2	636.9	53.25	12.960	
7,600.0	7,498.9	7,501.1	7,498.9	28.7	26.7	88.47	29.9	-0.2	687.9	634.4	53.52	12.854	
7,635.7	7,522.2	7,522.2	7,522.2	28.7	26.7	90.00	29.9	-0.2	687.4	633.7	53.68	12.804	
7,650.0	7,531.1	7,531.1	7,531.1	28.7	26.8	90.57	29.9	-0.2	687.5	633.7	53.75	12.790	
7,700.0	7,559.8	7,559.8	7,559.8	28.8	26.9	92.34	29.9	-0.2	689.3	635.4	53.98	12.771	
7,750.0	7,584.9	7,584.9	7,584.9	28.8	27.0	93.67	29.9	-0.2	693.9	639.8	54.18	12.807	
7,800.0	7,606.0	7,606.0	7,606.0	28.9	27.0	94.49	29.9	-0.2	701.6	647.2	54.37	12.904	
7,850.0	7,623.2	7,623.2	7,623.2	28.9	27.1	94.71	29.9	-0.2	712.5	658.0	54.53	13.067	
7,900.0	7,636.2	7,636.2	7,636.2	29.0	27.1	94.27	29.9	-0.2	726.7	672.0	54.66	13.296	
7,950.0	7,645.0	7,645.0	7,645.0	29.1	27.2	93.13	29.9	-0.2	744.1	689.4	54.75	13.591	
8,000.0	7,649.4	7,649.4	7,649.4	29.2	27.2	91.26	29.9	-0.2	764.6	709.8	54.81	13.949	
8,025.8	7,650.0	7,650.0	7,650.0	29.3	27.2	90.00	29.9	-0.2	776.2	721.4	54.83	14.156	
8,039.4	7,650.0	7,650.0	7,650.0	29.4	27.2	90.00	29.9	-0.2	782.7	727.8	54.84	14.272	
8,100.0	7,650.0	7,650.0	7,650.0	29.6	27.2	90.00	29.9	-0.2	813.6	758.8	54.87	14.829	
8,200.0	7,650.0	7,650.0	7,650.0	30.0	27.2	90.00	29.9	-0.2	871.6	816.6	54.91	15.873	
8,300.0	7,650.0	7,650.0	7,650.0	30.6	27.2	90.00	29.9	-0.2	936.6	881.7	54.94	17.049	
8,400.0	7,650.0	7,650.0	7,650.0	31.2	27.2	90.00	29.9	-0.2	1,007.4	952.4	54.96	18.331	
8,500.0	7,650.0	7,650.0	7,650.0	31.9	27.2	90.00	29.9	-0.2	1,082.8	1,027.8	54.97	19.698	
8,600.0	7,650.0	7,650.0	7,650.0	32.7	27.2	90.00	29.9	-0.2	1,161.9	1,107.0	54.98	21.134	
8,700.0	7,650.0	7,650.0	7,650.0	33.5	27.2	90.00	29.9	-0.2	1,244.1	1,189.1	54.99	22.624	
8,800.0	7,650.0	7,650.0	7,650.0	34.4	27.2	90.00	29.9	-0.2	1,328.7	1,273.7	55.00	24.159	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #244H - 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
8,900.0	7,650.0	7,650.0	7,650.0	35.4	27.2	90.00	29.9	-0.2	1,415.3	1,360.3	55.00	25.730	
9,000.0	7,650.0	7,650.0	7,650.0	36.4	27.2	90.00	29.9	-0.2	1,503.5	1,448.5	55.01	27.331	
9,100.0	7,650.0	7,650.0	7,650.0	37.4	27.2	90.00	29.9	-0.2	1,593.2	1,538.1	55.02	28.956	
9,200.0	7,650.0	7,650.0	7,650.0	38.5	27.2	90.00	29.9	-0.2	1,684.0	1,629.0	55.03	30.602	
9,300.0	7,650.0	7,650.0	7,650.0	39.6	27.2	90.00	29.9	-0.2	1,775.8	1,720.7	55.04	32.264	
9,400.0	7,650.0	7,650.0	7,650.0	40.8	27.2	90.00	29.9	-0.2	1,868.4	1,813.4	55.05	33.940	
9,500.0	7,650.0	7,650.0	7,650.0	42.0	27.2	90.00	29.9	-0.2	1,961.8	1,906.7	55.06	35.629	
9,600.0	7,650.0	7,650.0	7,650.0	43.2	27.2	90.00	29.9	-0.2	2,055.8	2,000.7	55.08	37.327	
9,700.0	7,650.0	7,650.0	7,650.0	44.5	27.2	90.00	29.9	-0.2	2,150.3	2,095.2	55.09	39.033	
9,800.0	7,650.0	7,650.0	7,650.0	45.8	27.2	90.00	29.9	-0.2	2,245.3	2,190.2	55.11	40.746	
9,900.0	7,650.0	7,650.0	7,650.0	47.1	27.2	90.00	29.9	-0.2	2,340.8	2,285.6	55.12	42.464	
10,000.0	7,650.0	7,650.0	7,650.0	48.4	27.2	90.00	29.9	-0.2	2,436.5	2,381.4	55.14	44.188	
10,100.0	7,650.0	7,650.0	7,650.0	49.7	27.2	90.00	29.9	-0.2	2,532.7	2,477.5	55.16	45.915	
10,200.0	7,650.0	7,650.0	7,650.0	51.1	27.2	90.00	29.9	-0.2	2,629.1	2,573.9	55.18	47.645	
10,300.0	7,650.0	7,650.0	7,650.0	52.5	27.2	90.00	29.9	-0.2	2,725.7	2,670.5	55.20	49.378	
10,400.0	7,650.0	7,650.0	7,650.0	53.9	27.2	90.00	29.9	-0.2	2,822.6	2,767.4	55.22	51.112	
10,500.0	7,650.0	7,650.0	7,650.0	55.3	27.2	90.00	29.9	-0.2	2,919.7	2,864.5	55.25	52.848	
10,600.0	7,650.0	7,650.0	7,650.0	56.7	27.2	90.00	29.9	-0.2	3,017.0	2,961.8	55.27	54.585	
10,700.0	7,650.0	7,650.0	7,650.0	58.1	27.2	90.00	29.9	-0.2	3,114.5	3,059.2	55.30	56.322	
10,800.0	7,650.0	7,650.0	7,650.0	59.6	27.2	90.00	29.9	-0.2	3,212.1	3,156.8	55.32	58.060	
10,900.0	7,650.0	7,650.0	7,650.0	61.0	27.2	90.00	29.9	-0.2	3,309.9	3,254.5	55.35	59.797	
11,000.0	7,650.0	7,650.0	7,650.0	62.5	27.2	90.00	29.9	-0.2	3,407.8	3,352.4	55.38	61.533	
11,100.0	7,650.0	7,650.0	7,650.0	63.9	27.2	90.00	29.9	-0.2	3,505.8	3,450.4	55.41	63.269	
11,200.0	7,650.0	7,650.0	7,650.0	65.4	27.2	90.00	29.9	-0.2	3,603.9	3,548.5	55.44	65.004	
11,300.0	7,650.0	7,650.0	7,650.0	66.9	27.2	90.00	29.9	-0.2	3,702.1	3,646.7	55.47	66.737	
11,400.0	7,650.0	7,650.0	7,650.0	68.4	27.2	90.00	29.9	-0.2	3,800.5	3,744.9	55.51	68.469	
11,500.0	7,650.0	7,650.0	7,650.0	69.9	27.2	90.00	29.9	-0.2	3,898.9	3,843.3	55.54	70.199	
11,600.0	7,650.0	7,650.0	7,650.0	71.4	27.2	90.00	29.9	-0.2	3,997.3	3,941.8	55.57	71.927	
11,700.0	7,650.0	7,650.0	7,650.0	72.9	27.2	90.00	29.9	-0.2	4,095.9	4,040.3	55.61	73.653	
11,800.0	7,650.0	7,650.0	7,650.0	74.5	27.2	90.00	29.9	-0.2	4,194.5	4,138.9	55.65	75.377	
11,900.0	7,650.0	7,650.0	7,650.0	76.0	27.2	90.00	29.9	-0.2	4,293.2	4,237.5	55.68	77.098	
12,000.0	7,650.0	7,650.0	7,650.0	77.5	27.2	90.00	29.9	-0.2	4,391.9	4,336.2	55.72	78.817	
12,100.0	7,650.0	7,650.0	7,650.0	79.1	27.2	90.00	29.9	-0.2	4,490.7	4,435.0	55.76	80.533	
12,200.0	7,650.0	7,650.0	7,650.0	80.6	27.2	90.00	29.9	-0.2	4,589.6	4,533.8	55.80	82.246	
12,300.0	7,650.0	7,650.0	7,650.0	82.2	27.2	90.00	29.9	-0.2	4,688.5	4,632.7	55.84	83.957	
12,400.0	7,650.0	7,650.0	7,650.0	83.7	27.2	90.00	29.9	-0.2	4,787.4	4,731.6	55.89	85.664	
12,500.0	7,650.0	7,650.0	7,650.0	85.3	27.2	90.00	29.9	-0.2	4,886.4	4,830.5	55.93	87.368	
12,600.0	7,650.0	7,650.0	7,650.0	86.8	27.2	90.00	29.9	-0.2	4,985.5	4,929.5	55.97	89.068	
12,700.0	7,650.0	7,650.0	7,650.0	88.4	27.2	90.00	29.9	-0.2	5,084.5	5,028.5	56.02	90.766	
12,800.0	7,650.0	7,650.0	7,650.0	89.9	27.2	90.00	29.9	-0.2	5,183.6	5,127.6	56.06	92.459	
12,900.0	7,650.0	7,650.0	7,650.0	91.5	27.2	90.00	29.9	-0.2	5,282.8	5,226.7	56.11	94.149	
13,000.0	7,650.0	7,650.0	7,650.0	93.1	27.2	90.00	29.9	-0.2	5,381.9	5,325.8	56.16	95.836	
13,100.0	7,650.0	7,650.0	7,650.0	94.7	27.2	90.00	29.9	-0.2	5,481.1	5,424.9	56.21	97.518	
13,200.0	7,650.0	7,650.0	7,650.0	96.2	27.2	90.00	29.9	-0.2	5,580.4	5,524.1	56.26	99.197	
13,300.0	7,650.0	7,650.0	7,650.0	97.8	27.2	90.00	29.9	-0.2	5,679.6	5,623.3	56.31	100.872	
13,400.0	7,650.0	7,650.0	7,650.0	99.4	27.2	90.00	29.9	-0.2	5,778.9	5,722.6	56.36	102.542	
13,500.0	7,650.0	7,650.0	7,650.0	101.0	27.2	90.00	29.9	-0.2	5,878.2	5,821.8	56.41	104.209	
13,600.0	7,650.0	19,544.6	13,591.0	102.6	110.2	-180.00	-5,902.3	734.5	5,941.0	5,838.6	102.41	58.012	
13,700.0	7,650.0	19,644.6	13,591.0	104.1	111.7	-180.00	-6,002.3	735.4	5,941.0	5,837.1	103.89	57.187	
13,800.0	7,650.0	19,744.6	13,591.0	105.7	113.1	-180.00	-6,102.3	736.2	5,941.0	5,835.6	105.37	56.384	
13,900.0	7,650.0	19,844.6	13,591.0	107.3	114.6	-180.00	-6,202.3	737.0	5,941.0	5,834.2	106.85	55.603	
14,000.0	7,650.0	19,944.6	13,591.0	108.9	116.1	-180.00	-6,302.3	737.8	5,941.0	5,832.7	108.33	54.841	

Anticollision Report

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 Voni - Voni Fed Com #244H - 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	7,650.0	20,044.6	13,591.0	110.5	117.6	-180.00	-6,402.3	738.6	5,941.0	5,831.2	109.82	54.099	
14,200.0	7,650.0	20,144.6	13,591.0	112.1	119.1	-180.00	-6,502.3	739.5	5,941.0	5,829.7	111.31	53.375	
14,300.0	7,650.0	20,244.6	13,591.0	113.7	120.6	-180.00	-6,602.3	740.3	5,941.0	5,828.2	112.80	52.670	
14,400.0	7,650.0	20,344.6	13,591.0	115.3	122.2	-180.00	-6,702.3	741.1	5,941.0	5,826.7	114.29	51.982	
14,500.0	7,650.0	20,444.6	13,591.0	116.9	123.7	-180.00	-6,802.3	741.9	5,941.0	5,825.2	115.78	51.311	
14,600.0	7,650.0	20,544.6	13,591.0	118.5	125.2	-180.00	-6,902.3	742.8	5,941.0	5,823.7	117.28	50.656	
14,700.0	7,650.0	20,644.6	13,591.0	120.1	126.7	-180.00	-7,002.3	743.6	5,941.0	5,822.2	118.78	50.017	
14,800.0	7,650.0	20,744.6	13,591.0	121.7	128.2	-180.00	-7,102.3	744.4	5,941.0	5,820.7	120.28	49.394	
14,900.0	7,650.0	20,844.6	13,591.0	123.3	129.8	-180.00	-7,202.3	745.2	5,941.0	5,819.2	121.78	48.785	
15,000.0	7,650.0	20,944.6	13,591.0	124.9	131.3	-180.00	-7,302.3	746.1	5,941.0	5,817.7	123.28	48.190	
15,100.0	7,650.0	21,044.6	13,591.0	126.5	132.8	-180.00	-7,402.3	746.9	5,941.0	5,816.2	124.79	47.609	
15,200.0	7,650.0	21,144.6	13,591.0	128.2	134.4	-180.00	-7,502.3	747.7	5,941.0	5,814.7	126.29	47.041	
15,300.0	7,650.0	21,244.6	13,591.0	129.8	135.9	-180.00	-7,602.3	748.5	5,941.0	5,813.2	127.80	46.486	
15,400.0	7,650.0	21,344.6	13,591.0	131.4	137.5	-180.00	-7,702.3	749.3	5,941.0	5,811.7	129.31	45.943	
15,500.0	7,650.0	21,444.6	13,591.0	133.0	139.0	-180.00	-7,802.3	750.2	5,941.0	5,810.2	130.82	45.413	
15,600.0	7,650.0	21,544.6	13,591.0	134.6	140.5	-180.00	-7,902.3	751.0	5,941.0	5,808.7	132.33	44.894	
15,700.0	7,650.0	21,644.6	13,591.0	136.2	142.1	-180.00	-8,002.3	751.8	5,941.0	5,807.2	133.85	44.386	
15,800.0	7,650.0	21,744.6	13,591.0	137.8	143.6	-180.00	-8,102.3	752.6	5,941.0	5,805.6	135.36	43.890	
15,900.0	7,650.0	21,844.6	13,591.0	139.5	145.2	-180.00	-8,202.3	753.5	5,941.0	5,804.1	136.88	43.404	
16,000.0	7,650.0	21,944.6	13,591.0	141.1	146.8	-180.00	-8,302.3	754.3	5,941.0	5,802.6	138.39	42.928	
16,100.0	7,650.0	22,044.6	13,591.0	142.7	148.3	-180.00	-8,402.3	755.1	5,941.0	5,801.1	139.91	42.462	
16,200.0	7,650.0	22,144.6	13,591.0	144.3	149.9	-180.00	-8,502.3	755.9	5,941.0	5,799.6	141.43	42.006	
16,300.0	7,650.0	22,244.6	13,591.0	145.9	151.4	-180.00	-8,602.3	756.7	5,941.0	5,798.0	142.95	41.560	
16,400.0	7,650.0	22,344.6	13,591.0	147.6	153.0	-180.00	-8,702.3	757.6	5,941.0	5,796.5	144.47	41.122	
16,500.0	7,650.0	22,444.6	13,591.0	149.2	154.6	-180.00	-8,802.3	758.4	5,941.0	5,795.0	145.99	40.693	
16,600.0	7,650.0	22,544.6	13,591.0	150.8	156.1	180.00	-8,902.2	759.2	5,941.0	5,793.5	147.52	40.273	
16,700.0	7,650.0	22,644.6	13,591.0	152.4	157.7	180.00	-9,002.2	760.0	5,941.0	5,792.0	149.04	39.861	
16,800.0	7,650.0	22,744.6	13,591.0	154.0	159.3	180.00	-9,102.2	760.9	5,941.0	5,790.4	150.57	39.458	
16,900.0	7,650.0	22,844.6	13,591.0	155.7	160.9	180.00	-9,202.2	761.7	5,941.0	5,788.9	152.09	39.062	
17,000.0	7,650.0	22,944.6	13,591.0	157.3	162.4	180.00	-9,302.2	762.5	5,941.0	5,787.4	153.62	38.674	
17,100.0	7,650.0	23,044.6	13,591.0	158.9	164.0	180.00	-9,402.2	763.3	5,941.0	5,785.9	155.15	38.293	
17,200.0	7,650.0	23,144.6	13,591.0	160.5	165.6	180.00	-9,502.2	764.2	5,941.0	5,784.3	156.67	37.919	
17,300.0	7,650.0	23,244.6	13,591.0	162.2	167.2	180.00	-9,602.2	765.0	5,941.0	5,782.8	158.20	37.553	
17,400.0	7,650.0	23,344.6	13,591.0	163.8	168.7	180.00	-9,702.2	765.8	5,941.0	5,781.3	159.73	37.193	
17,500.0	7,650.0	23,444.6	13,591.0	165.4	170.3	180.00	-9,802.2	766.6	5,941.0	5,779.7	161.26	36.840	
17,600.0	7,650.0	23,544.6	13,591.0	167.0	171.9	180.00	-9,902.2	767.4	5,941.0	5,778.2	162.80	36.494	
17,700.0	7,650.0	23,644.6	13,591.0	168.7	173.5	180.00	-10,002.2	768.3	5,941.0	5,776.7	164.33	36.153	
17,800.0	7,650.0	23,744.6	13,591.0	170.3	175.1	180.00	-10,102.2	769.1	5,941.0	5,775.1	165.86	35.819	
17,900.0	7,650.0	23,844.6	13,591.0	171.9	176.7	180.00	-10,202.2	769.9	5,941.0	5,773.6	167.39	35.491	
18,000.0	7,650.0	23,944.6	13,591.0	173.6	178.3	180.00	-10,302.2	770.7	5,941.0	5,772.1	168.93	35.169	
18,100.0	7,650.0	24,044.6	13,591.0	175.2	179.8	180.00	-10,402.2	771.6	5,941.0	5,770.5	170.46	34.852	
18,200.0	7,650.0	24,144.6	13,591.0	176.8	181.4	180.00	-10,502.2	772.4	5,941.0	5,769.0	172.00	34.541	
18,300.0	7,650.0	24,244.6	13,591.0	178.5	183.0	180.00	-10,602.2	773.2	5,941.0	5,767.5	173.53	34.235	
18,400.0	7,650.0	24,344.6	13,591.0	180.1	184.6	180.00	-10,702.2	774.0	5,941.0	5,765.9	175.07	33.935	
18,500.0	7,650.0	24,444.6	13,591.0	181.7	186.2	180.00	-10,802.2	774.8	5,941.0	5,764.4	176.61	33.640	
18,600.0	7,650.0	24,544.6	13,591.0	183.3	187.8	180.00	-10,902.2	775.7	5,941.0	5,762.9	178.14	33.349	
18,700.0	7,650.0	24,644.6	13,591.0	185.0	189.4	180.00	-11,002.2	776.5	5,941.0	5,761.3	179.68	33.064	
18,800.0	7,650.0	24,744.6	13,591.0	186.6	191.0	180.00	-11,102.2	777.3	5,941.0	5,759.8	181.22	32.783	
18,900.0	7,650.0	24,844.6	13,591.0	188.2	192.6	180.00	-11,202.2	778.1	5,941.0	5,758.2	182.76	32.507	
19,000.0	7,650.0	24,944.6	13,591.0	189.9	194.2	180.00	-11,302.2	779.0	5,941.0	5,756.7	184.30	32.235	
19,100.0	7,650.0	25,044.6	13,591.0	191.5	195.8	180.00	-11,402.2	779.8	5,941.0	5,755.2	185.84	31.968	
19,200.0	7,650.0	25,144.6	13,591.0	193.1	197.4	180.00	-11,502.2	780.6	5,941.0	5,753.6	187.38	31.705	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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

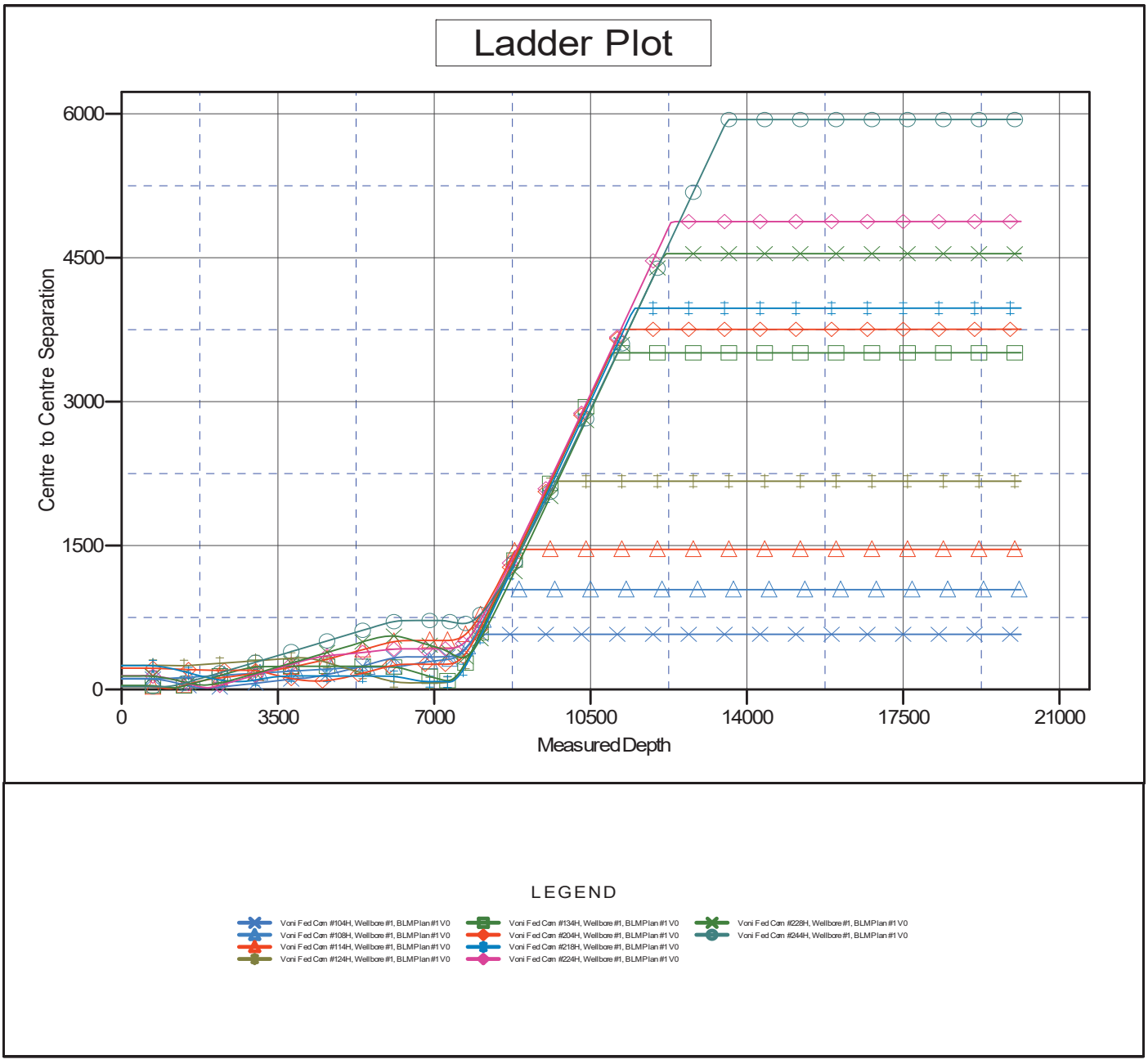
Offset Design Voni - Voni Fed Com #244H - Wellbore #1 - BLM Plan #1 — **Offset Site Error:** 0.0 usft

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
19,300.0	7,650.0	25,244.6	13,591.0	194.8	199.0	180.00	-11,602.2	781.4	5,941.0	5,752.1	188.92	31.447	
19,400.0	7,650.0	25,344.6	13,591.0	196.4	200.6	180.00	-11,702.2	782.3	5,941.0	5,750.5	190.46	31.192	
19,500.0	7,650.0	25,444.6	13,591.0	198.1	202.2	180.00	-11,802.1	783.1	5,941.0	5,749.0	192.01	30.942	
19,600.0	7,650.0	25,544.6	13,591.0	199.7	203.8	180.00	-11,902.1	783.9	5,941.0	5,747.5	193.55	30.695	
19,700.0	7,650.0	25,644.6	13,591.0	201.3	205.4	180.00	-12,002.1	784.7	5,941.0	5,745.9	195.09	30.452	
19,800.0	7,650.0	25,744.6	13,591.0	203.0	207.0	180.00	-12,102.1	785.5	5,941.0	5,744.4	196.63	30.213	
19,900.0	7,650.0	25,844.6	13,591.0	204.6	208.6	180.00	-12,202.1	786.4	5,941.0	5,742.8	198.18	29.978	
20,000.0	7,650.0	25,944.6	13,591.0	206.2	210.2	180.00	-12,302.1	787.2	5,941.0	5,741.3	199.72	29.746	
20,100.0	7,650.0	25,941.4	13,591.0	207.9	210.2	180.00	-12,299.0	787.2	5,941.9	5,741.6	200.33	29.661	
20,139.1	7,650.0	25,941.4	13,591.0	208.5	210.2	180.00	-12,299.0	787.2	5,942.7	5,742.1	200.56	29.630	

Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**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 @ 3222.5usft	Coordinates are relative to: Voni Fed Com #024H
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: 0.29°

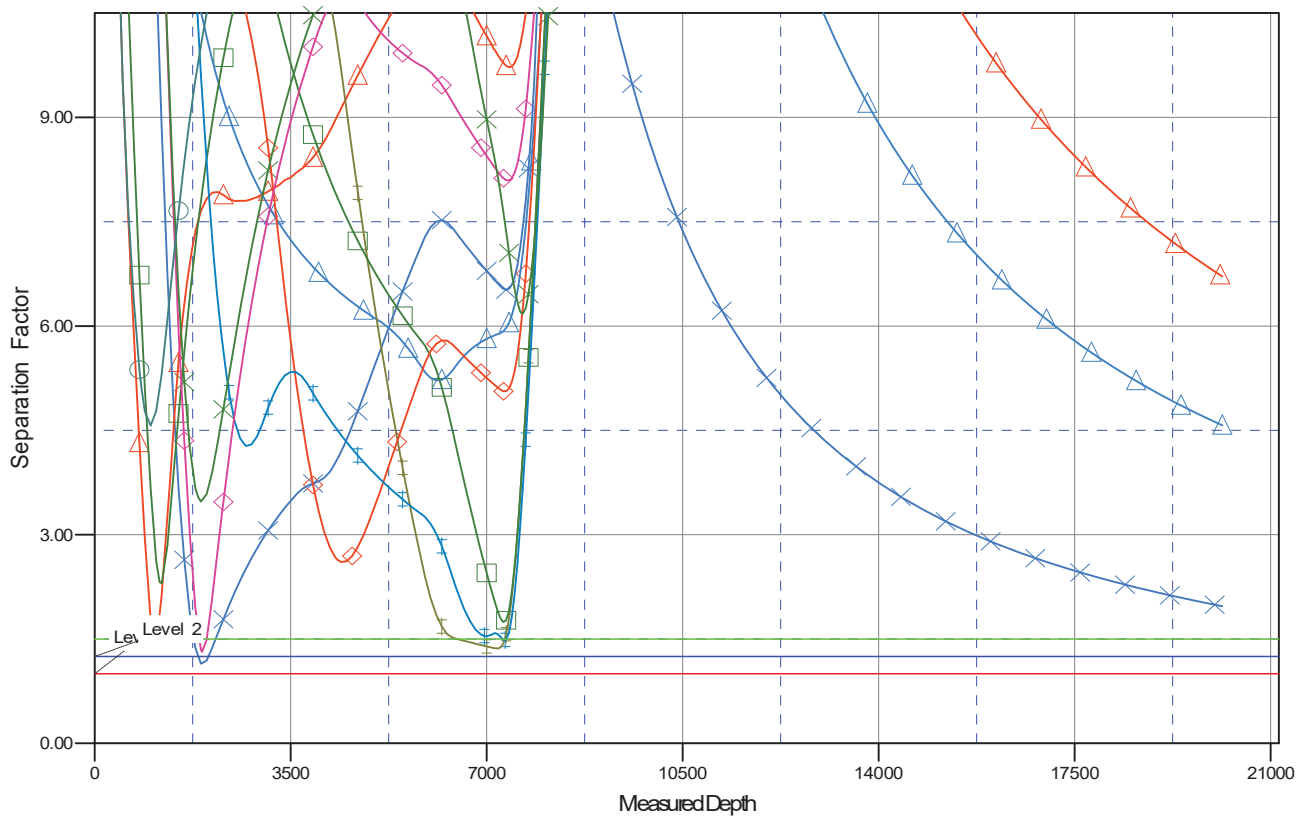


Company:	Matador Production Company	**Local Co-ordinate Reference:**	Well Voni Fed Com #024H
Project:	Rustler Breaks	**TVD Reference:**	KB @ 3222.5usft
Reference Site:	Voni	**MD Reference:**	KB @ 3222.5usft
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	Voni Fed Com #024H	**Survey Calculation 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 @ 3222.5usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Voni Fed Com #024H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.29°

Separation Factor Plot



LEGEND

Voni Fed Com #104H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #108H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #114H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #124H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #134H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #204H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #218H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #224H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #228H, Wellbore #1, BLM Plan #1 V0
Voni Fed Com #244H, Wellbore #1, BLM Plan #1 V0

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

X Original
☐ Amended

Operator & OGRID No.: Matador Production Company (228937)
Date: 4/23/19

Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – Name of facility

The wells that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Voni Fed Com 024H	N/A 3001547216	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 400	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well
Voni Fed Com 104H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 3,000	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well
Voni Fed Com 108H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 3,000	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.
Voni Fed Com 114 H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 2,500	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 124H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 2,500	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 134H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 6,000	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup

Voni Fed Com 204H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 6,000	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 218H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 6,500	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 224H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/-5900	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 228H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 5900	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup
Voni Fed Com 244H	N/A	UL-A Sec 21 &16 T26S R31E	### FNL ### FEL	+/- 10,000	~30 days	Flare ~30 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup

Gathering System and Pipeline Notification

The wells will be connected to a production facility after flowback operations are complete so long as the gas transporter system is in place. The gas produced from the production facility should be connected to Lucid Energy Delaware, LLC gathering system. It will require ~5,000' of pipeline to connect the facility to Lucid Energy Delaware, LLC gathering system. Matador Production Company periodically provides a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future to Lucid Energy Delaware, LLC. If changes occur that will affect the drilling and completion schedule, Matador Production Company will notify Lucid Energy Delaware, LLC. Additionally, the gas produced from the well will be processed at a processing plant further downstream and, although unanticipated, any issues with downstream facilities could cause flaring at the wellhead. The actual flow of the gas will be based on compression operating parameters and gathering system pressures measured when the well starts producing.

Flowback Strategy

After the fracture treatment/completion operations (flowback), the well will be produced to temporary production tanks and the gas will be flared or vented. During flowback, the fluids and sand content will be monitored. If the produced fluids contain minimal sand, then the well will be turned to production facilities. The gas sales should start as soon as the well starts flowing through the production facilities, unless there are operational issues on the midstream system at that time. Based on current information, it is Matador's belief the system will be able to take the gas upon completion of the well.

Safety requirements during cleanout operations may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
    - Operating a generator will only utilize a portion of the produced gas and the remainder of gas would still need to be flared.
    - Power Company has to be willing to purchase gas back and if they are willing they require a 5 year commitment to supply the agreed upon amount of power back to them. With gas decline rates and unpredictability of markets

it is impossible to agree to such long term demands. If the demands are not met then operator is burdened with penalty for not delivering.

- Compressed Natural Gas – On lease
  - Compressed Natural Gas is likely to be uneconomic to operate when the gas volume declines.
- NGL Removal – On lease
  - NGL Removal requires a plant and is expensive on such a small scale rendering it uneconomic and still requires residue gas to be flared.

Hydrogen Sulfide Drilling
Operations Plan
Matador Resources

1 H2S safety instructions to the following:

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

2 H2S Detection and Alarm Systems:

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

3 Windsocks and / Wind Streamers:

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

4 Condition Flags and Signs:

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

5 Well Control Equipment:

- See Exhibit E-1

6 Communication:

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

7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment
9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary
11 Emergency Contacts

- See exhibit E-6

HYDROGEN SULFIDE CONTINGENCY PLAN
Drilling, Testing, & Completion

MRC ENERGY CO.

Reviewers

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

H2S Contingency Plan # 0165 **Revision#** 0

This H2S Contingency Plan is subject to updating

Effective date: July 8, 2015

TABLE OF CONTENTS

INTRODUCTION

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

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

To be effective, the plan requires the cooperation and effort of each person participating in the drilling of an H_2S well. Each person must know his/her responsibilities and all emergency and safety procedures. He/she should thoroughly understand and be able to use with accuracy, all safety equipment while performing his/her normal duties, if the circumstance should arise. He/she should therefore familiarize himself/herself with the location of all safety equipment and check to see that it is properly stored, easily accessible at all times, and routinely maintained.

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

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

II. PURPOSE

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

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

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

A. OPERATING PROCEDURES

DEFINITIONS:

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

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

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

GENERAL:

Before this H_2S contingency plan becomes operational, all regularly assigned In Scope Personnel (primarily the MRC, drilling contractor, and certain service personnel,) shall be thoroughly trained in the use of breathing equipment, emergency procedures, and responsibilities. Total Safety Technician or a designee assigned by the MRC Drilling Foreman shall keep a list of all personnel who have been through the on-site H_2S training program at the drill site.

All In Scope Personnel shall be given H2S training and the steps to be taken during H2S conditions under which the well may be drilled. General information will be explained about toxic gases, as well as the physiological effects of H_2S and the various classified operating conditions. In addition, the reader will be informed his/her general responsibility concerning safety equipment and emergency procedures.

The Total Safety H_2S Safety Technician or MRC on-site RSE Technician shall make available the H2S Contingency Plan for all personnel to review.

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

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

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

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

All safety equipment and H_2S related hardware must be set up as required by MRC Energy Co. with regard to location of briefing areas, breathing equipment, etc. All safety equipment must be inspected periodically (at least weekly) with particular attention to resuscitators and breathing equipment.

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

1. Rig Floor

2. Mud Pits

3. Derrick

4. Shale Shaker

5. Cellar

The Total Safety H_2S Safety Technician will be responsible for rigging up all H_2S continuous monitoring-type detectors. The Total Safety Technician will monitor and bump test the detector units periodically (at least at least once a week to test alarm function during drilling conditions. In the event H_2S is detected, or when drilling in a zone confirmed to contain H_2S, the units shall be bump tested at least once every 24 hours. A bump test/calibration log will be kept on location. All results will be reported to the MRC on-site Drilling Foreman.

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

C. DRILLING BELOW CONTINGENCY PLAN DEPTH

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

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

Rig crews and service company personnel shall be made aware of the location of spare air bottles, resuscitation equipment, portable fire extinguishers, H_2S monitors and detectors. Knowledge of the location of the H_2S monitors and detectors are vital in determining as our gas location and the severity of the emergency conditions.

After any device has initially detected H2S, all areas of poor ventilation shall be inspected periodically by means of a portable H_2S detector instrument. The buddy system will be utilized. (When an alarm sounds, personnel will don an SCBA, shut the well in, and proceed to SBA for roll call. The H2S Technician or designee will mask up, with a buddy and will verify source of H2S and report back to the on-site MRC Foreman.)

D. PROCEDURES PROGRAM

1. Drill Site

    a. The drilling rig will be located to allow prevailing winds to blow across the reserve pit.

    b. A Safe Briefing Area will be provided with a breathing air cascade trailer and or 30-minute SCBA's at the Primary Area. Personnel will assemble at the most up-wind station under alarm conditions, or when so ordered by the MRC Energy Co. representative, the Contractor representative, or

the Total Safety H_2S Safety Technician. Windsocks or streamers will be anchored to various strategic places on a pole about 10 feet high, so it is in easy view from the rig floor at all times.

c. Warning signs will be posted on the perimeters. "No Smoking" signs will be posted by MRC Energy Co.as well.

d. One multi-channel automatic H_2S monitor will be provided by Total Safety and the detector heads will be at the shale shaker, bell nipple, mud pits, rig floor, and quarter's area. The monitor will be located inside HSE or Company man trailer. Should the alarm be shut off to silence the sirens, the blinker light must continue to warn of H_2S presence. The Total Safety H2S Safety Technician or designee will continuously monitor the detectors and will reactivate the alarm if H_2S concentrations increase to a dangerous level.

e. A method of escape will be open at all times.

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f. If available, land line telephone service will be provided or cell phones provided. (Primary communications provided)

g. A rig communication system will be provided, as needed.

h. A gas trap, choke manifold, and degasser will be installed.

i. A kill line, securely anchored and of ample strength, will be laid to the well-head from a safe location. This line is to be used only in an emergency.

General

a. The MRC Energy Co. representative and/or the Contractor's Toolpusher will be available at all times. The drilling supervisor, while on duty, will have complete charge of the rig and location operations and will take whatever action is deemed necessary to insure personnel safety, to protect the well, and to prevent damage.

b. A Mud Engineer will be on location at all times when drilling takes place at the depth H_2S may be expected. The mud engineer will be able to verify the presence or absence of H2S.

III. CONDITIONS AND EMERGENCY PROCEDURES

A. DEFINITION OF OPERATIONAL "CONDITIONS"

CONDITION I **"POSSIBLE DANGER"**

Warning Flags — Green

Alarms — No Alarm. Less than 10 ppm

Characterized By: Drilling operations in zones that may contain hydrogen sulfide. This condition remains in effect unless H_2S is detected and it becomes necessary to go to Condition II.

General Action:

a. Be alert for a condition change

b. Check all safety equipment for availability and proper functioning.

c. Perform all drills for familiarization and proficiency.

CONDITION II **"MODERATE DANGER"**

Warning Flags — Yellow

Alarms: Actuates at 10 ppm. Continuous flashing light.

Characterized By: Drilling operations in zones containing hydrogen sulfide. This condition will remain in effect until adding chemicals to the mud system neutralizes the hydrogen sulfide or it becomes necessary to go to Condition III.

General Action:

a. Be alert for a condition change

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

WHEN TRIPPING – Driller and two designated crewmembers will don 30 min SCBA, shut in the well and immediately proceed to the Safe Briefing Area. The Derrickman will

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

c. All In Scope Personnel will proceed directly to the appropriate Safe Briefing Area.

d. Remain in safe briefing area, take roll call and wait for instructions

e. Contact the Total H2S Technician if not on location.

f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H_2S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases.

g. All Out of Scope Personnel will report to the appropriate Safe Briefing Area.

CONDITION III "EXTREME DANGER"

Warning Flags: Red

Alarms: Actuate at 15 ppm. Continuous Sirens and Flashing Lights

Characterized by: Critical well operations which pose an immediate threat of H_2S exposure to on-site personnel and a potential threat to the public.

General Action:

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

WHEN TRIPPING – Driller and two designated crewmembers will don 30

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

b. All In Scope Personnel should don SCBA if nearby and immediately proceed to Safe Briefing Area. If SCBA in not nearby at time of alarm, DO NOT GO TOWARDS RIG AREA, but proceed directly to the Safe Briefing Area

c. All out of Scope Personnel shall evacuate the location.

d. Remain in the Safe Briefing Area, take roll call and wait for instructions.

e. Contact the Total H2S Technician if not on location.

f. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering an H_2S contaminated area to provide assistance to anyone who may be injured or overcome by toxic gases. Use the buddy system.

g. Remain in safe briefing area, take roll call and wait for instructions.

h. A cascade breathing air systems shall be mobilized and utilized to conduct any additional on rig work required to correct the H2S release condition.

i. If well is ignited do not assume area is safe. SO2 is hazardous and not all H2S will burn.

H_2S EMERGENCY PROCEDURES; IN SCOPE PERSONNEL

A. Day To Day Drilling Operations

1. Upon discovering a release of H_2S gas in the ambient air by warning alarms or in any other way **Do Not Panic**.

2. Hold your breath donning the nearest Self Contained Breathing Apparatus and rapidly move up or across-wind away from the areas where H_2S sensing devices are in place, to the closest available safe briefing area. Continue to use breathing apparatus until it has been determined that the exposure of H_2S gas in the ambient air no longer exists. **Do Not Panic**!

3. Utilize the "Buddy System", i.e.; select and pair up each person participating in the drilling of an H_2S well prior to an emergency situation.

4. Help anyone who is overcome or affected by the H_2S gas by taking him/her up-wind out of the contaminated area. (This should be done utilizing an SCBA and with a buddy.)

5. Take necessary steps to confirm the release of the H_2S gas into the ambient air.

    - When an H2S alarm activates, two designated personnel using the buddy system, while wearing their self contained breathing apparatus, will determine by the read-out on the fixed monitor which sensing device has detected the release of the H_2S gas.

    - They will utilize the hand-held sniffer type device at the particular sensing point disclosed on the fixed monitor to corroborate the fact that H_2S gas has actually been released. This will rule out the possibility of a false alarm. This will be done with a buddy and under mask after reporting to the Safe Briefing Area for roll call and instructions by on-site MRC Foreman.

6. Refer to the Emergency Phone Numbers and call emergency personnel.

7. Take the necessary steps to suppress the release of H_2S gas into the ambient air. Comply with the MRC Energy Co. Representative to physically suppress the release of H_2S gas at the actual release point.

8. Check all of MRC Energy Co.'s monitoring devices and increase gas-monitoring activities with the portable hand-operated H_2S and gas detector units.

Do Not Panic!

The MRC Energy Co. representative will assess the situation and with assistance of the Contractor's Representative and Total Safety's H_2S Safety Technician or on site designee, will assign duties to each person to bring the situation under control.

B. RESPONSIBILITIES OF WELL-SITE PERSONNEL

In the event of a release of potentially hazardous amounts of H_2S, all personnel will immediately don their protective breathing apparatus, the well will be shut in and personnel will proceed upwind to the nearest designated safe briefing area for roll call and instructions by MRC Foreman. Consideration will be given to evacuating Out of Scope Personnel, as situation warrants.

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

a. If MRC Energy Co.'s well-site representative is incapacitated or not on location, this responsibility will fall to the Toolpusher/Driller.

b. Immediately upon assessing the situation, set this plan into Action by initiating the proper procedures to contain the gas and notify the appropriate people and agencies.

c. Ensure that the alarm area indicated by the fixed H_2S Monitor is checked and verified with a portable H_2S detector. (Safety Technician if on location or MRC assigned designee with a buddy utilizing SCBA's)

d. Consult Pusher/driller of remedial actions as needed.

e. Ensure that non-essential personnel proceed to the safe briefing area.

f. Ensure location entrance barricades are positioned. Keep the number of persons on location to a minimum during hazardous operations.

g. Consult each contractor, Service Company and all others allowed to enter the site, that H2S gas may be encountered and the potential hazards that may exist.

h. Authorize the evacuation of local residents if H_2S threatens Their safety.

i. Non essential personnel should be evacuated from location if Situation warrants.

2. Toolpusher

a. Toolpusher/Driller will assume responsibilities of MRC Energy Co.'s well-site representative if that person is incapacitated or not on location.

b. Ensure that the alarm area indicated by the fixed H_2S monitor is checked and verified with a portable H_2S gas detector. (Alarm area indicated by the monitor will be Checked by the H2S Technician and a buddy, under mask.) This will be done after checking in and roll call at the Upwind Safe Briefing Area.

c. Confer with MRC Energy Co.'s well-site representative or superintendent and direct remedial action to suppress the H_2S and control the well.

d. Ensure that personnel at the safe briefing area are instructed on emergency actions required.

e. Ensure that personnel at the drill floor area are instructed on emergency actions required.

f. Ensure that all personnel observe the appropriate safety and emergency procedures.

g. Ensure that all persons are accounted for and provided emergency assistance as necessary.

3. Mud Engineer

a. Run a sulfide check on the flowline mud.

b. Take steps to determine the source of the H_2S and suppress it. Lime and H_2S scavenger shall be added to the mud as necessary.

4. Total H_2S Safety Technician, if on location, or MRC Designee

a. H2S Safety Technician or designee don nearest SCBA and report to Safe Briefing Area for roll call, take a buddy masked up and check monitor and verify with a portable H_2S detector the alarm area indicated by the fixed H_2S monitor. Advise the Toolpusher/Driller and MRC Energy Co.'s well-site representative of findings. Record all findings.

b. If H_2S is flared, check for sulfur dioxide (SO_2) near the flare as necessary. Take hourly readings at different perimeters, log readings and record on location.

c. Ensure that personnel at the safe briefing area are instructed on emergency actions required.

d. Ensure that the appropriate warning flags are displayed.

e. Ensure that all personnel are in S.C.B.A. as necessary.

f. Ensure that all persons are accounted for and provide emergency assistance as necessary.

g. Be prepared to evacuate rig if order is issued.

5. General Personnel & Visitors

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

b. During any emergency, use the "buddy" system to prevent anyone from entering or being left in a gas area alone, even wearing breathing apparatus.

c. Provide assistance to anyone who may be injured or overcome by toxic gases. Personnel shall ensure that their breathing apparatus is properly fitted and operational before entering a potentially H_2S contaminated area.

d. Remain in safe briefing area and wait for instructions.

C. INSTRUCTIONS FOR IGNITING THE WELL

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

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

   a. Human life and property are endangered, or

   b. There is no hope of controlling the well under current conditions.

2. Once the decision has been made, the following procedures should be followed:

   a. Two people wearing self-contained breathing apparatus will be needed for the actual lighting of the well. They must first establish the flammable perimeter by using an explosimeter. This should be established at 30% to 40% of the lower flammable limits.

   b. After the flammable perimeter has been established and everyone removed from the area, the ignition team should select a site upwind of the well from which to ignite the well. This site should offer the maximum protection and have a clear path for retreat from the area.

c. The ignition team should have safety belts and lifeline attached and manned before attempting ignition. If the leak is not ignited on the first attempt, move in 20 to 30 feet and fire again. Continue to monitor with the explosimeter and NEVER fire from an area with over 75% of the Lower Explosive Limit (LEL). If having trouble igniting the well, try firing 40 degrees to 90 degrees on either side of the well.

d. If ignition is not possible due to the makeup of the gas, the toxic perimeter must be established and evacuation continued until the well is contained.

e. All personnel must act only as directed by the person in charge of the operations.

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

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

D. CORING PROCEDURES

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

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

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

Cores will be appropriately marked and sealed for transportation.

Normal Operations

1. Responsibilities of well-site personnel

a. Well-site Representative

1. Notify H_2S Technician of expected date to reach Contingency Plan implementation depth (Two (2) days prior to reaching suspected H_2S bearing zone) or prior to starting well work.

2. Ensure H_2S Safety Technician completes rig-up procedures prior to reaching Contingency Plan effective depth.

3. Restrict the number of personnel at the drilling rig or well site to a minimum while drilling, starting well work, testing or coring.

4. Ensure weekly H_2S drills/training are performed, if possible.

B. Toolpusher

1. Ensure that necessary H_2S safety equipment is provided on the rig, and that it is properly inspected and maintained.

2. Ensure that all personnel that work in the well area, are thoroughly trained in the use of H_2S safety equipment and periodic drills are held to maintain an adequate level of proficiency.

C. In Scope Personnel

1. Remain clean-shaven. Beards and long sideburns do not allow a proper facepiece seal.

2. Receive H_2S safety training on location, or confirm prior training by certification that is one year within date.

3. Familiarize yourself with the rig's Contingency Plan.

4. Inspect and practice putting on your breathing apparatus.

5. Know the location of the "safe briefing areas".

6. Keep yourself "wind conscious". Be prepared to quickly move upwind and away in the event of any emergency involving release of H_2S.

D. Total Safety H_2S Safety Technician or MRC Designee

1. Conduct training as necessary to ensure all personnel working in well area are familiar with the contingency procedures and the operation of emergency equipment.

2. Check all H_2S safety equipment to ensure that it is ready for emergency use:

   - Check pressure weekly for each shift on breathing apparatus (both 30-minute and hip-packs) to make sure they are charged to full volume.

   - Check pressure on cascade air bottles, if on location, to see that they are capable of recharging breathing apparatus.

   - Check oxygen resuscitator, if on location, to ensure that it is charged to full volume.

   - Check H_2S detectors weekly for each shift (fixed and portable), and explosimeter, to ensure they are working properly.

3. Provide a weekly report to MRC Energy Co.'s well-site representative documenting:

   - Calibrations performed on H_2S detectors.

   - Proper location and working order of H_2S safety equipment.

   - Attendance of all personnel, trained or retrained, and their company.

   - Weekly drills, if held and a list of personnel participating and summary of actions.

OUT OF SCOPE PERSONNEL

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

SAFETY EQUIPMENT

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

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

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

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

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

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

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

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

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

scale reading of the concentration of hydrogen sulfide. By changing the type of detector tube used, this detector may also be used for sulfur dioxide (SO_2) detection when hydrogen sulfide (H_2S) is being burned in the flare area.

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

V – TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity[1]	PEL (OSHA)[2]	STEL[3]	Lethal ppm[4]
Hydrogen Cyanide	HCN	0.94	10	150	300
Hydrogen Sulfide	H_2S	1.18	20	Peak- 50ppm	600
Note: The ACGIH(7) recommends a TWA(6) value of 10ppm as the TLV(5) for H2S and an STEL of 15ppm.					
Sulfur Dioxide	SO_2	2.21	2	5 ppm	1000
Chlorine	CL_2	2.45	1		
Carbon Monoxide	CO	0.97	35	200/1 Hour	1000
Carbon Dioxide	CO_2	1.52	5000	5%	10%
Methane	CH_4	0.55	90000		

[1] **Air = 1.0**

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

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

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

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

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

ACGIH – (American Conference of Governmental Industrial Hygienists) is an organization comprised of Occupational Health Professionals believed by many to be the top experts in the field of Industrial Hygiene. They are recognized as an expert rexource by OSHA. The ACGIH releases a bi-annual publication "Threshold Limit Values and Biological Indices" that many safety professionals consider to be the authoritative document on airborne contaminants.
Reference: API RP-49, September 1974 - Reissued August 1978

VI. PROPERTIES OF GASES

A. CARBON DIOXIDE

1. Carbon Dioxide (CO_2) is usually considered inert and is commonly used to extinguish fires. It is 1.52 times heavier than air and will concentrate in low areas of still air. Humans cannot breathe air containing more than 10% CO_2 without losing conscience or becoming disorientation in a few minutes. Continued exposure to CO_2 after being affected will cause convulsions, coma, and respiratory failure.

2. The threshold limit of CO_2 is 5000 ppm. Short-term exposure to 50,000 ppm (5%) is reasonable. This gas is colorless, odorless, and can be tolerated in relatively high concentrations.

B. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H_2S) is a colorless, transparent, flammable gas. It is heavier than air and, hence, may accumulate in low places.

2. Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of H_2S.

CONCENTRATION			EFFECTS
% H_2S	PPM	GR/100 SCF[1]	
0.001	10	.65	Safe for 8 hours without respirator. Obvious and unpleasant odor.
0.0015	15	0.975	Safe for 15 minutes of exposure without respirator.
0.01	100	6.48	Kills smell in 3-15 minutes; may sting eyes and throat.
0.02	200	12.96	Kills smell quickly; stings eyes and throat.
0.05	500	32.96	Dizziness; breathing ceases in a few minutes; need prompt artificial respiration.
0.07	700	45.92	Rapid Unconsciousness; death will result if not rescued promptly.
0.1	1000	64.80	Instant unconsciousness, followed by death within minutes.

[1] Grains per 100 Cubic Feet

VII. Treatment Procedures for Hydrogen Sulfide Poisoning

A. Remove the victim to fresh air.

B. If breathing has ceased or is labored, begin resuscitation immediately.
Note: This is the quickest and preferred method of clearing victim's lungs of contaminated air; however, under disaster conditions, it may not be practical to move the victim to fresh air. In such instances, where those rendering first aid must continue to wear masks, a resuscitator should be used.

C. Apply resuscitator to help purge H_2S from the blood stream.

D. Keep the victim at rest and prevent chilling.

E. Get victim under physician's care as soon as possible.

C. SULPHUR DIOXIDE

1. Sulfur Dioxide (SO_2) is a colorless, non-flammable, transparent gas.

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

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

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

An H_2S Drill and Training Session must be given once a week to ALL on-duty personnel with off duty personnel. On-duty and Off-duty personnel will reverse roles on alternate drills.
An H2S drill and training session must be given once a week to all off-duty personnel in coincidence with on-duty personnel reversing roles on alternate drills.

The purpose of this drill is to instruct the crews in the operation and use of breathing air and H_2S related emergency equipment and to allow the personnel to become acquainted with using the equipment under working conditions. The crews should be trained to put on the breathing air equipment within one minute when required or requested to do so.

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

1. All personnel should be informed that a drill will be held.

2. The Total H2S Safety Technician or a designee assigned by the MRC Drilling Foreman should initiate the drill by signaling as he/she would if H2S was detected.

3. Personnel should don their breathing apparatus.

4. Once the breathing air equipment is on, the H2S Technician should check all personnel to insure proper operation.

A training and information session will be conducted after each drill to answer any H_2S related questions and to cover any gaps identified from one of the following topics:

- Condition II, and III alerts and steps to be taken by all personnel.
- The importance of wind direction when dealing with H_2S.
- Proper use and storage of all types of breathing equipment.
- Proper use and storage of oxygen resuscitators.
- Proper use and storage of H_2S detectors (Mini Checks or equivalent).
- The "buddy system" and the procedure for rescuing a person overcome by H_2S.
- Responsibilities and duties.
- Location of H_2S safety equipment.
- Other parts of the "H_2S Contingency Plan" that should be reviewed.

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

IX. HYDROGEN SULFIDE TRAINING CURRICULUM

(FOR EMPLOYERS, VISITORS, AND CONTRACTORS)

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

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

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

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

1. **Brief Introduction on H2S**
   - A. Slide or Computer presentation (If Available)
   - B. H2S material will be distributed
   - C. Re-emphasize the properties, toxicity, and hazards of H2S
   - D. Source of SO2 (if applicable)

2. **H2S Detection**
   - A. Description of H2S sensors
   - B. Description of warning system (how it works & it's location)
   - C. Actual location of H2S sensors
   - D. Instruction on use of pump type detector (Gastec)
   - E. Use of card detectors, ampoules, or dosimeters
   - F. Use of combustible gas detector
   - G. Other personnel detectors used
   - H. Alarm conditions I & II,
   - I. SO2 alarms (if applicable)

3. **H2S Protection**
   - A. Types of breathing apparatus provided (30-minute SCBA & 5-minute SCBA (with voice diaphragms for communication if supplied)
   - B. Principle of how breathing apparatus works
   - C. Demonstration on how to use breathing apparatus
   - D. Location of breathing apparatus

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

5. **H2S Rescue and First Aid**
   - A. Importance of wind direction
   - B. Safe briefing area
   - C. Buddy system
   - D. H2S symptoms
   - E. Methods of rescue

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

7. **Certification**
   - A. Testing on material covered

TOTAL SAFETY US INC., FIT TEST

X. EMPLOYEE INFORMATION

Employee Name: _____ Date: _____

Date of Employee Medical Evaluation: _____

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

RESPIRATOR INFORMATIOIN

Respirator Type (Dustmask, SCBA, etc):_____

Brand:_____

Size: (circle): XS S M L XL

FIT TEST INFORMATION

Type of Fit Test Performed:

Quantitative

Porta Count	Fit Factor:_____
Fittester 3000	Fit Factor:_____

Qualitative

Irritant Smoke	Passed / Failed
Isoamyl Acetate (Banana Oil)	Passed / Failed
Saccharin	Passed / Failed
Bitrex	Passed / Failed

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

Fit Tester Name (Print):_____

Signature:_____ Date:_____

XI. H_2S SAFETY SERVICES

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

RESPIRATORY SAFETY SYSTEMS

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

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

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

DETECTION AND ALARM SAFETY SYSTEM

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

ADDITIONAL SAFETY RELATED EQUIPMENT

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

TRAILER WITH BREATHING AIR CASCADE WILL ALSO INCLUDE THE FOLLOWING:

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

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

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

EMERGENCY PHONE NUMBERS

MRC Energy Co. Emergency Phone #
MRC Energy Co. Permian Operations Phone----------
MRC Energy Co. Production
113 Daw Rd
Mansfield LA 71052

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

Hydrogen Sulfide Safety Consultants

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

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

MEDICAL COORDINATOR # ----------

Emergency Numbers & Directions

Hospitals (911)

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

State Police (911)

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

Local Law Enforcement (911) (Sheriff)

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

Federal & State Agencies

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

Rig Company

XIII. EVACUATION OF THE GENERAL PUBLIC

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

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

1. The MRC Energy Co.'s representative will dispatch sufficient personnel to immediately warn each resident and transients down-wind within radius of exposure from the well site. Then warn all residence in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants.

2. The MRC Energy Co.'s representative will immediately notify proper authorities, including the Sheriff's Office, Highway Patrol, and any other public officials as described above and will enlist their assistance in warning residents and transients in the calculated radius of exposure.

3. The MRC Energy Co.'s representative will dispatch sufficient personnel to divert traffic in the vicinity away from the potentially dangerous area. A guard to the entrance of the well site will be posted to monitor essential and non essential traffic.

4. General:

    A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.

    B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. MRC Energy Co. will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

    C. MRC Energy Co. will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel

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

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

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

Company Office			
Matador Resources Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Blake Hermes	Drilling Engineer	972-371-5485	713-876-8558
	Construction Superintendent		
	Construction Superintendent		

Artesia		
Ambulance	911	
State Police	575-746-2703	
City Police	575-746-2703	
Sheriff's Office	575-746-9888	
Fire Department	575-746-2701	
Local Emergency Planning Committee	575-746-2122	
New Mexico Oil Conservation Division	575-748-1283	
Carlsbad		
Ambulance	911	
State Police	575-885-3137	
City Police	575-885-2111	
Sheriff's Office	575-887-7551	
Fire Department	575-887-3798	
Local Emergency Planning Committee	575-887-6544	
New Mexico Oil Conservation Division	575-887-6544	
Santa Fe		
New Mexico Emergency Response Comission (Santa Fe)	505-476-9600	
New Mexico Emergency Response Comission (Santa Fe) 24 hrs	505-827-9126	
New Mexico State Emergency Operations Center	505-476-9635	
National		
National Emegency Response Center (Washington, D.C.)	800-424-8802	
Medical		
Flight for Life- 4000 24th St.; Lubbock, TX	806-743-9911	
Aerocare- R3, Box 49F; Lubbock, TX	806-747-8923	
Med Flight Air Amb- 2301 Yale Blvd S.E., D3; Albuquerque, NM	505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949	
Other		
Boots & Coots IWC	800-256-9688	or 281-931-8884
Cudd Pressure Control	432-699-0139	or 432-563-3356
Haliburton	575-746-2757	
B.J. Services	575-746-3569	

Voni Fed Com #024H
SHL: 290' FNL & 1348' FEL Section 21
BHL: 100' FSL & 660' FEL Section 33
Township/Range: 26S 31E
Elevation Above Sea Level: 3193'

Drilling Operation Plan

Proposed Drilling Depth: 20129' MD / 7648' TVD

Type of well: Horizontal well, no pilot hole

Permitted Well Type: Oil

Geologic Name of Surface Formation: Quaternary Deposits

KOP Lat/Long (NAD83): 32.0353315615 N / -103.7768051771 W
TD Lat/Long (NAD83): 32.0004581419 N / -103.7766856742 W

1. Estimated Tops

Formation	MD (ft)	TVD (ft)	Thickness (ft)	Lithology	Resource
Rustler	893	893	681	Anhydrite	Barren
Salado (Top of Salt)	1,574	1,574	1,817	Salt	Barren
Castile	3,391	3,391	634	Salt	Barren
Lamar (Base of Salt)	4,025	4,025	27	Salt	Barren
Bell Canyon	4,052	4,052	1,090	Sandstone	Oil/Natural Gas
Cherry Canyon	5,142	5,142	1,149	Sandstone	Oil/Natural Gas
Brushy Canyon	6,291	6,291		Sandstone	Oil/Natural Gas
KOP	**7,115**	**7,075**		**Sandstone**	**Oil/Natural Gas**
TD	**20,129**	**7,648**		**Sandstone**	**Oil/Natural Gas**

2. Notable Zones

Brushy Canyon is the goal. All perforations will be within the setback requirements as prescribed or permitted by the New Mexico Oil Conservation Division. OSE estimated ground water depth at this location is 230'.

3. Pressure Control

Equipment
A 12,000' 5000-psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and one annular preventer will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams.

An accumulator complying with Onshore Order #2 requirements for the pressure rating of the BOP stack will be present. A rotating head will also be installed as needed.

Testing Procedure

BOP will be inspected and operated as required in Onshore Order #2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

After setting surface casing, a minimum 5M BOPE system will be installed. Test pressures will be 250 psi low and 5000 psi high with the annular preventer being tested to 250 psi low and 2500 psi high before drilling below surface shoe. In the event that the rig drills multiple wells on the pad and any seal subject to test pressures are broken, a full BOP test will be performed when the rig returns and the 5M BOPE system is re-installed.

Variance Request

Matador requests a variance to have the option of running a multi-bowl wellhead assembly for setting the Intermediate 1 and Production Strings. The BOPs will not be tested again unless any flanges are separated.

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

Matador requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, the wellbore will be secured with a blind flange of like pressure. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test.

Matador request a variance to utilize a surface setting rig. If this is used, Matador request the option to drill either 17.5" or 20" surface hole.

4. Casing & Cement

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

String	Hole Size (in)	Set MD (ft)	Set TVD (ft)	Casing Size (in)	Wt. (lb/ft)	Grade	Joint	Collapse	Burst	Tension
Surface	17.5	0 - 918	0 - 918	13.375	54.5	J-55	BUTT	1.125	1.125	1.8
Intermediate 1	12.25	0 - 4077	0 - 4077	9.625	40	J-55	BUTT	1.125	1.125	1.8
Production	8.75	0 - 20129	0 - 7648	5.5	20	P-110	Hunting TLW	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
- Request the option to deepen the Intermediate 1 casing set depth to the Bone Spring Lime

String	Type	Sacks	Yield	Cu. Ft.	Weight	Percent Excess	Top of Cement	Class	Blend
Surface	Lead	420	1.72	716	12.5	50%	0	C	5% NaCl + LCM
	Tail	250	1.38	347	14.8	50%	618	C	5% NaCl + LCM
Intermediate 1	Lead	750	2.13	1601	12.6	50%	0	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	300	1.38	417	14.8	50%	3262	C	5% NaCl + LCM
Production	Lead	380	2.22	854	11.5	25%	3877	H	Fluid Loss + Dispersant + Retarder + LCM

Production	Tail	3170	1.35	4277	13.2	25%	6615	H	Fluid Loss + Dispersant + Retarder + LCM

5. Mud Program

An electronic Pason mud monitoring system complying with Onshore Order #2 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions.

Hole Section	Hole Size (in)	Mud Type	Interval MD (ft)	Density (lb/gal)	Viscosity	Fluid Loss
Surface	17.5	Spud Mud	0 - 918	8.4 - 8.8	28-30	NC
Intermediate 1	12.25	Brine/OBM	918 - 4077	9.5 - 10.2	28-30	NC
Production	8.75	Cut Brine/OBM	4077 - 20129	8.6 - 9.4	28-65	NC

6. Cores, Test, & Logs

No core or drill stem test is planned.

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

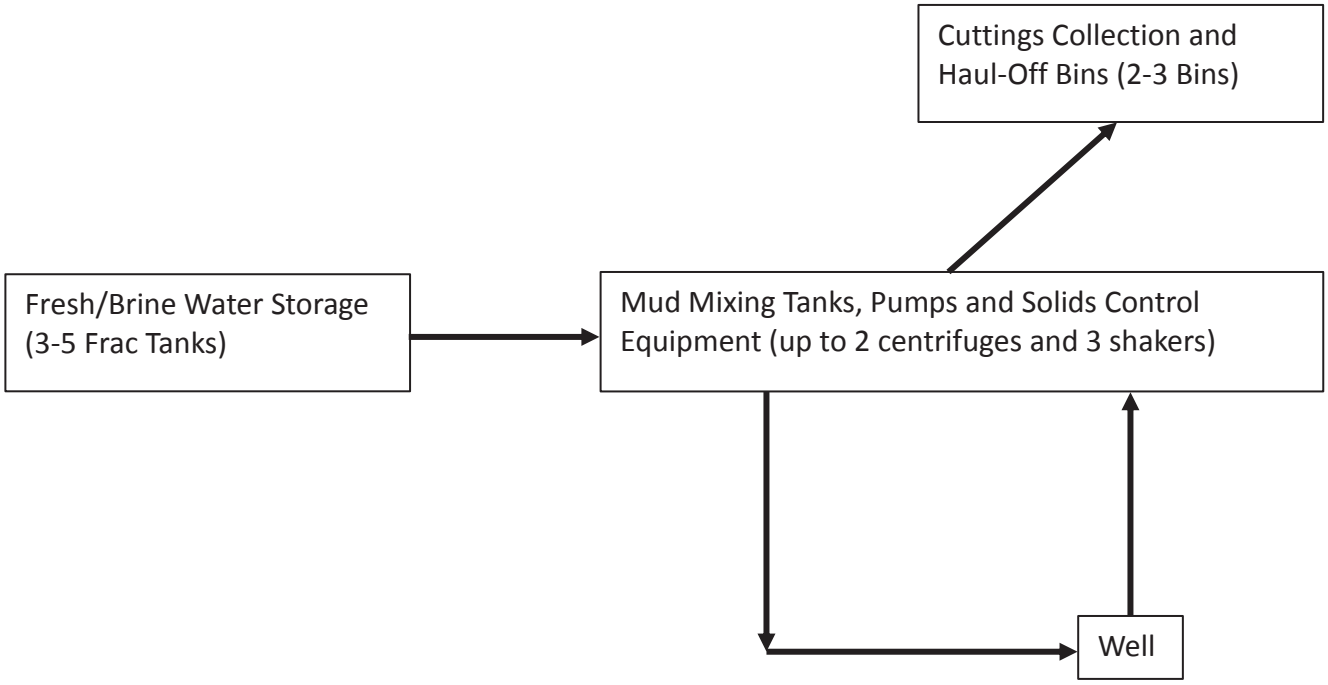
No electric logs are planned at this time. GR will be collected through the MWD tools from Intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to top of curve.

7. Down Hole Conditions

No abnormal pressure or temperature is expected. Maximum anticipated surface pressure is 2056 psi. Expected bottom hole temperature is 144° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of a "H2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have a H2S safety package on all wells, attached is a "H2S Drilling Operations Plan." Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of the equipment being used.

Closed-Loop System



Operating and Maintenance Plan:

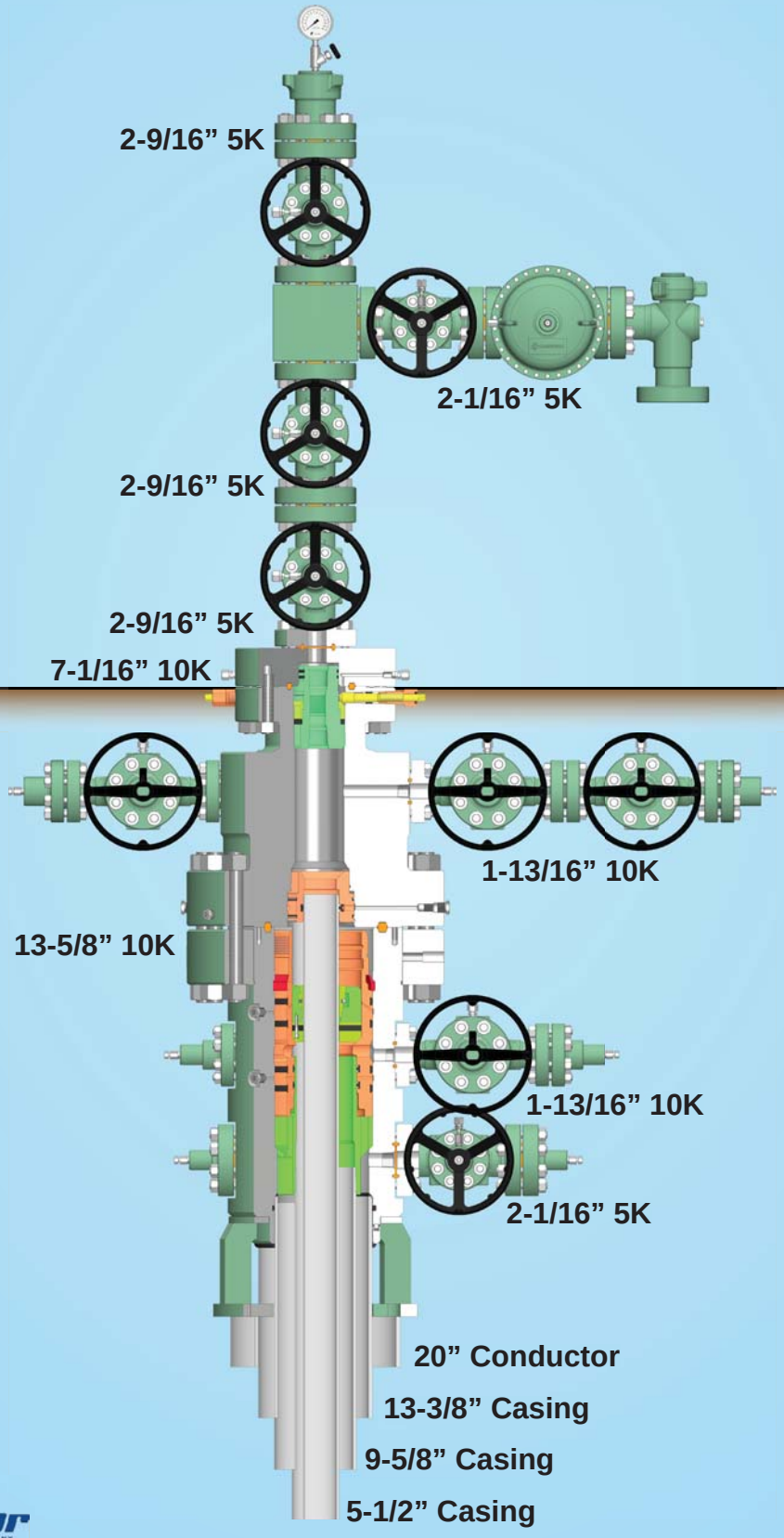
During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluids and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.

CAMERON
A Schlumberger Company

13-5/8” 10K MN-DS Wellhead
13-3/8 x 9-5/8 x 5-1/2 Casing Program



Matador RESOURCES COMPANY

2018-147-03
Rev: 01

NOTE: All dimensions on this drawing are estimated measurements and should be evaluated by engineering.