

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. Lease Serial No.
NMNM132079

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

MATADOR PRODUCTION COMPANY

Contact: CADE LABOLT

Email: cade.labolt@matadorresources.com

3a. Address

5400 LBJ FREEWAY SUITE 1500
DALLAS, TX 75240

3b. Phone No. (include area code)

Ph: 9726292158

8. Well Name and No.

UNCLE CHES FEDERAL 128H

9. API Well No.

30-025-44520-00-X1

10. Field and Pool or Exploratory Area
FEATHERSTONE

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

Sec 21 T20S R35E SESE 413FSL 576FEL

11. County or Parish, State

LEA COUNTY, NM

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

TYPE OF SUBMISSION

TYPE OF ACTION

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

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

BLM Bond No. NMB001079

Surety Bond No. RLB0015172

Matador requests the name of this well to be changed from Uncle Ches Fed 124H (API 30-025-44520) to Uncle Ches 2116 Fed Com 128H.

Please see the attached C102 to revise the SHL of Matador's Uncle Ches 2116 Fed Com 128H from 350' FSL and 203' FEL of Sec. 21 T20S R35E to 413' FSL and 576' FEL of Sec. 21 T20S R35E. This proposed SHL move lies within the approved well pad location footprint covered in Environmental Assessment DOI-BLM-NM-P020-2019-0741-EA.

Matador requests the BHL be revised from 330' FSL 240' FWL of Sec. 21 T20S R35E to 60' FNL and 331'

11-3-20 BR

Name change and BHL change good 11-2-20 same COA's / Surface good same COA

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #520273 verified by the BLM Well Information System

For MATADOR PRODUCTION COMPANY, sent to the Hobbs

Committed to AFMSS for processing by JUANA MEDRANO on 06/25/2020 (20JM0152SE)

Name (Printed/Typed) CADE LABOLT

Title LANDMAN

Signature

(Electronic Submission)

Date 06/25/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Date

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

Office

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

(Instructions on page 2)

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional data for EC transaction #520273 that would not fit on the form

32. Additional remarks, continued

FEL of Sec. 16 T20S R35E. This changes the azimuth of the well from being East/West in orientation to being North/South. This also extends the lateral length from a one-mile lateral to a two-mile lateral. The BHL given represents the terminus of the well. The last perforation point will be 100' FNL and 331' FEL of the referenced spacing unit comprising the E2E2 of Sections 21 and 16 of T20S R35E.

Matador requests the OPTION to amend the casing and cementing design per the drill plan attached hereto. Please contact Blake Hermes at 972-371-5485 for any questions with regards to the drill plan or well design.

Revisions to Operator-Submitted EC Data for Sundry Notice #520273

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	APDCH NOI	APDCH NOI
Lease:	NMNM132079	NMNM132079
Agreement:		
Operator:	MATADOR PRODUCTION COMPANY 5400 LBJ FWY SUITE 1500 DALLAS, TX 75240 Ph: 972-371-5200	MATADOR PRODUCTION COMPANY 5400 LBJ FREEWAY SUITE 1500 DALLAS, TX 75240 Ph: 972.371.5200
Admin Contact:	CADE LABOLT LANDMAN E-Mail: cade.labolt@matadorresources.com Ph: 972-629-2158	CADE LABOLT LANDMAN E-Mail: cade.labolt@matadorresources.com Ph: 9726292158
Tech Contact:	CADE LABOLT LANDMAN E-Mail: cade.labolt@matadorresources.com Ph: 972-629-2158	CADE LABOLT LANDMAN E-Mail: cade.labolt@matadorresources.com Ph: 972-629-2158
Location:		
State:	NM	NM
County:	LEA	LEA
Field/Pool:	FEATHERSTONE; BONE SPRING	FEATHERSTONE
Well/Facility:	UNCLE CHES FEDERAL 124H Sec 21 T20S R35E Mer NMP 350FSL 203FEL	UNCLE CHES FEDERAL 128H Sec 21 T20S R35E SESE 413FSL 576FEL

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6161 Fax (505) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax (505) 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 30-025-44520	² Pool Code 24250	³ Pool Name Featherstone; Bone Spring
⁴ Property Code 326210	⁵ Property Name UNCLE CHES 2116 FED COM	⁶ Well Number 128H
⁷ OGRID No. 228937	⁸ Operator Name MATADOR PRODUCTION COMPANY	⁹ Elevation 3705'

¹⁰Surface Location

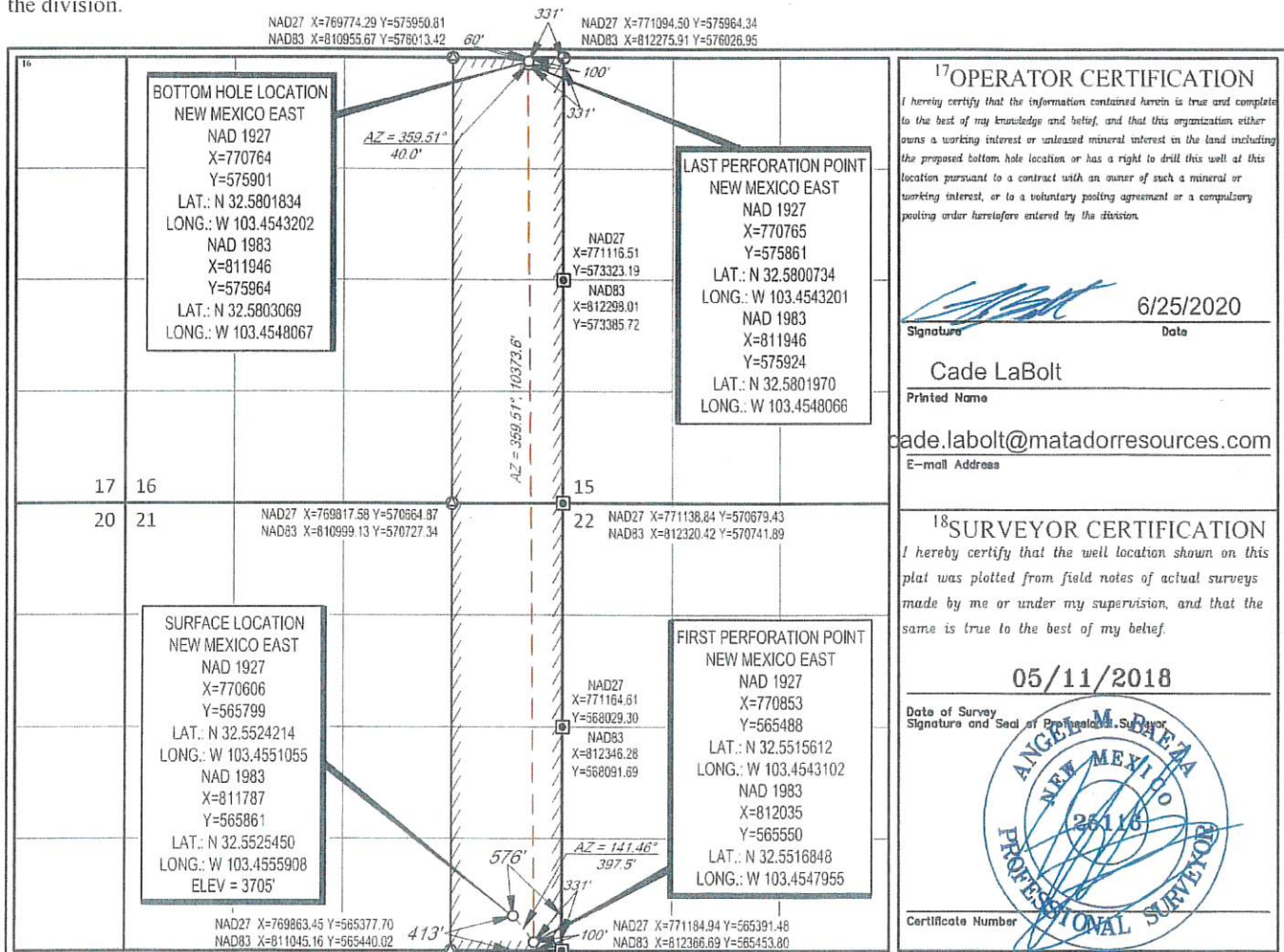
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	21	20-S	35-E	-	413'	SOUTH	576'	EAST	LEA

¹¹Bottom 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
A	16	20-S	35-E	-	60'	NORTH	331'	EAST	LEA

¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.



S:\SURVEY\MATADOR_RESOURCES\UNCLE_CHES_21-20S-35E\FINAL_PRODUCTS\ILO_UNCLE_CHES_2116_FED_COM_128H_REV2.DWG 6/9/2020 1:57:54 PM adisabell



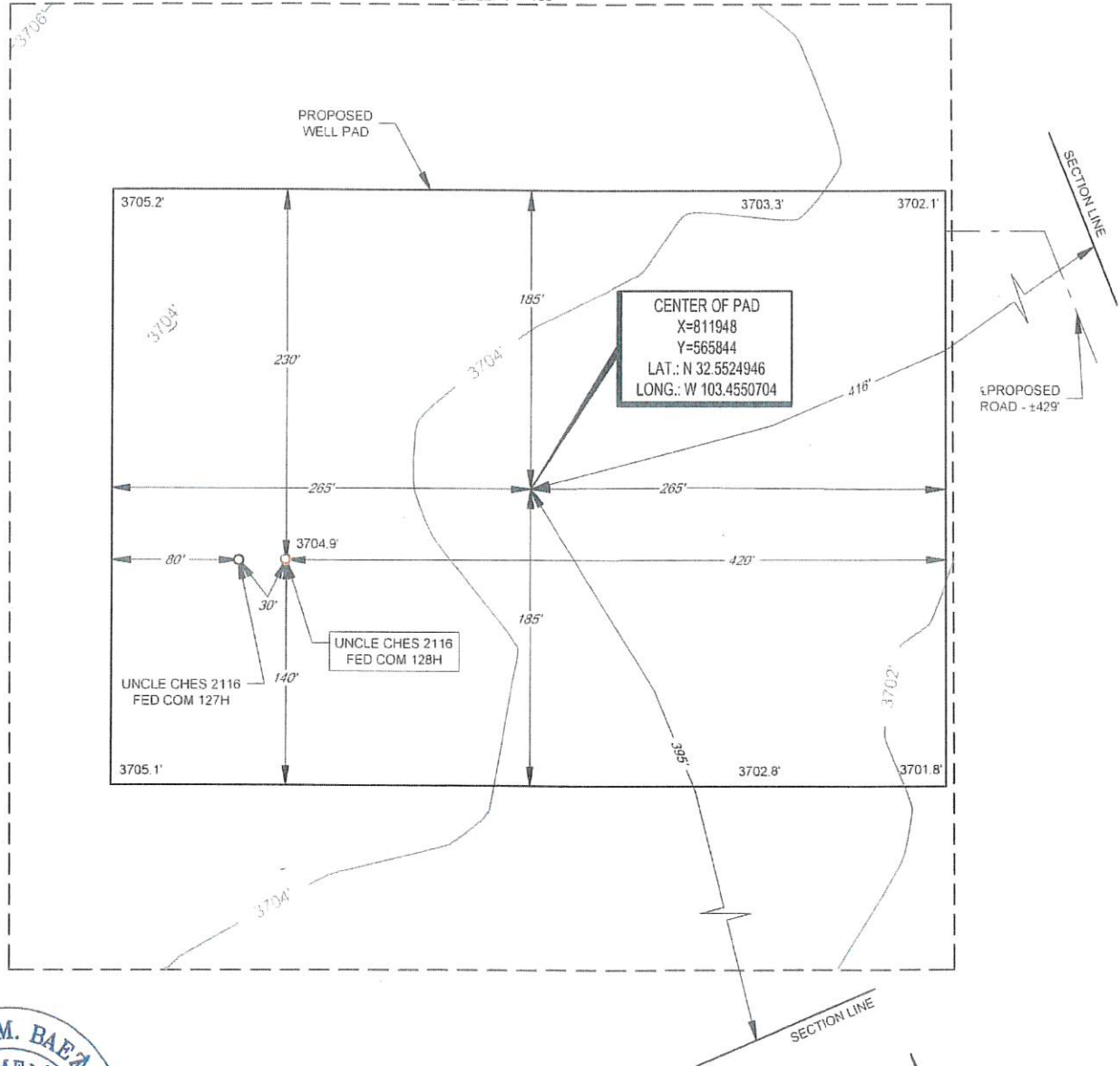


LEGEND

- PROPOSED ROAD
 ——— SECTION LINE
 - - - - - ARCH SITE

SECTION 21, TOWNSHIP 20-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: UNCLE CHES 2116 FED COM 128H
 #128H LATITUDE N 32.5525450 #128H LONGITUDE W 103.4555908

CENTER OF PAD IS 395' FSL & 416' FEL

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

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 NAVD83, 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"

S:\SURVEY\MATADOR_RESOURCES\UNCLE_CHES_21-20S-35E\FINAL_PRODUCTS\SILO_UNCLE_CHES_2116_FED_COM_128H_REV2.DWG 6/9/2020 1 57 56 PM adisabella



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

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

Drill Plan

Uncle Ches 2116 Fed Com 128H
SHL: 413' FSL & 576' FEL Section 21
BHL: 60' FNL & 331' FEL Section 16
Township/Range: 20S 35E
Elevation Above Sea Level: 3,705'

Drilling Operation Plan

Proposed Drilling Depth: 20974' MD / 10676' TVD

Type of well: Horizontal well, no pilot hole

Permitted Well Type: Oil

Geologic Name of Surface Formation: Quaternary Deposits

KOP Lat/Long (NAD83): 32.5515437787 N / -103.4547976223 W
 TD Lat/Long (NAD83): 32.5803030765 N / -103.4548069281 W

1. Estimated Tops

Formation	MD (ft)	TVD (ft)	Thickness (ft)	Lithology	Resource
Rustler	1,977	1,977	347	Anhydrite	Barren
Salado (Top of Salt)	2,324	2,324	1,316	Salt	Barren
Lamar (Base of Salt)	3,640	3,640	2,533	Salt	Barren
Bell Canyon	6,173	6,173	1,135	Sandstone	Oil/Natural Gas
Brushy Canyon	7,308	7,308	1,169	Sandstone	Oil/Natural Gas
Bone Spring Lime	8,477	8,477	1,188	Limestone	Oil/Natural Gas
1st Bone Spring Sand	9,665	9,665	345	Sandstone	Oil/Natural Gas
2nd Bone Spring Carbonate	10,010	10,010	344	Carbonate	Oil/Natural Gas
KOP	10,183	10,173	-	Sandstone	Oil/Natural Gas
2nd Bone Spring Sand	10,367	10,354	-	Sandstone	Oil/Natural Gas
TD	20,974	10,676		Sandstone	Oil/Natural Gas

2. Notable Zones

2nd Bone Spring is the goal. All perforations will be within the setback requirements as prescribed or permitted by the New Mexico Oil Conservation Division. OSE estimated ground water depth at this location is 877'.

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

Drill Plan

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	20	0 - 2002	0 - 2002	13.375	54.5	J-55	BUTT	1.125	1.125	1.8
Intermediate 1	12.25	0 - 6198	0 - 6198	9.625	40	J-55	BUTT	1.125	1.125	1.8
Production Top	8.75	0 - 10083	0 - 10073	7	29	P-110	DWC/C	1.125	1.125	1.8
Production Bottom	8.75	10083 - 20974	10073 - 10676	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
- Request the option to run a full 5.5" production string. Cement volumes will be adjusted accordingly.

String	Type	Sacks	Yield	Cu Fl.	Weight	Percent Excess	Top of Cement	Class	Blend
Surface	Lead	1790	1.72	3082	12.5	50%	0	C	5% NaCl + LCM
	Tail	550	1.38	759	14.8	50%	1602	C	5% NaCl + LCM
Intermediate 1	Lead	1160	2.13	2478	12.6	50%	0	C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	450	1.38	616	14.8	50%	4958	C	5% NaCl + LCM

Drill Plan

Production	Lead	310	2.22	687	11.5	25%	5998	H	Fluid Loss + Dispersant + Retarder + LCM
	Tail	2610	1.35	3524	13.2	25%	9683	H	Fluid Loss + Dispersant + Retarder + LCM

Matador requests the option to run a DV tool with annular packer as contingency in the intermediate 1 section on 9-5/8" casing if lost circulation is encountered. If losses occur, the DV tool with packer will be placed at least 100' above the loss zone to give the option to pump cement as either a single stage or two stage.

Example:

Assuming DV tool is set at 2500' MD but if the setting depth changes, cement volumes will be adjusted proportionately.

Stage 1:

Type	Sacks	Yield	Weight	Percent	Top of	Class	Blend
Lead	1160	2.13	12.6	50	0	C	Bentonite + 2% CaCL2 + 3%
Tail	450	1.38	14.8	50	4958	C	5% NaCl + LCM

Stage 2:

Type	Sacks	Yield	Weight	Percent	Top of	Class	Blend
Lead	640	1.78	13.5	10	0	C	Bentonite + 2% CaCL2 + 3%

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	20	Spud Mud	0 - 2002	8.4 - 8.8	28-30	NC
Intermediate 1	12.25	Brine Water	2002 - 6198	9.5 - 10.2	28-30	NC
Production	8.75	Cut Brine/OBM	6198 - 20974	8.6 - 9.4	28-30	NC

6. Cores, Test, & Logs



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

Generated on Sep 03, 2019



Casing Table Specification Sheet

Uncle Ches 2116 Fed Com 128H
 SHL: 413' FSL & 576' FEL Section 21
 BHL: 60' FNL & 331' FEL Section 16
 Township/Range: 20S 35E
 Elevation Above Sea Level: 3,705'

String	Hole Size (in)	Set MD (ft)	Set TVD (ft)	Casing Size (in)	Wt. (lb/ft)	Grade	Joint	Collapse	Burst	Tension
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Intermediate 1	12.25	0 - 6198	0 - 6198	9.625	40	J-55	BUTT	1.125	1.125	1.8
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Production Bottom	8.75	10083 - 20974	10073 - 10676	5.5	20	P-110	Hunting TLW	1.125	1.125	1.8



Matador Production Company

Ranger/Arrowhead

Uncle Ches

Uncle Ches 2116 Fed Com #128H

Wellbore #1

BLM Plan #2

Anticollision Report

23 June, 2020



Anticollision Report

Company:	Matador Production Company	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Project:	Ranger/Arrowhead	TVD Reference:	KB @ 3733.5usft
Reference Site:	Uncle Ches	MD Reference:	KB @ 3733.5usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Uncle Ches 2116 Fed Com #128H	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 Single User Db
Reference Design:	BLM Plan #2	Offset TVD Reference:	Offset Datum

Reference	BLM Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 6/23/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,974.4	BLM Plan #2 (Wellbore #1)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Uncle Ches						
Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM P	1,000.0	1,000.0	30.0	23.3	4.471	CC, ES
Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM P	20,974.4	21,061.8	1,319.5	972.5	3.803	SF

Offset Design Uncle Ches - Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM Plan #2													Offset Site Error:	0.0 usft
Survey Program: O-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.0	0.0	0.0	0.0	-67.93	11.3	-27.8	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	-67.93	11.3	-27.8	30.0	29.7	0.26	117.022		
200.0	200.0	200.0	200.0	0.5	0.5	-67.93	11.3	-27.8	30.0	29.0	0.97	30.818		
300.0	300.0	300.0	300.0	0.8	0.8	-67.93	11.3	-27.8	30.0	28.3	1.69	17.746		
400.0	400.0	400.0	400.0	1.2	1.2	-67.93	11.3	-27.8	30.0	27.6	2.41	12.460		
500.0	500.0	500.0	500.0	1.6	1.6	-67.93	11.3	-27.8	30.0	26.9	3.12	9.601		
600.0	600.0	600.0	600.0	1.9	1.9	-67.93	11.3	-27.8	30.0	26.2	3.84	7.809		
700.0	700.0	700.0	700.0	2.3	2.3	-67.93	11.3	-27.8	30.0	25.4	4.56	6.580		
800.0	800.0	800.0	800.0	2.6	2.6	-67.93	11.3	-27.8	30.0	24.7	5.27	5.686		
900.0	900.0	900.0	900.0	3.0	3.0	-67.93	11.3	-27.8	30.0	24.0	5.99	5.006		
1,000.0	1,000.0	1,000.0	1,000.0	3.4	3.4	-67.93	11.3	-27.8	30.0	23.3	6.71	4.471	CC, ES	
1,100.0	1,100.0	1,099.6	1,099.6	3.7	3.7	146.30	11.0	-28.6	31.4	24.0	7.40	4.240		
1,200.0	1,200.0	1,199.1	1,199.0	4.0	4.0	145.80	10.1	-31.0	35.5	27.4	8.06	4.400		
1,280.3	1,280.2	1,278.8	1,278.7	4.3	4.3	145.30	8.9	-34.2	40.8	32.2	8.60	4.737		
1,300.0	1,299.9	1,298.3	1,298.2	4.4	4.4	145.15	8.6	-35.1	42.3	33.6	8.74	4.841		
1,400.0	1,399.7	1,397.4	1,397.0	4.7	4.7	143.82	6.5	-40.7	50.9	41.5	9.41	5.407		
1,500.0	1,499.6	1,496.1	1,495.5	5.0	5.1	141.85	3.8	-47.9	60.9	50.8	10.09	6.030		
1,600.0	1,599.5	1,594.5	1,593.4	5.4	5.4	139.64	0.6	-56.7	72.3	61.5	10.77	6.707		
1,700.0	1,699.4	1,692.5	1,690.8	5.7	5.8	137.40	-3.2	-67.0	85.1	73.7	11.45	7.435		
1,800.0	1,799.3	1,809.2	1,788.3	6.1	6.2	135.30	-7.6	-78.7	99.4	87.2	12.21	8.141		
1,900.0	1,899.1	1,889.7	1,886.4	6.5	6.5	133.66	-12.0	-90.6	113.9	101.0	12.84	8.868		
2,000.0	1,999.0	1,988.6	1,984.5	6.8	6.9	132.40	-16.4	-102.5	128.5	114.9	13.55	9.482		
2,100.0	2,098.9	2,087.5	2,082.6	7.2	7.3	131.39	-20.8	-114.5	143.1	128.8	14.25	10.037		
2,200.0	2,198.8	2,186.4	2,180.6	7.5	7.7	130.57	-25.2	-126.4	157.7	142.8	14.97	10.540		
2,300.0	2,298.7	2,285.3	2,278.7	7.9	8.1	129.89	-29.6	-138.3	172.4	156.7	15.68	10.998		

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



Anticollision Report

Company: Matador Production Company
 Project: Ranger/Arrowhead
 Reference Site: Uncle Ches
 Site Error: 0.0 usft
 Reference Well: Uncle Ches 2116 Fed Com #128H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
 TVD Reference: KB @ 3733.5usft
 MD Reference: KB @ 3733.5usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.14 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,400.0	2,398.5	2,384.2	2,376.8	8.2	8.4	129.32	-34.0	-150.3	187.1	170.7	16.39	11.415		
2,500.0	2,498.4	2,483.1	2,474.9	8.6	8.8	128.83	-38.5	-162.2	201.8	184.7	17.11	11.798		
2,600.0	2,598.3	2,582.0	2,572.9	9.0	9.2	128.40	-42.9	-174.1	216.6	198.8	17.83	12.149		
2,700.0	2,698.2	2,680.9	2,671.0	9.3	9.6	128.03	-47.3	-186.1	231.3	212.8	18.55	12.473		
2,800.0	2,798.1	2,779.8	2,769.1	9.7	10.0	127.71	-51.7	-198.0	246.1	226.8	19.27	12.772		
2,900.0	2,898.0	2,878.7	2,867.2	10.0	10.4	127.42	-56.1	-209.9	260.8	240.8	19.99	13.050		
3,000.0	2,997.8	2,977.6	2,965.2	10.4	10.8	127.16	-60.5	-221.9	275.6	254.9	20.71	13.308		
3,100.0	3,097.7	3,076.5	3,063.3	10.8	11.2	126.93	-65.0	-233.8	290.4	268.9	21.43	13.548		
3,200.0	3,197.6	3,175.4	3,161.4	11.1	11.6	126.72	-69.4	-245.7	305.1	283.0	22.16	13.772		
3,300.0	3,297.5	3,274.3	3,259.5	11.5	12.0	126.53	-73.8	-257.6	319.9	297.0	22.88	13.982		
3,400.0	3,397.4	3,373.2	3,357.5	11.9	12.4	126.36	-78.2	-269.6	334.7	311.1	23.61	14.178		
3,500.0	3,497.2	3,472.1	3,455.6	12.2	12.8	126.20	-82.6	-281.5	349.5	325.1	24.33	14.363		
3,600.0	3,597.1	3,571.0	3,553.7	12.6	13.2	126.05	-87.0	-293.4	364.3	339.2	25.06	14.537		
3,700.0	3,697.0	3,669.9	3,651.8	13.0	13.6	125.92	-91.4	-305.4	379.0	353.3	25.78	14.701		
3,800.0	3,796.9	3,768.8	3,749.8	13.3	14.0	125.80	-95.9	-317.3	393.8	367.3	26.51	14.855		
3,900.0	3,896.8	3,867.6	3,847.9	13.7	14.4	125.68	-100.3	-329.2	408.6	381.4	27.24	15.001		
4,000.0	3,996.6	3,966.5	3,946.0	14.1	14.8	125.57	-104.7	-341.2	423.4	395.4	27.97	15.140		
4,100.0	4,096.5	4,065.4	4,044.1	14.4	15.2	125.47	-109.1	-353.1	438.2	409.5	28.69	15.271		
4,200.0	4,196.4	4,164.3	4,142.1	14.8	15.7	125.38	-113.5	-365.0	453.0	423.6	29.42	15.396		
4,300.0	4,296.3	4,263.2	4,240.2	15.2	16.1	125.29	-117.9	-377.0	467.8	437.6	30.15	15.515		
4,400.0	4,396.2	4,362.1	4,338.3	15.5	16.5	125.21	-122.3	-388.9	482.6	451.7	30.88	15.627		
4,500.0	4,496.0	4,461.0	4,436.4	15.9	16.9	125.13	-126.8	-400.8	497.4	465.8	31.61	15.735		
4,600.0	4,595.9	4,559.9	4,534.4	16.2	17.3	125.06	-131.2	-412.8	512.2	479.8	32.34	15.838		
4,700.0	4,695.8	4,658.8	4,632.5	16.6	17.7	124.99	-135.6	-424.7	527.0	493.9	33.07	15.936		
4,800.0	4,795.7	4,757.7	4,730.6	17.0	18.1	124.93	-140.0	-436.6	541.8	508.0	33.80	16.029		
4,900.0	4,895.6	4,856.6	4,828.7	17.3	18.5	124.87	-144.4	-448.5	556.6	522.0	34.53	16.119		
5,000.0	4,995.4	4,955.5	4,926.7	17.7	18.9	124.81	-148.8	-460.5	571.4	536.1	35.26	16.205		
5,100.0	5,095.3	5,054.4	5,024.8	18.1	19.3	124.75	-153.2	-472.4	586.2	550.2	35.99	16.287		
5,200.0	5,195.2	5,153.3	5,122.9	18.4	19.7	124.70	-157.7	-484.3	601.0	564.3	36.72	16.366		
5,300.0	5,295.1	5,252.2	5,221.0	18.8	20.1	124.65	-162.1	-496.3	615.8	578.3	37.45	16.442		
5,400.0	5,395.0	5,351.1	5,319.0	19.2	20.5	124.60	-166.5	-508.2	630.6	592.4	38.18	16.515		
5,500.0	5,494.8	5,450.0	5,417.1	19.5	20.9	124.56	-170.9	-520.1	645.4	606.5	38.91	16.585		
5,600.0	5,594.7	5,548.9	5,515.2	19.9	21.3	124.51	-175.3	-532.1	660.2	620.5	39.65	16.652		
5,700.0	5,694.6	5,647.8	5,613.3	20.3	21.8	124.47	-179.7	-544.0	675.0	634.6	40.38	16.717		
5,800.0	5,794.5	5,746.7	5,711.4	20.6	22.2	124.43	-184.1	-555.9	689.8	648.7	41.11	16.780		
5,900.0	5,894.4	5,845.6	5,809.4	21.0	22.6	124.39	-188.6	-567.9	704.6	662.8	41.84	16.840		
6,000.0	5,994.2	5,944.5	5,907.5	21.4	23.0	124.36	-193.0	-579.8	719.4	676.8	42.57	16.899		
6,100.0	6,094.1	6,043.4	6,005.6	21.7	23.4	124.32	-197.4	-591.7	734.2	690.9	43.30	16.955		
6,200.0	6,194.0	6,142.3	6,103.7	22.1	23.8	124.29	-201.8	-603.7	749.0	705.0	44.04	17.009		
6,300.0	6,293.9	6,241.2	6,201.7	22.5	24.2	124.26	-206.2	-615.6	763.8	719.0	44.77	17.062		
6,400.0	6,393.8	6,340.1	6,299.8	22.8	24.6	124.23	-210.6	-627.5	778.6	733.1	45.50	17.113		
6,500.0	6,493.6	6,439.0	6,397.9	23.2	25.0	124.20	-215.0	-639.4	793.4	747.2	46.23	17.162		
6,600.0	6,593.5	6,537.9	6,496.0	23.6	25.4	124.17	-219.5	-651.4	808.2	761.3	46.96	17.209		
6,700.0	6,693.4	6,636.8	6,594.0	23.9	25.8	124.14	-223.9	-663.3	823.0	775.3	47.70	17.256		
6,800.0	6,793.3	6,735.7	6,692.1	24.3	26.2	124.11	-228.3	-675.2	837.8	789.4	48.43	17.300		
6,900.0	6,893.2	6,834.6	6,790.2	24.7	26.7	124.09	-232.7	-687.2	852.6	803.5	49.16	17.344		
7,000.0	6,993.0	6,933.5	6,888.3	25.0	27.1	124.06	-237.1	-699.1	867.5	817.6	49.89	17.386		
7,100.0	7,092.9	7,032.4	6,986.3	25.4	27.5	124.04	-241.5	-711.0	882.3	831.6	50.63	17.427		
7,200.0	7,192.8	7,131.3	7,084.4	25.8	27.9	124.01	-246.0	-723.0	897.1	845.7	51.36	17.466		
7,300.0	7,292.7	7,230.2	7,182.5	26.1	28.3	123.99	-250.4	-734.9	911.9	859.8	52.09	17.505		
7,400.0	7,392.6	7,329.0	7,280.6	26.5	28.7	123.97	-254.8	-746.8	926.7	873.9	52.83	17.542		
7,500.0	7,492.4	7,427.9	7,378.6	26.9	29.1	123.95	-259.2	-758.8	941.5	887.9	53.56	17.578		

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

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COMPASS 5000.14 Build 83



Anticollision Report

Company: Matador Production Company
 Project: Ranger/Arrowhead
 Reference Site: Uncle Ches
 Site Error: 0.0 usft
 Reference Well: Uncle Ches 2116 Fed Com #128H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
 TVD Reference: KB @ 3733.5usft
 MD Reference: KB @ 3733.5usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.14 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:
Uncle Ches - Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM Plan #2													0.0 usft
Survey Program: 0-MWD													Offset Well Error:
													0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,600.0	7,592.3	7,526.8	7,476.7	27.3	29.5	123.93	-263.6	-770.7	956.3	902.0	54.29	17.614	
7,700.0	7,692.2	7,625.7	7,574.8	27.6	29.9	123.91	-268.0	-782.6	971.1	916.1	55.03	17.648	
7,800.0	7,792.1	7,724.6	7,672.9	28.0	30.3	123.89	-272.4	-794.6	985.9	930.2	55.76	17.682	
7,900.0	7,892.0	7,823.5	7,770.9	28.4	30.7	123.87	-276.9	-806.5	1,000.7	944.2	56.49	17.714	
8,000.0	7,991.8	7,922.4	7,869.0	28.7	31.2	123.85	-281.3	-818.4	1,015.5	958.3	57.23	17.746	
8,100.0	8,091.7	8,021.3	7,967.1	29.1	31.6	123.83	-285.7	-830.3	1,030.3	972.4	57.96	17.777	
8,200.0	8,191.6	8,120.2	8,065.2	29.5	32.0	123.82	-290.1	-842.3	1,045.1	986.4	58.69	17.807	
8,300.0	8,291.5	8,219.1	8,163.2	29.8	32.4	123.80	-294.5	-854.2	1,060.0	1,000.5	59.43	17.836	
8,400.0	8,391.4	8,318.0	8,261.3	30.2	32.8	123.78	-298.9	-866.1	1,074.8	1,014.6	60.16	17.865	
8,500.0	8,491.3	8,416.9	8,359.4	30.6	33.2	123.77	-303.3	-878.1	1,089.6	1,028.7	60.89	17.893	
8,600.0	8,591.1	8,515.8	8,457.5	30.9	33.6	123.75	-307.8	-890.0	1,104.4	1,042.7	61.63	17.920	
8,700.0	8,691.0	8,614.7	8,555.5	31.3	34.0	123.74	-312.2	-901.9	1,119.2	1,056.8	62.36	17.947	
8,800.0	8,790.9	8,713.6	8,653.6	31.7	34.4	123.72	-316.6	-913.9	1,134.0	1,070.9	63.10	17.973	
8,900.0	8,890.8	8,812.5	8,751.7	32.0	34.8	123.71	-321.0	-925.8	1,148.8	1,085.0	63.83	17.998	
9,000.0	8,990.7	8,911.4	8,849.8	32.4	35.2	123.69	-325.4	-937.7	1,163.6	1,099.0	64.56	18.023	
9,100.0	9,090.5	9,010.3	8,947.8	32.8	35.7	123.68	-329.8	-949.7	1,178.4	1,113.1	65.30	18.047	
9,200.0	9,190.4	9,109.2	9,045.9	33.1	36.1	123.67	-334.2	-961.6	1,193.2	1,127.2	66.03	18.071	
9,300.0	9,290.3	9,208.1	9,144.0	33.5	36.5	123.65	-338.7	-973.5	1,208.0	1,141.3	66.77	18.094	
9,400.0	9,390.2	9,307.0	9,242.1	33.9	36.9	123.64	-343.1	-985.5	1,222.8	1,155.3	67.50	18.116	
9,500.0	9,490.1	9,405.9	9,340.1	34.2	37.3	123.63	-347.5	-997.4	1,237.7	1,169.4	68.23	18.138	
9,600.0	9,589.9	9,504.8	9,438.2	34.6	37.7	123.62	-351.9	-1,009.3	1,252.5	1,183.5	68.97	18.160	
9,700.0	9,689.8	9,603.7	9,536.3	35.0	38.1	123.61	-356.3	-1,021.2	1,267.3	1,197.6	69.70	18.181	
9,800.0	9,789.7	9,702.6	9,634.4	35.3	38.5	123.60	-360.7	-1,033.2	1,282.1	1,211.6	70.44	18.202	
9,900.0	9,889.6	9,813.7	9,744.6	35.7	39.0	123.59	-365.6	-1,046.4	1,296.8	1,225.5	71.26	18.197	
9,996.8	9,986.2	9,955.2	9,885.4	36.1	39.5	123.63	-370.5	-1,059.7	1,308.5	1,236.3	72.26	18.109	
10,000.0	9,989.5	9,960.0	9,890.1	36.1	39.6	123.64	-370.7	-1,060.1	1,308.9	1,236.6	72.29	18.105	
10,100.0	10,089.4	10,107.4	10,037.2	36.4	40.1	123.79	-373.8	-1,068.6	1,316.6	1,243.3	73.23	17.979	
10,183.6	10,173.0	10,231.1	10,161.0	36.7	40.5	-90.61	-374.9	-1,071.6	1,319.1	1,245.2	73.91	17.847	
10,200.0	10,189.4	10,255.4	10,185.2	36.8	40.6	-90.12	-375.0	-1,071.7	1,319.2	1,245.2	74.03	17.819	
10,250.0	10,239.2	10,309.8	10,239.6	36.9	40.7	-90.22	-373.5	-1,071.7	1,319.2	1,244.9	74.35	17.743	
10,300.0	10,288.6	10,360.3	10,289.7	37.1	40.9	-90.31	-367.6	-1,071.8	1,319.3	1,244.6	74.65	17.674	
10,350.0	10,337.1	10,411.0	10,339.3	37.2	41.0	-90.40	-357.3	-1,071.9	1,319.3	1,244.3	74.92	17.609	
10,400.0	10,384.3	10,461.9	10,388.0	37.3	41.1	-90.49	-342.6	-1,072.0	1,319.3	1,244.1	75.17	17.550	
10,450.0	10,429.9	10,512.9	10,435.4	37.5	41.2	-90.57	-323.5	-1,072.2	1,319.3	1,243.9	75.41	17.495	
10,500.0	10,473.6	10,564.2	10,481.0	37.6	41.3	-90.65	-300.2	-1,072.4	1,319.3	1,243.7	75.63	17.444	
10,550.0	10,514.9	10,615.6	10,524.5	37.7	41.4	-90.73	-272.9	-1,072.6	1,319.3	1,243.5	75.84	17.397	
10,600.0	10,553.7	10,667.1	10,565.5	37.7	41.5	-90.80	-241.6	-1,072.9	1,319.4	1,243.3	76.03	17.354	
10,650.0	10,589.6	10,718.8	10,603.6	37.8	41.5	-90.86	-206.7	-1,073.2	1,319.4	1,243.2	76.21	17.312	
10,700.0	10,622.3	10,770.7	10,638.5	37.9	41.5	-90.92	-168.4	-1,073.5	1,319.4	1,243.0	76.39	17.272	
10,750.0	10,651.5	10,822.6	10,669.9	38.0	41.5	-90.97	-127.0	-1,073.9	1,319.4	1,242.9	76.56	17.233	
10,800.0	10,677.2	10,874.7	10,697.4	38.1	41.6	-91.01	-82.9	-1,074.2	1,319.4	1,242.7	76.74	17.194	
10,850.0	10,699.0	10,926.8	10,720.9	38.1	41.5	-91.04	-36.3	-1,074.6	1,319.5	1,242.5	76.92	17.154	
10,900.0	10,716.8	10,979.0	10,740.0	38.2	41.5	-91.07	12.2	-1,075.0	1,319.5	1,242.4	77.10	17.113	
10,950.0	10,730.4	11,031.3	10,754.7	38.3	41.5	-91.08	62.4	-1,075.5	1,319.5	1,242.2	77.29	17.071	
11,000.0	10,739.9	11,083.6	10,764.7	38.4	41.5	-91.09	113.6	-1,075.9	1,319.5	1,242.0	77.49	17.027	
11,050.0	10,745.0	11,135.9	10,770.0	38.5	41.5	-91.09	165.6	-1,076.4	1,319.5	1,241.8	77.70	16.981	
11,087.6	10,745.9	11,175.1	10,770.9	38.6	41.5	-91.08	204.8	-1,076.7	1,319.5	1,241.6	77.87	16.945	
11,100.0	10,745.9	11,187.5	10,770.8	38.7	41.5	-91.08	217.2	-1,076.8	1,319.5	1,241.5	77.92	16.933	
11,200.0	10,745.2	11,287.5	10,770.1	38.9	41.6	-91.08	317.2	-1,077.7	1,319.5	1,241.0	78.45	16.818	
11,300.0	10,744.5	11,387.5	10,769.4	39.3	41.7	-91.08	417.2	-1,078.5	1,319.5	1,240.3	79.12	16.677	
11,400.0	10,743.8	11,487.5	10,768.7	39.7	42.0	-91.08	517.2	-1,079.4	1,319.5	1,239.6	79.92	16.510	
11,500.0	10,743.1	11,587.5	10,768.0	40.2	42.3	-91.08	617.2	-1,080.2	1,319.5	1,238.6	80.84	16.321	

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



Anticollision Report

Company: Matador Production Company
 Project: Ranger/Arrowhead
 Reference Site: Uncle Ches
 Site Error: 0.0 usft
 Reference Well: Uncle Ches 2116 Fed Com #128H
 Well Error: 0.0 usft
 Reference Wellbore: Wellbore #1
 Reference Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
 TVD Reference: KB @ 3733.5usft
 MD Reference: KB @ 3733.5usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.14 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design													Offset Site Error:
Uncle Ches - Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM Plan #2													0.0 usft
Survey Program: 0-MWD													Offset Well Error:
													0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
11,600.0	10,742.4	11,687.5	10,767.3	40.8	42.7	-91.08	717.2	-1,081.1	1,319.5	1,237.6	81.89	16.112	
11,700.0	10,741.7	11,787.5	10,766.6	41.4	43.3	-91.08	817.2	-1,081.9	1,319.5	1,236.4	83.06	15.885	
11,800.0	10,741.0	11,887.5	10,766.0	42.1	43.9	-91.08	917.2	-1,082.8	1,319.5	1,235.1	84.35	15.644	
11,900.0	10,740.3	11,987.5	10,765.3	42.8	44.5	-91.08	1,017.2	-1,083.6	1,319.5	1,233.7	85.74	15.390	
12,000.0	10,739.6	12,087.5	10,764.6	43.5	45.2	-91.08	1,117.2	-1,084.5	1,319.5	1,232.2	87.23	15.126	
12,100.0	10,738.9	12,187.5	10,763.9	44.4	46.0	-91.08	1,217.2	-1,085.3	1,319.5	1,230.6	88.83	14.854	
12,200.0	10,738.2	12,287.5	10,763.2	45.2	46.8	-91.08	1,317.1	-1,086.2	1,319.5	1,229.0	90.52	14.577	
12,300.0	10,737.5	12,387.5	10,762.5	46.1	47.6	-91.08	1,417.1	-1,087.1	1,319.5	1,227.2	92.29	14.296	
12,400.0	10,736.8	12,487.5	10,761.8	47.1	48.5	-91.08	1,517.1	-1,087.9	1,319.5	1,225.3	94.15	14.014	
12,500.0	10,736.1	12,587.5	10,761.1	48.1	49.5	-91.08	1,617.1	-1,088.8	1,319.5	1,223.4	96.09	13.731	
12,600.0	10,735.4	12,687.5	10,760.4	49.1	50.5	-91.08	1,717.1	-1,089.6	1,319.5	1,221.4	98.10	13.450	
12,700.0	10,734.7	12,787.5	10,759.7	50.2	51.5	-91.08	1,817.1	-1,090.5	1,319.5	1,219.3	100.18	13.170	
12,800.0	10,734.0	12,887.5	10,759.0	51.2	52.5	-91.08	1,917.1	-1,091.3	1,319.5	1,217.1	102.33	12.894	
12,900.0	10,733.3	12,987.5	10,758.3	52.4	53.6	-91.08	2,017.1	-1,092.2	1,319.5	1,214.9	104.54	12.622	
13,000.0	10,732.6	13,087.5	10,757.6	53.5	54.7	-91.08	2,117.1	-1,093.0	1,319.5	1,212.7	106.80	12.354	
13,100.0	10,731.9	13,187.5	10,756.9	54.7	55.8	-91.08	2,217.1	-1,093.9	1,319.5	1,210.3	109.12	12.092	
13,200.0	10,731.2	13,287.5	10,756.2	55.9	57.0	-91.08	2,317.1	-1,094.8	1,319.5	1,208.0	111.49	11.835	
13,300.0	10,730.5	13,387.5	10,755.5	57.1	58.1	-91.08	2,417.1	-1,095.6	1,319.5	1,205.6	113.91	11.584	
13,400.0	10,729.8	13,487.5	10,754.8	58.3	59.3	-91.08	2,517.1	-1,096.5	1,319.5	1,203.1	116.37	11.339	
13,500.0	10,729.1	13,587.5	10,754.1	59.6	60.6	-91.08	2,617.1	-1,097.3	1,319.5	1,200.6	118.87	11.100	
13,600.0	10,728.4	13,687.5	10,753.4	60.9	61.8	-91.08	2,717.1	-1,098.2	1,319.5	1,198.1	121.41	10.868	
13,700.0	10,727.7	13,787.5	10,752.7	62.2	63.1	-91.08	2,817.1	-1,099.0	1,319.5	1,195.5	123.99	10.642	
13,800.0	10,727.0	13,887.5	10,752.0	63.5	64.3	-91.08	2,917.1	-1,099.9	1,319.5	1,192.9	126.60	10.422	
13,900.0	10,726.3	13,987.5	10,751.3	64.8	65.6	-91.08	3,017.0	-1,100.7	1,319.5	1,190.2	129.24	10.209	
14,000.0	10,725.6	14,087.5	10,750.6	66.2	66.9	-91.08	3,117.0	-1,101.6	1,319.5	1,187.5	131.92	10.002	
14,100.0	10,724.9	14,187.5	10,749.9	67.5	68.3	-91.08	3,217.0	-1,102.5	1,319.5	1,184.8	134.62	9.801	
14,200.0	10,724.2	14,287.5	10,749.2	68.9	69.6	-91.08	3,317.0	-1,103.3	1,319.5	1,182.1	137.35	9.606	
14,300.0	10,723.5	14,387.5	10,748.5	70.3	71.0	-91.08	3,417.0	-1,104.2	1,319.5	1,179.4	140.11	9.417	
14,400.0	10,722.8	14,487.5	10,747.8	71.7	72.3	-91.08	3,517.0	-1,105.0	1,319.5	1,176.6	142.89	9.234	
14,500.0	10,722.1	14,587.5	10,747.1	73.1	73.7	-91.08	3,617.0	-1,105.9	1,319.5	1,173.8	145.69	9.057	
14,600.0	10,721.4	14,687.5	10,746.4	74.5	75.1	-91.08	3,717.0	-1,106.7	1,319.5	1,171.0	148.51	8.885	
14,700.0	10,720.7	14,787.5	10,745.7	75.9	76.5	-91.08	3,817.0	-1,107.6	1,319.5	1,168.1	151.35	8.718	
14,800.0	10,720.0	14,887.5	10,745.0	77.4	77.9	-91.08	3,917.0	-1,108.4	1,319.5	1,165.3	154.22	8.556	
14,900.0	10,719.3	14,987.5	10,744.3	78.8	79.3	-91.08	4,017.0	-1,109.3	1,319.5	1,162.4	157.10	8.399	
15,000.0	10,718.6	15,087.5	10,743.6	80.3	80.8	-91.08	4,117.0	-1,110.1	1,319.5	1,159.5	159.99	8.247	
15,100.0	10,717.9	15,187.5	10,742.9	81.7	82.2	-91.08	4,217.0	-1,111.0	1,319.5	1,156.6	162.91	8.100	
15,200.0	10,717.2	15,287.5	10,742.2	83.2	83.6	-91.08	4,317.0	-1,111.9	1,319.5	1,153.6	165.83	7.957	
15,300.0	10,716.5	15,387.5	10,741.5	84.7	85.1	-91.08	4,417.0	-1,112.7	1,319.5	1,150.7	168.77	7.818	
15,400.0	10,715.8	15,487.5	10,740.8	86.2	86.6	-91.08	4,517.0	-1,113.6	1,319.5	1,147.7	171.73	7.683	
15,500.0	10,715.1	15,587.5	10,740.1	87.7	88.0	-91.08	4,616.9	-1,114.4	1,319.5	1,144.8	174.70	7.553	
15,600.0	10,714.4	15,687.5	10,739.4	89.2	89.5	-91.08	4,716.9	-1,115.3	1,319.5	1,141.8	177.68	7.426	
15,700.0	10,713.7	15,787.5	10,738.7	90.7	91.0	-91.08	4,816.9	-1,116.1	1,319.5	1,138.8	180.67	7.303	
15,800.0	10,713.0	15,887.5	10,738.0	92.2	92.5	-91.08	4,916.9	-1,117.0	1,319.5	1,135.8	183.68	7.184	
15,900.0	10,712.3	15,987.5	10,737.3	93.7	93.9	-91.08	5,016.9	-1,117.8	1,319.5	1,132.8	186.69	7.068	
16,000.0	10,711.6	16,087.5	10,736.6	95.2	95.4	-91.08	5,116.9	-1,118.7	1,319.5	1,129.8	189.71	6.955	
16,100.0	10,711.0	16,187.5	10,735.9	96.7	96.9	-91.08	5,216.9	-1,119.6	1,319.5	1,126.7	192.75	6.846	
16,200.0	10,710.3	16,287.5	10,735.2	98.2	98.5	-91.08	5,316.9	-1,120.4	1,319.5	1,123.7	195.79	6.739	
16,300.0	10,709.6	16,387.5	10,734.5	99.8	100.0	-91.08	5,416.9	-1,121.3	1,319.5	1,120.6	198.84	6.636	
16,400.0	10,708.9	16,487.5	10,733.8	101.3	101.5	-91.08	5,516.9	-1,122.1	1,319.5	1,117.6	201.90	6.535	
16,500.0	10,708.2	16,587.5	10,733.1	102.8	103.0	-91.08	5,616.9	-1,123.0	1,319.5	1,114.5	204.97	6.437	
16,600.0	10,707.5	16,687.5	10,732.4	104.4	104.5	-91.08	5,716.9	-1,123.8	1,319.5	1,111.4	208.05	6.342	
16,700.0	10,706.8	16,787.5	10,731.7	105.9	106.1	-91.08	5,816.9	-1,124.7	1,319.5	1,108.3	211.13	6.250	

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



Anticollision Report

Company:	Matador Production Company	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Project:	Ranger/Arrowhead	TVD Reference:	KB @ 3733.5usft
Reference Site:	Uncle Ches	MD Reference:	KB @ 3733.5usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Uncle Ches 2116 Fed Com #128H	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 Single User Db
Reference Design:	BLM Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Uncle Ches - Uncle Ches 2116 Fed Com #127H - Wellbore #1 - BLM Plan #2													Offset Well Error:	0.0 usft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
16,800.0	10,706.1	16,887.5	10,731.0	107.5	107.6	-91.08	5,916.9	-1,125.5	1,319.5	1,105.2	214.22	6.159		
16,900.0	10,705.4	16,987.5	10,730.3	109.0	109.1	-91.08	6,016.9	-1,126.4	1,319.5	1,102.2	217.32	6.072		
17,000.0	10,704.7	17,087.5	10,729.6	110.6	110.7	-91.08	6,116.9	-1,127.3	1,319.5	1,099.1	220.42	5.986		
17,100.0	10,704.0	17,187.5	10,728.9	112.1	112.2	-91.08	6,216.8	-1,128.1	1,319.5	1,095.9	223.53	5.903		
17,200.0	10,703.3	17,287.5	10,728.3	113.7	113.8	-91.08	6,316.8	-1,129.0	1,319.5	1,092.8	226.64	5.822		
17,300.0	10,702.6	17,387.5	10,727.6	115.3	115.3	-91.08	6,416.8	-1,129.8	1,319.5	1,089.7	229.76	5.743		
17,400.0	10,701.9	17,487.5	10,726.9	116.8	116.9	-91.08	6,516.8	-1,130.7	1,319.5	1,086.6	232.89	5.666		
17,500.0	10,701.2	17,587.5	10,726.2	118.4	118.4	-91.08	6,616.8	-1,131.5	1,319.5	1,083.4	236.02	5.590		
17,600.0	10,700.5	17,687.5	10,725.5	120.0	120.0	-91.08	6,716.8	-1,132.4	1,319.5	1,080.3	239.16	5.517		
17,700.0	10,699.8	17,787.5	10,724.8	121.5	121.5	-91.08	6,816.8	-1,133.2	1,319.5	1,077.2	242.30	5.446		
17,800.0	10,699.1	17,887.5	10,724.1	123.1	123.1	-91.08	6,916.8	-1,134.1	1,319.5	1,074.0	245.44	5.376		
17,900.0	10,698.4	17,987.5	10,723.4	124.7	124.7	-91.08	7,016.8	-1,134.9	1,319.5	1,070.9	248.59	5.308		
18,000.0	10,697.7	18,087.5	10,722.7	126.3	126.2	-91.08	7,116.8	-1,135.8	1,319.5	1,067.7	251.75	5.241		
18,100.0	10,697.0	18,187.5	10,722.0	127.8	127.8	-91.08	7,216.8	-1,136.7	1,319.5	1,064.6	254.90	5.176		
18,200.0	10,696.3	18,287.5	10,721.3	129.4	129.4	-91.08	7,316.8	-1,137.5	1,319.5	1,061.4	258.07	5.113		
18,300.0	10,695.6	18,387.5	10,720.6	131.0	130.9	-91.08	7,416.8	-1,138.4	1,319.5	1,058.2	261.23	5.051		
18,400.0	10,694.9	18,487.5	10,719.9	132.6	132.5	-91.08	7,516.8	-1,139.2	1,319.5	1,055.1	264.40	4.990		
18,500.0	10,694.2	18,587.5	10,719.2	134.2	134.1	-91.08	7,616.8	-1,140.1	1,319.5	1,051.9	267.58	4.931		
18,600.0	10,693.5	18,687.5	10,718.5	135.8	135.7	-91.08	7,716.8	-1,140.9	1,319.5	1,048.7	270.75	4.873		
18,700.0	10,692.8	18,787.5	10,717.8	137.4	137.3	-91.08	7,816.8	-1,141.8	1,319.5	1,045.5	273.93	4.817		
18,800.0	10,692.1	18,887.5	10,717.1	139.0	138.8	-91.08	7,916.7	-1,142.6	1,319.5	1,042.4	277.12	4.761		
18,900.0	10,691.4	18,987.5	10,716.4	140.6	140.4	-91.08	8,016.7	-1,143.5	1,319.5	1,039.2	280.30	4.707		
19,000.0	10,690.7	19,087.5	10,715.7	142.1	142.0	-91.08	8,116.7	-1,144.4	1,319.5	1,036.0	283.49	4.654		
19,100.0	10,690.0	19,187.5	10,715.0	143.7	143.6	-91.08	8,216.7	-1,145.2	1,319.5	1,032.8	286.68	4.603		
19,200.0	10,689.3	19,287.5	10,714.3	145.3	145.2	-91.08	8,316.7	-1,146.1	1,319.5	1,029.6	289.88	4.552		
19,300.0	10,688.6	19,387.5	10,713.6	146.9	146.8	-91.08	8,416.7	-1,146.9	1,319.5	1,026.4	293.08	4.502		
19,400.0	10,687.9	19,487.5	10,712.9	148.5	148.4	-91.08	8,516.7	-1,147.8	1,319.5	1,023.2	296.28	4.454		
19,500.0	10,687.2	19,587.5	10,712.2	150.2	150.0	-91.08	8,616.7	-1,148.6	1,319.5	1,020.0	299.48	4.406		
19,600.0	10,686.5	19,687.5	10,711.5	151.8	151.6	-91.08	8,716.7	-1,149.5	1,319.5	1,016.8	302.68	4.359		
19,700.0	10,685.8	19,787.5	10,710.8	153.4	153.2	-91.08	8,816.7	-1,150.3	1,319.5	1,013.6	305.89	4.314		
19,800.0	10,685.1	19,887.5	10,710.1	155.0	154.8	-91.08	8,916.7	-1,151.2	1,319.5	1,010.4	309.10	4.269		
19,900.0	10,684.4	19,987.5	10,709.4	156.6	156.4	-91.08	9,016.7	-1,152.1	1,319.5	1,007.2	312.31	4.225		
20,000.0	10,683.7	20,087.5	10,708.7	158.2	158.0	-91.08	9,116.7	-1,152.9	1,319.5	1,003.9	315.53	4.182		
20,100.0	10,683.0	20,187.5	10,708.0	159.8	159.6	-91.08	9,216.7	-1,153.8	1,319.5	1,000.7	318.74	4.140		
20,200.0	10,682.3	20,287.5	10,707.3	161.4	161.2	-91.08	9,316.7	-1,154.6	1,319.5	997.5	321.96	4.098		
20,300.0	10,681.6	20,387.5	10,706.6	163.0	162.8	-91.08	9,416.7	-1,155.5	1,319.5	994.3	325.18	4.058		
20,400.0	10,680.9	20,487.5	10,705.9	164.6	164.4	-91.08	9,516.6	-1,156.3	1,319.5	991.1	328.40	4.018		
20,500.0	10,680.2	20,587.5	10,705.2	166.2	166.0	-91.08	9,616.6	-1,157.2	1,319.5	987.8	331.63	3.979		
20,600.0	10,679.5	20,687.5	10,704.5	167.9	167.6	-91.08	9,716.6	-1,158.0	1,319.5	984.6	334.85	3.940		
20,700.0	10,678.8	20,787.5	10,703.8	169.5	169.2	-91.08	9,816.6	-1,158.9	1,319.5	981.4	338.08	3.903		
20,800.0	10,678.1	20,887.5	10,703.1	171.1	170.8	-91.08	9,916.6	-1,159.7	1,319.5	978.2	341.31	3.866		
20,900.0	10,677.4	20,987.5	10,702.4	172.7	172.4	-91.08	10,016.6	-1,160.6	1,319.5	974.9	344.54	3.830		
20,974.4	10,676.9	21,061.8	10,701.9	173.9	173.6	-91.08	10,091.0	-1,161.2	1,319.5	972.5	346.94	3.803 SF		

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



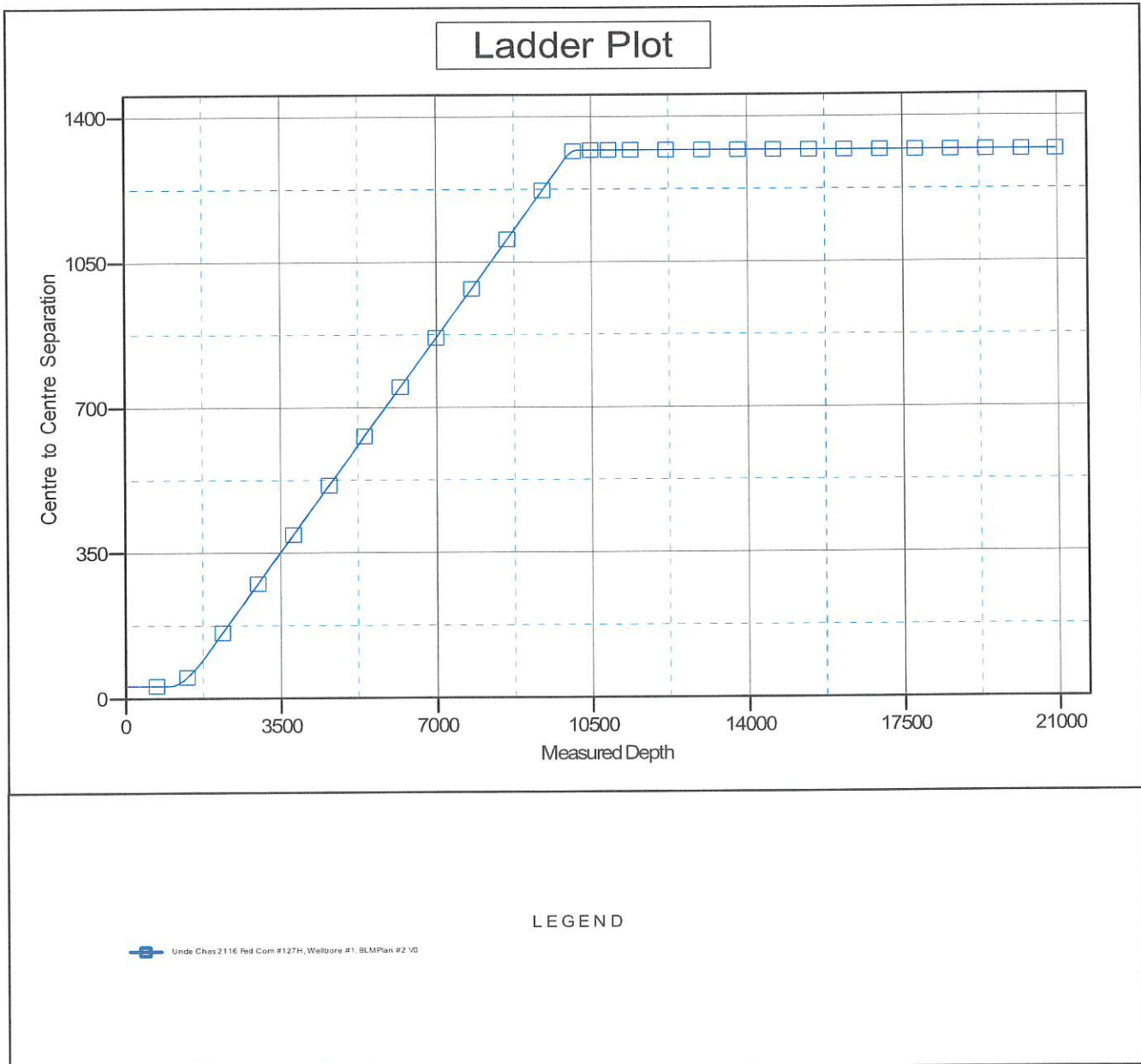
Anticollision Report

Company: Matador Production Company
Project: Ranger/Arrowhead
Reference Site: Uncle Ches
Site Error: 0.0 usft
Reference Well: Uncle Ches 2116 Fed Com #128H
Well Error: 0.0 usft
Reference Wellbore: Wellbore #1
Reference Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
TVD Reference: KB @ 3733.5usft
MD Reference: KB @ 3733.5usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB @ 3733.5usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Uncle Ches 2116 Fed Com #128H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.47°



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



Anticollision Report

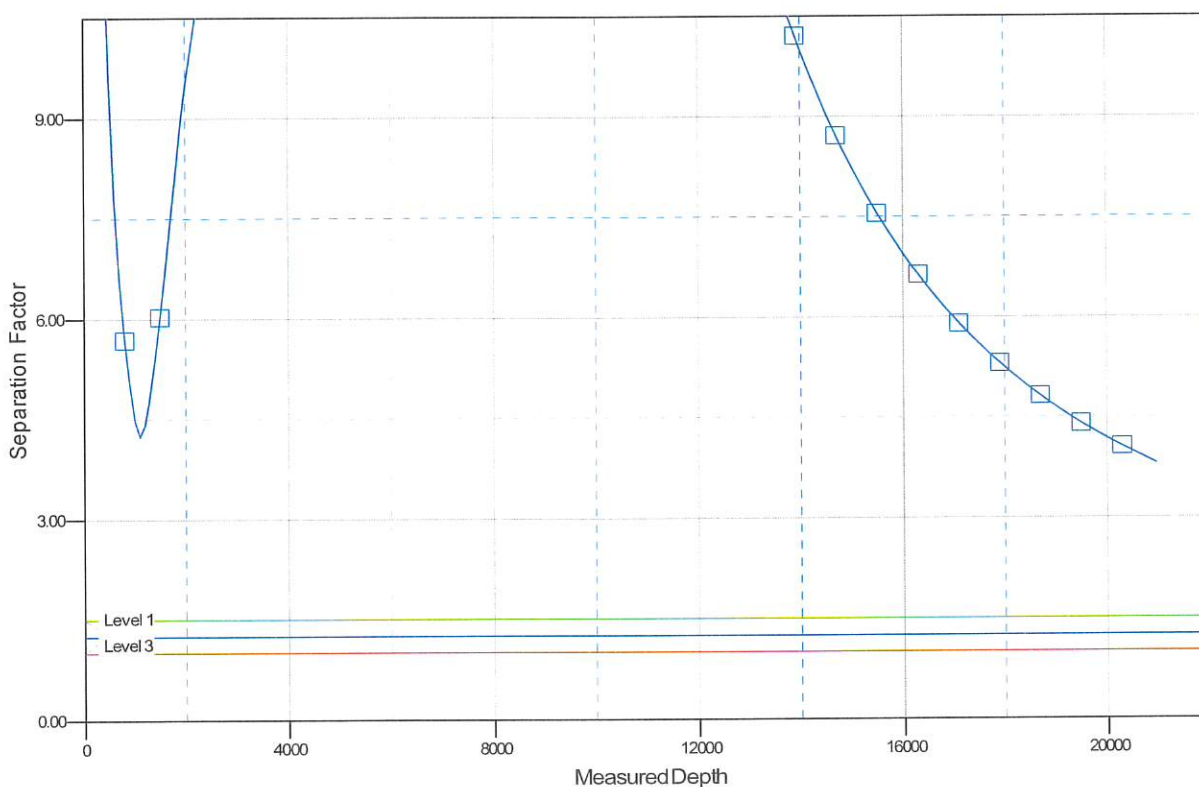
Company: Matador Production Company
Project: Ranger/Arrowhead
Reference Site: Uncle Ches
Site Error: 0.0 usft
Reference Well: Uncle Ches 2116 Fed Com #128H
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 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Uncle Ches 2116 Fed Com #128H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.47°

Separation Factor Plot



LEGEND

Uncle Ches 2116 Fed Com #127H, Wellbore #1, BLM Plan #2 V0

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



SURVEY PROGRAM

WELL DETAILS: Uncle Ches 2116 Fed Com #128H

Depth From	Depth To	Survey/Plan	Tool	+N/-S	+E/-W	GL @ 3705.0	KB @ 3733.5usft	Longitude	Slot
0.0	20974.4	BLM Plan #2 (Wellbore #1)	MWD	0.0	0.0	565798.95	770605.60	32° 33' 8.717 N 103° 27' 18.380 W	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP - Uncle Ches 2116 Fed Com #128H	10173.0	-361.0	247.4	565438.00	770853.00	32° 33' 5.125 N	103° 27' 15.524 W
BHL - Uncle Ches 2116 Fed Com #128H	10746.0	10102.1	158.6	575900.97	770764.17	32° 34' 48.660 N	103° 27' 15.553 W

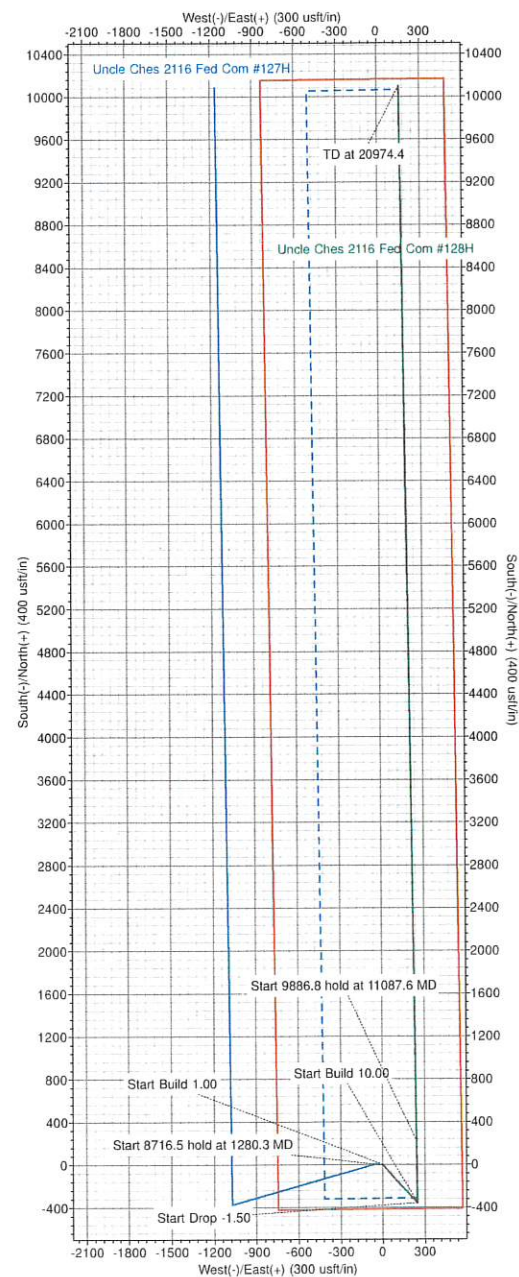
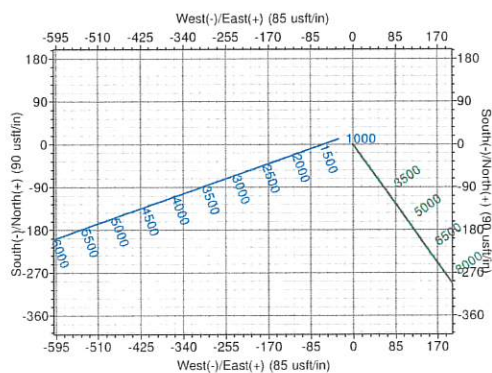
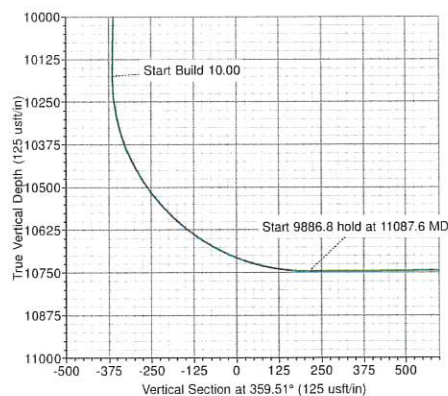
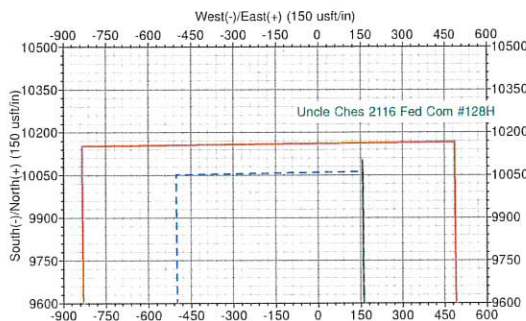
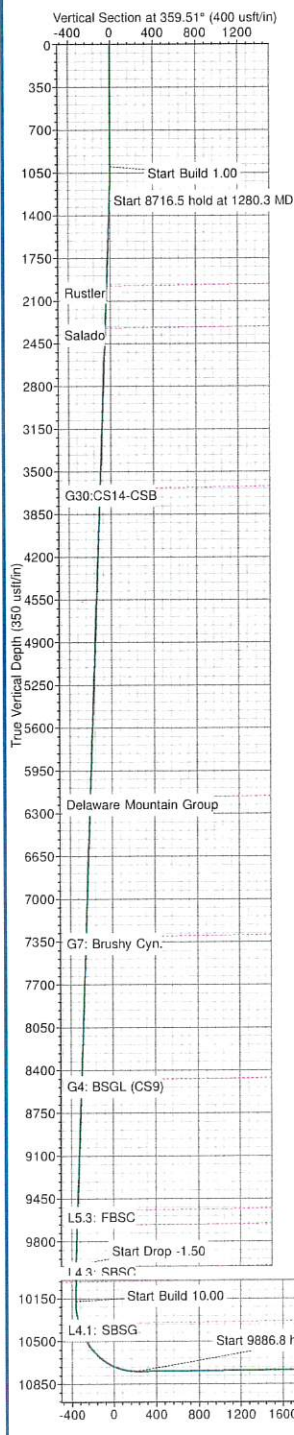
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	Start Build 1.00
1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	Start 8716.5 hold at 1280.3 MD
1280.3	2.80	145.57	1280.2	-5.7	3.9	1.00	145.57	-5.7	Start Drop -1.50
9996.8	2.80	145.57	9986.2	-357.2	244.8	0.00	0.00	-359.3	Start Build 10.00
10183.6	0.00	0.00	10173.0	-361.0	247.4	1.50	180.00	-363.1	Start 9886.8 hold at 11087.6 MD
11087.6	90.40	359.51	10745.9	215.9	242.5	10.00	359.51	213.9	TD at 20974.4
20974.4	90.40	359.51	10676.9	10102.1	157.9	0.00	0.00	10100.4	

Company: Matador Production Company
Well: Uncle Ches 2116 Fed Com #128H
County: Lea County, NM
Wellbore: Wellbore #1
Plan: BLM Plan #2
Date:

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 6.12°
To convert a Magnetic Direction to a True Direction, Add 6.59° East
To convert a True Direction to a Grid Direction, Subtract 0.47°





Matador Production Company

Ranger/Arrowhead

Uncle Ches

Uncle Ches 2116 Fed Com #128H

Wellbore #1

Plan: BLM Plan #2

Standard Planning Report

23 June, 2020



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Company:	Matador Production Company	TVD Reference:	KB @ 3733.5usft
Project:	Ranger/Arrowhead	MD Reference:	KB @ 3733.5usft
Site:	Uncle Ches	North Reference:	Grid
Well:	Uncle Ches 2116 Fed Com #128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #2		

Project	Ranger/Arrowhead		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		Using geodetic scale factor

Site	Uncle Ches				
Site Position:		Northing:	565,810.22 usft	Latitude:	32° 33' 8.831 N
From:	Lat/Long	Easting:	770,577.81 usft	Longitude:	103° 27' 18.703 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.47 °

Well	Uncle Ches 2116 Fed Com #128H					
Well Position	+N/-S	-11.3 usft	Northing:	565,798.95 usft	Latitude:	32° 33' 8.717 N
	+E/-W	27.8 usft	Easting:	770,605.60 usft	Longitude:	103° 27' 18.380 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,705.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	6/23/2020	6.59	60.34	47,830.99661122

Design	BLM Plan #2				
Audit Notes:					
Version:	2	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	359.51	

Plan Survey Tool Program	Date 6/23/2020				
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	20,974.4 BLM Plan #2 (Wellbore #1)	MWD	OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,280.3	2.80	145.57	1,280.2	-5.7	3.9	1.00	1.00	0.00	145.57	
9,996.8	2.80	145.57	9,986.2	-357.2	244.8	0.00	0.00	0.00	0.00	
10,183.6	0.00	0.00	10,173.0	-361.0	247.4	1.50	-1.50	0.00	180.00	VP - Uncle Ches 2116
11,087.6	90.40	359.51	10,745.9	215.9	242.5	10.00	10.00	0.00	359.51	
20,974.4	90.40	359.51	10,676.9	10,102.1	157.9	0.00	0.00	0.00	0.00	BHL - Uncle Ches 211



Planning Report

Database: EDM 5000.14 Single User Db
 Company: Matador Production Company
 Project: Ranger/Arrowhead
 Site: Uncle Ches
 Well: Uncle Ches 2116 Fed Com #128H
 Wellbore: Wellbore #1
 Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
 TVD Reference: KB @ 3733.5usft
 MD Reference: KB @ 3733.5usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 1.00									
1,100.0	1.00	145.57	1,100.0	-0.7	0.5	-0.7	1.00	1.00	0.00
1,200.0	2.00	145.57	1,200.0	-2.9	2.0	-2.9	1.00	1.00	0.00
1,280.3	2.80	145.57	1,280.2	-5.7	3.9	-5.7	1.00	1.00	0.00
Start 8716.5 hold at 1280.3 MD									
1,300.0	2.80	145.57	1,299.9	-6.4	4.4	-6.5	0.00	0.00	0.00
1,400.0	2.80	145.57	1,399.7	-10.5	7.2	-10.5	0.00	0.00	0.00
1,500.0	2.80	145.57	1,499.6	-14.5	9.9	-14.6	0.00	0.00	0.00
1,600.0	2.80	145.57	1,599.5	-18.5	12.7	-18.7	0.00	0.00	0.00
1,700.0	2.80	145.57	1,699.4	-22.6	15.5	-22.7	0.00	0.00	0.00
1,800.0	2.80	145.57	1,799.3	-26.6	18.2	-26.8	0.00	0.00	0.00
1,900.0	2.80	145.57	1,899.1	-30.6	21.0	-30.8	0.00	0.00	0.00
1,977.8	2.80	145.57	1,976.9	-33.8	23.2	-34.0	0.00	0.00	0.00
Rustler									
2,000.0	2.80	145.57	1,999.0	-34.7	23.8	-34.9	0.00	0.00	0.00
2,100.0	2.80	145.57	2,098.9	-38.7	26.5	-38.9	0.00	0.00	0.00
2,200.0	2.80	145.57	2,198.8	-42.8	29.3	-43.0	0.00	0.00	0.00
2,300.0	2.80	145.57	2,298.7	-46.8	32.1	-47.1	0.00	0.00	0.00
2,325.4	2.80	145.57	2,324.0	-47.8	32.8	-48.1	0.00	0.00	0.00
Salado									
2,400.0	2.80	145.57	2,398.5	-50.8	34.8	-51.1	0.00	0.00	0.00
2,500.0	2.80	145.57	2,498.4	-54.9	37.6	-55.2	0.00	0.00	0.00
2,600.0	2.80	145.57	2,598.3	-58.9	40.4	-59.2	0.00	0.00	0.00
2,700.0	2.80	145.57	2,698.2	-62.9	43.1	-63.3	0.00	0.00	0.00
2,800.0	2.80	145.57	2,798.1	-67.0	45.9	-67.3	0.00	0.00	0.00
2,900.0	2.80	145.57	2,898.0	-71.0	48.7	-71.4	0.00	0.00	0.00
3,000.0	2.80	145.57	2,997.8	-75.0	51.4	-75.5	0.00	0.00	0.00
3,100.0	2.80	145.57	3,097.7	-79.1	54.2	-79.5	0.00	0.00	0.00
3,200.0	2.80	145.57	3,197.6	-83.1	56.9	-83.6	0.00	0.00	0.00
3,300.0	2.80	145.57	3,297.5	-87.1	59.7	-87.6	0.00	0.00	0.00
3,400.0	2.80	145.57	3,397.4	-91.2	62.5	-91.7	0.00	0.00	0.00
3,500.0	2.80	145.57	3,497.2	-95.2	65.2	-95.7	0.00	0.00	0.00
3,600.0	2.80	145.57	3,597.1	-99.2	68.0	-99.8	0.00	0.00	0.00
3,643.5	2.80	145.57	3,640.6	-101.0	69.2	-101.6	0.00	0.00	0.00
G30:CS14-CSB									
3,700.0	2.80	145.57	3,697.0	-103.3	70.8	-103.9	0.00	0.00	0.00
3,800.0	2.80	145.57	3,796.9	-107.3	73.5	-107.9	0.00	0.00	0.00
3,900.0	2.80	145.57	3,896.8	-111.3	76.3	-112.0	0.00	0.00	0.00
4,000.0	2.80	145.57	3,996.6	-115.4	79.1	-116.0	0.00	0.00	0.00
4,100.0	2.80	145.57	4,096.5	-119.4	81.8	-120.1	0.00	0.00	0.00
4,200.0	2.80	145.57	4,196.4	-123.4	84.6	-124.1	0.00	0.00	0.00
4,300.0	2.80	145.57	4,296.3	-127.5	87.4	-128.2	0.00	0.00	0.00



Planning Report

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Company:	Matador Production Company	TVD Reference:	KB @ 3733.5usft
Project:	Ranger/Arrowhead	MD Reference:	KB @ 3733.5usft
Site:	Uncle Ches	North Reference:	Grid
Well:	Uncle Ches 2116 Fed Com #128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #2		

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)
4,400.0	2.80	145.57	4,396.2	-131.5	90.1	-132.3	0.00	0.00	0.00
4,500.0	2.80	145.57	4,496.0	-135.5	92.9	-136.3	0.00	0.00	0.00
4,600.0	2.80	145.57	4,595.9	-139.6	95.7	-140.4	0.00	0.00	0.00
4,700.0	2.80	145.57	4,695.8	-143.6	98.4	-144.4	0.00	0.00	0.00
4,800.0	2.80	145.57	4,795.7	-147.6	101.2	-148.5	0.00	0.00	0.00
4,900.0	2.80	145.57	4,895.6	-151.7	103.9	-152.5	0.00	0.00	0.00
5,000.0	2.80	145.57	4,995.4	-155.7	106.7	-156.6	0.00	0.00	0.00
5,100.0	2.80	145.57	5,095.3	-159.7	109.5	-160.7	0.00	0.00	0.00
5,200.0	2.80	145.57	5,195.2	-163.8	112.2	-164.7	0.00	0.00	0.00
5,300.0	2.80	145.57	5,295.1	-167.8	115.0	-168.8	0.00	0.00	0.00
5,400.0	2.80	145.57	5,395.0	-171.8	117.8	-172.8	0.00	0.00	0.00
5,500.0	2.80	145.57	5,494.8	-175.9	120.5	-176.9	0.00	0.00	0.00
5,600.0	2.80	145.57	5,594.7	-179.9	123.3	-180.9	0.00	0.00	0.00
5,700.0	2.80	145.57	5,694.6	-183.9	126.1	-185.0	0.00	0.00	0.00
5,800.0	2.80	145.57	5,794.5	-188.0	128.8	-189.0	0.00	0.00	0.00
5,900.0	2.80	145.57	5,894.4	-192.0	131.6	-193.1	0.00	0.00	0.00
6,000.0	2.80	145.57	5,994.2	-196.0	134.4	-197.2	0.00	0.00	0.00
6,100.0	2.80	145.57	6,094.1	-200.1	137.1	-201.2	0.00	0.00	0.00
6,180.6	2.80	145.57	6,174.6	-203.3	139.3	-204.5	0.00	0.00	0.00
Delaware Mountain Group									
6,200.0	2.80	145.57	6,194.0	-204.1	139.9	-205.3	0.00	0.00	0.00
6,300.0	2.80	145.57	6,293.9	-208.1	142.6	-209.3	0.00	0.00	0.00
6,400.0	2.80	145.57	6,393.8	-212.2	145.4	-213.4	0.00	0.00	0.00
6,500.0	2.80	145.57	6,493.6	-216.2	148.2	-217.4	0.00	0.00	0.00
6,600.0	2.80	145.57	6,593.5	-220.2	150.9	-221.5	0.00	0.00	0.00
6,700.0	2.80	145.57	6,693.4	-224.3	153.7	-225.6	0.00	0.00	0.00
6,800.0	2.80	145.57	6,793.3	-228.3	156.5	-229.6	0.00	0.00	0.00
6,900.0	2.80	145.57	6,893.2	-232.3	159.2	-233.7	0.00	0.00	0.00
7,000.0	2.80	145.57	6,993.0	-236.4	162.0	-237.7	0.00	0.00	0.00
7,100.0	2.80	145.57	7,092.9	-240.4	164.8	-241.8	0.00	0.00	0.00
7,200.0	2.80	145.57	7,192.8	-244.4	167.5	-245.8	0.00	0.00	0.00
7,300.0	2.80	145.57	7,292.7	-248.5	170.3	-249.9	0.00	0.00	0.00
7,317.5	2.80	145.57	7,310.1	-249.2	170.8	-250.6	0.00	0.00	0.00
G7: Brushy Cyn.									
7,400.0	2.80	145.57	7,392.6	-252.5	173.1	-254.0	0.00	0.00	0.00
7,500.0	2.80	145.57	7,492.4	-256.5	175.8	-258.0	0.00	0.00	0.00
7,600.0	2.80	145.57	7,592.3	-260.6	178.6	-262.1	0.00	0.00	0.00
7,700.0	2.80	145.57	7,692.2	-264.6	181.4	-266.1	0.00	0.00	0.00
7,800.0	2.80	145.57	7,792.1	-268.6	184.1	-270.2	0.00	0.00	0.00
7,900.0	2.80	145.57	7,892.0	-272.7	186.9	-274.2	0.00	0.00	0.00
8,000.0	2.80	145.57	7,991.8	-276.7	189.6	-278.3	0.00	0.00	0.00
8,100.0	2.80	145.57	8,091.7	-280.7	192.4	-282.4	0.00	0.00	0.00
8,200.0	2.80	145.57	8,191.6	-284.8	195.2	-286.4	0.00	0.00	0.00
8,300.0	2.80	145.57	8,291.5	-288.8	197.9	-290.5	0.00	0.00	0.00
8,400.0	2.80	145.57	8,391.4	-292.8	200.7	-294.5	0.00	0.00	0.00
8,488.4	2.80	145.57	8,479.6	-296.4	203.1	-298.1	0.00	0.00	0.00
G4: BSG (CS9)									
8,500.0	2.80	145.57	8,491.3	-296.9	203.5	-298.6	0.00	0.00	0.00
8,600.0	2.80	145.57	8,591.1	-300.9	206.2	-302.6	0.00	0.00	0.00
8,700.0	2.80	145.57	8,691.0	-304.9	209.0	-306.7	0.00	0.00	0.00
8,800.0	2.80	145.57	8,790.9	-309.0	211.8	-310.8	0.00	0.00	0.00
8,900.0	2.80	145.57	8,890.8	-313.0	214.5	-314.8	0.00	0.00	0.00
9,000.0	2.80	145.57	8,990.7	-317.0	217.3	-318.9	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14 Single User Db
 Company: Matador Production Company
 Project: Ranger/Arrowhead
 Site: Uncle Ches
 Well: Uncle Ches 2116 Fed Com #128H
 Wellbore: Wellbore #1
 Design: BLM Plan #2

Local Co-ordinate Reference: Well Uncle Ches 2116 Fed Com #128H
 TVD Reference: KB @ 3733.5usft
 MD Reference: KB @ 3733.5usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,100.0	2.80	145.57	9,090.5	-321.1	220.1	-322.9	0.00	0.00	0.00
9,200.0	2.80	145.57	9,190.4	-325.1	222.8	-327.0	0.00	0.00	0.00
9,300.0	2.80	145.57	9,290.3	-329.1	225.6	-331.0	0.00	0.00	0.00
9,400.0	2.80	145.57	9,390.2	-333.2	228.3	-335.1	0.00	0.00	0.00
9,500.0	2.80	145.57	9,490.1	-337.2	231.1	-339.2	0.00	0.00	0.00
9,559.1	2.80	145.57	9,549.1	-339.6	232.7	-341.6	0.00	0.00	0.00
L5.3: FBSC									
9,600.0	2.80	145.57	9,589.9	-341.2	233.9	-343.2	0.00	0.00	0.00
9,678.3	2.80	145.57	9,668.1	-344.4	236.0	-346.4	0.00	0.00	0.00
L5.1: FBSG									
9,700.0	2.80	145.57	9,689.8	-345.3	236.6	-347.3	0.00	0.00	0.00
9,800.0	2.80	145.57	9,789.7	-349.3	239.4	-351.3	0.00	0.00	0.00
9,900.0	2.80	145.57	9,889.6	-353.3	242.2	-355.4	0.00	0.00	0.00
9,996.8	2.80	145.57	9,986.2	-357.2	244.8	-359.3	0.00	0.00	0.00
Start Drop -1.50									
10,000.0	2.75	145.57	9,989.5	-357.4	244.9	-359.4	1.50	-1.50	0.00
10,023.8	2.40	145.57	10,013.3	-358.2	245.5	-360.3	1.50	-1.50	0.00
L4.3: SBSC									
10,100.0	1.25	145.57	10,089.4	-360.2	246.9	-362.3	1.50	-1.50	0.00
10,183.6	0.00	0.00	10,173.0	-361.0	247.4	-363.1	1.50	-1.50	-174.10
Start Build 10.00 - VP - Uncle Ches 2116 Fed Com #128H									
10,200.0	1.64	359.51	10,189.4	-360.8	247.4	-362.9	10.00	10.00	-2.99
10,300.0	11.64	359.51	10,288.6	-349.2	247.3	-351.3	10.00	10.00	0.00
10,367.8	18.41	359.51	10,354.0	-331.7	247.2	-333.8	10.00	10.00	0.00
L4.1: SBSG									
10,400.0	21.64	359.51	10,384.3	-320.6	247.1	-322.7	10.00	10.00	0.00
10,500.0	31.64	359.51	10,473.6	-275.8	246.7	-277.9	10.00	10.00	0.00
10,600.0	41.64	359.51	10,553.7	-216.2	246.2	-218.3	10.00	10.00	0.00
10,700.0	51.64	359.51	10,622.3	-143.6	245.6	-145.7	10.00	10.00	0.00
10,800.0	61.64	359.51	10,677.2	-60.2	244.9	-62.3	10.00	10.00	0.00
10,900.0	71.64	359.51	10,716.8	31.5	244.1	29.4	10.00	10.00	0.00
11,000.0	81.64	359.51	10,739.9	128.6	243.2	126.5	10.00	10.00	0.00
11,087.6	90.40	359.51	10,745.9	215.9	242.5	213.9	10.00	10.00	0.00
Start 9886.8 hold at 11087.6 MD									
11,100.0	90.40	359.51	10,745.9	228.3	242.4	226.2	0.00	0.00	0.00
11,200.0	90.40	359.51	10,745.2	328.3	241.5	326.2	0.00	0.00	0.00
11,300.0	90.40	359.51	10,744.5	428.3	240.7	426.2	0.00	0.00	0.00
11,400.0	90.40	359.51	10,743.8	528.3	239.8	526.2	0.00	0.00	0.00
11,500.0	90.40	359.51	10,743.1	628.3	239.0	626.2	0.00	0.00	0.00
11,600.0	90.40	359.51	10,742.4	728.3	238.1	726.2	0.00	0.00	0.00
11,700.0	90.40	359.51	10,741.7	828.3	237.3	826.2	0.00	0.00	0.00
11,800.0	90.40	359.51	10,741.0	928.3	236.4	926.2	0.00	0.00	0.00
11,900.0	90.40	359.51	10,740.3	1,028.3	235.5	1,026.2	0.00	0.00	0.00
12,000.0	90.40	359.51	10,739.6	1,128.3	234.7	1,126.2	0.00	0.00	0.00
12,100.0	90.40	359.51	10,738.9	1,228.3	233.8	1,226.2	0.00	0.00	0.00
12,200.0	90.40	359.51	10,738.2	1,328.3	233.0	1,326.2	0.00	0.00	0.00
12,300.0	90.40	359.51	10,737.5	1,428.2	232.1	1,426.2	0.00	0.00	0.00
12,400.0	90.40	359.51	10,736.8	1,528.2	231.3	1,526.2	0.00	0.00	0.00
12,500.0	90.40	359.51	10,736.1	1,628.2	230.4	1,626.2	0.00	0.00	0.00
12,600.0	90.40	359.51	10,735.4	1,728.2	229.6	1,726.2	0.00	0.00	0.00
12,700.0	90.40	359.51	10,734.7	1,828.2	228.7	1,826.2	0.00	0.00	0.00
12,800.0	90.40	359.51	10,734.0	1,928.2	227.9	1,926.2	0.00	0.00	0.00
12,900.0	90.40	359.51	10,733.3	2,028.2	227.0	2,026.2	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Company:	Matador Production Company	TVD Reference:	KB @ 3733.5usft
Project:	Ranger/Arrowhead	MD Reference:	KB @ 3733.5usft
Site:	Uncle Ches	North Reference:	Grid
Well:	Uncle Ches 2116 Fed Com #128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #2		

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)
13,000.0	90.40	359.51	10,732.6	2,128.2	226.1	2,126.2	0.00	0.00	0.00
13,100.0	90.40	359.51	10,731.9	2,228.2	225.3	2,226.2	0.00	0.00	0.00
13,200.0	90.40	359.51	10,731.2	2,328.2	224.4	2,326.2	0.00	0.00	0.00
13,300.0	90.40	359.51	10,730.5	2,428.2	223.6	2,426.2	0.00	0.00	0.00
13,400.0	90.40	359.51	10,729.8	2,528.2	222.7	2,526.2	0.00	0.00	0.00
13,500.0	90.40	359.51	10,729.1	2,628.2	221.9	2,626.2	0.00	0.00	0.00
13,600.0	90.40	359.51	10,728.4	2,728.2	221.0	2,726.2	0.00	0.00	0.00
13,700.0	90.40	359.51	10,727.7	2,828.2	220.2	2,826.2	0.00	0.00	0.00
13,800.0	90.40	359.51	10,727.0	2,928.2	219.3	2,926.2	0.00	0.00	0.00
13,900.0	90.40	359.51	10,726.3	3,028.2	218.4	3,026.2	0.00	0.00	0.00
14,000.0	90.40	359.51	10,725.6	3,128.1	217.6	3,126.2	0.00	0.00	0.00
14,100.0	90.40	359.51	10,724.9	3,228.1	216.7	3,226.2	0.00	0.00	0.00
14,200.0	90.40	359.51	10,724.2	3,328.1	215.9	3,326.2	0.00	0.00	0.00
14,300.0	90.40	359.51	10,723.5	3,428.1	215.0	3,426.2	0.00	0.00	0.00
14,400.0	90.40	359.51	10,722.8	3,528.1	214.2	3,526.2	0.00	0.00	0.00
14,500.0	90.40	359.51	10,722.1	3,628.1	213.3	3,626.2	0.00	0.00	0.00
14,600.0	90.40	359.51	10,721.4	3,728.1	212.5	3,726.2	0.00	0.00	0.00
14,700.0	90.40	359.51	10,720.7	3,828.1	211.6	3,826.2	0.00	0.00	0.00
14,800.0	90.40	359.51	10,720.0	3,928.1	210.7	3,926.2	0.00	0.00	0.00
14,900.0	90.40	359.51	10,719.3	4,028.1	209.9	4,026.1	0.00	0.00	0.00
15,000.0	90.40	359.51	10,718.6	4,128.1	209.0	4,126.1	0.00	0.00	0.00
15,100.0	90.40	359.51	10,717.9	4,228.1	208.2	4,226.1	0.00	0.00	0.00
15,200.0	90.40	359.51	10,717.2	4,328.1	207.3	4,326.1	0.00	0.00	0.00
15,300.0	90.40	359.51	10,716.5	4,428.1	206.5	4,426.1	0.00	0.00	0.00
15,400.0	90.40	359.51	10,715.8	4,528.1	205.6	4,526.1	0.00	0.00	0.00
15,500.0	90.40	359.51	10,715.1	4,628.1	204.8	4,626.1	0.00	0.00	0.00
15,600.0	90.40	359.51	10,714.4	4,728.0	203.9	4,726.1	0.00	0.00	0.00
15,700.0	90.40	359.51	10,713.7	4,828.0	203.1	4,826.1	0.00	0.00	0.00
15,800.0	90.40	359.51	10,713.0	4,928.0	202.2	4,926.1	0.00	0.00	0.00
15,900.0	90.40	359.51	10,712.3	5,028.0	201.3	5,026.1	0.00	0.00	0.00
16,000.0	90.40	359.51	10,711.6	5,128.0	200.5	5,126.1	0.00	0.00	0.00
16,100.0	90.40	359.51	10,711.0	5,228.0	199.6	5,226.1	0.00	0.00	0.00
16,200.0	90.40	359.51	10,710.3	5,328.0	198.8	5,326.1	0.00	0.00	0.00
16,300.0	90.40	359.51	10,709.6	5,428.0	197.9	5,426.1	0.00	0.00	0.00
16,400.0	90.40	359.51	10,708.9	5,528.0	197.1	5,526.1	0.00	0.00	0.00
16,500.0	90.40	359.51	10,708.2	5,628.0	196.2	5,626.1	0.00	0.00	0.00
16,600.0	90.40	359.51	10,707.5	5,728.0	195.4	5,726.1	0.00	0.00	0.00
16,700.0	90.40	359.51	10,706.8	5,828.0	194.5	5,826.1	0.00	0.00	0.00
16,800.0	90.40	359.51	10,706.1	5,928.0	193.6	5,926.1	0.00	0.00	0.00
16,900.0	90.40	359.51	10,705.4	6,028.0	192.8	6,026.1	0.00	0.00	0.00
17,000.0	90.40	359.51	10,704.7	6,128.0	191.9	6,126.1	0.00	0.00	0.00
17,100.0	90.40	359.51	10,704.0	6,228.0	191.1	6,226.1	0.00	0.00	0.00
17,200.0	90.40	359.51	10,703.3	6,328.0	190.2	6,326.1	0.00	0.00	0.00
17,300.0	90.40	359.51	10,702.6	6,427.9	189.4	6,426.1	0.00	0.00	0.00
17,400.0	90.40	359.51	10,701.9	6,527.9	188.5	6,526.1	0.00	0.00	0.00
17,500.0	90.40	359.51	10,701.2	6,627.9	187.7	6,626.1	0.00	0.00	0.00
17,600.0	90.40	359.51	10,700.5	6,727.9	186.8	6,726.1	0.00	0.00	0.00
17,700.0	90.40	359.51	10,699.8	6,827.9	185.9	6,826.1	0.00	0.00	0.00
17,800.0	90.40	359.51	10,699.1	6,927.9	185.1	6,926.1	0.00	0.00	0.00
17,900.0	90.40	359.51	10,698.4	7,027.9	184.2	7,026.1	0.00	0.00	0.00
18,000.0	90.40	359.51	10,697.7	7,127.9	183.4	7,126.1	0.00	0.00	0.00
18,100.0	90.40	359.51	10,697.0	7,227.9	182.5	7,226.1	0.00	0.00	0.00
18,200.0	90.40	359.51	10,696.3	7,327.9	181.7	7,326.1	0.00	0.00	0.00
18,300.0	90.40	359.51	10,695.6	7,427.9	180.8	7,426.1	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Company:	Matador Production Company	TVD Reference:	KB @ 3733.5usft
Project:	Ranger/Arrowhead	MD Reference:	KB @ 3733.5usft
Site:	Uncle Ches	North Reference:	Grid
Well:	Uncle Ches 2116 Fed Com #128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #2		

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)
18,400.0	90.40	359.51	10,694.9	7,527.9	180.0	7,526.1	0.00	0.00	0.00
18,500.0	90.40	359.51	10,694.2	7,627.9	179.1	7,626.1	0.00	0.00	0.00
18,600.0	90.40	359.51	10,693.5	7,727.9	178.3	7,726.1	0.00	0.00	0.00
18,700.0	90.40	359.51	10,692.8	7,827.9	177.4	7,826.1	0.00	0.00	0.00
18,800.0	90.40	359.51	10,692.1	7,927.9	176.5	7,926.1	0.00	0.00	0.00
18,900.0	90.40	359.51	10,691.4	8,027.8	175.7	8,026.1	0.00	0.00	0.00
19,000.0	90.40	359.51	10,690.7	8,127.8	174.8	8,126.0	0.00	0.00	0.00
19,100.0	90.40	359.51	10,690.0	8,227.8	174.0	8,226.0	0.00	0.00	0.00
19,200.0	90.40	359.51	10,689.3	8,327.8	173.1	8,326.0	0.00	0.00	0.00
19,300.0	90.40	359.51	10,688.6	8,427.8	172.3	8,426.0	0.00	0.00	0.00
19,400.0	90.40	359.51	10,687.9	8,527.8	171.4	8,526.0	0.00	0.00	0.00
19,500.0	90.40	359.51	10,687.2	8,627.8	170.6	8,626.0	0.00	0.00	0.00
19,600.0	90.40	359.51	10,686.5	8,727.8	169.7	8,726.0	0.00	0.00	0.00
19,700.0	90.40	359.51	10,685.8	8,827.8	168.8	8,826.0	0.00	0.00	0.00
19,800.0	90.40	359.51	10,685.1	8,927.8	168.0	8,926.0	0.00	0.00	0.00
19,900.0	90.40	359.51	10,684.4	9,027.8	167.1	9,026.0	0.00	0.00	0.00
20,000.0	90.40	359.51	10,683.7	9,127.8	166.3	9,126.0	0.00	0.00	0.00
20,100.0	90.40	359.51	10,683.0	9,227.8	165.4	9,226.0	0.00	0.00	0.00
20,200.0	90.40	359.51	10,682.3	9,327.8	164.6	9,326.0	0.00	0.00	0.00
20,300.0	90.40	359.51	10,681.6	9,427.8	163.7	9,426.0	0.00	0.00	0.00
20,400.0	90.40	359.51	10,680.9	9,527.8	162.9	9,526.0	0.00	0.00	0.00
20,500.0	90.40	359.51	10,680.2	9,627.8	162.0	9,626.0	0.00	0.00	0.00
20,600.0	90.40	359.51	10,679.5	9,727.7	161.1	9,726.0	0.00	0.00	0.00
20,700.0	90.40	359.51	10,678.8	9,827.7	160.3	9,826.0	0.00	0.00	0.00
20,800.0	90.40	359.51	10,678.1	9,927.7	159.4	9,926.0	0.00	0.00	0.00
20,900.0	90.40	359.51	10,677.4	10,027.7	158.6	10,026.0	0.00	0.00	0.00
20,973.9	90.40	359.51	10,676.9	10,101.6	157.9	10,099.9	0.00	0.00	0.00
BHL - Uncle Ches 2116 Fed Com #128H									
20,974.4	90.40	359.51	10,676.9	10,102.1	157.9	10,100.4	0.00	0.00	0.00
TD at 20974.4									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP - Uncle Ches 2116 F - hit/miss target - Shape - Point	0.00	0.00	10,173.0	-361.0	247.4	565,438.00	770,853.00	32° 33' 5.125 N	103° 27' 15.524 W
BHL - Uncle Ches 2116 I - plan misses target center by 69.1usft at 20973.9usft MD (10676.9 TVD, 10101.6 N, 157.9 E) - Point	0.00	0.00	10,746.0	10,102.1	158.6	575,900.97	770,764.17	32° 34' 48.660 N	103° 27' 15.553 W



Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Uncle Ches 2116 Fed Com #128H
Company:	Matador Production Company	TVD Reference:	KB @ 3733.5usft
Project:	Ranger/Arrowhead	MD Reference:	KB @ 3733.5usft
Site:	Uncle Ches	North Reference:	Grid
Well:	Uncle Ches 2116 Fed Com #128H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	BLM Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,977.8	1,976.9	Rustler		-0.60	359.51
2,325.4	2,324.0	Salado		-0.60	359.51
3,643.5	3,640.6	G30:CS14-CSB		-0.60	359.51
6,180.6	6,174.6	Delaware Mountain Group		-0.60	359.51
7,317.5	7,310.1	G7: Brushy Cyn.		-0.60	359.51
8,488.4	8,479.6	G4: BSG (CS9)		-0.60	359.51
9,559.1	9,549.1	L5.3: FBSC		-0.60	359.51
9,678.3	9,668.1	L5.1: FBSC		-0.60	359.51
10,023.8	10,013.3	L4.3: SBSC		-0.60	359.51
10,367.8	10,354.0	L4.1: SBSC		-0.60	359.51

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	Start Build 1.00
1,280.3	1,280.2	-5.7	3.9	Start 8716.5 hold at 1280.3 MD
9,996.8	9,986.2	-357.2	244.8	Start Drop -1.50
10,183.6	10,173.0	-361.0	247.4	Start Build 10.00
11,087.6	10,745.9	215.9	242.5	Start 9886.8 hold at 11087.6 MD
20,974.4	10,676.9	10,102.1	157.9	TD at 20974.4

Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
DWC/C Casing	7 in	29.00 lb/ft (0.408 in)	VMS P110 EC
2012 API Spec 5CT Coupling O.D.			

VMS P110 EC	Material
	Grade
125,000	Minimum Yield Strength (psi)
135,000	Minimum Ultimate Strength (psi)



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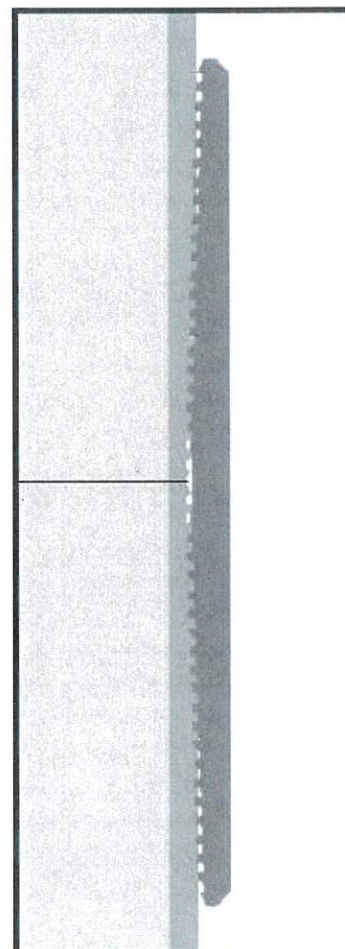
	Pipe Dimensions
7.000	Nominal Pipe Body O.D. (in)
6.184	Nominal Pipe Body I.D.(in)
0.408	Nominal Wall Thickness (in)
29.00	Nominal Weight (lbs/ft)
28.75	Plain End Weight (lbs/ft)
8.449	Nominal Pipe Body Area (sq in)

	Pipe Body Performance Properties
1,056,000	Minimum Pipe Body Yield Strength (lbs)
9,580	Minimum Collapse Pressure (psi)
12,750	Minimum Internal Yield Pressure (psi)
11,700	Hydrostatic Test Pressure (psi)

	Connection Dimensions
7.875	Connection O.D. (in)
6.184	Connection I.D. (in)
6.125	Connection Drift Diameter (in)
4.50	Make-up Loss (in)
8.449	Critical Area (sq in)
100.0	Joint Efficiency (%)

	Connection Performance Properties
1,056,000	Joint Strength (lbs)
26,010	Reference String Length (ft) 1.4 Design Factor
1,045,000	API Joint Strength (lbs)
528,000	Compression Rating (lbs)
9,580	API Collapse Pressure Rating (psi)
12,750	API Internal Pressure Resistance (psi)
40.9	Maximum Uniaxial Bend Rating [degrees/100 ft]

	Appoximated Field End Torque Values
26,800	Minimum Final Torque (ft-lbs)
31,300	Maximum Final Torque (ft-lbs)
35,800	Connection Yield Torque (ft-lbs)



For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

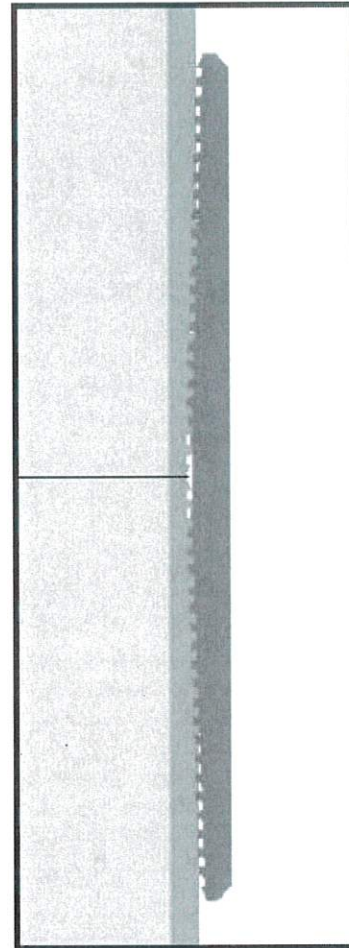
Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.



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

CONDITIONS

Action 12662

CONDITIONS OF APPROVAL

Operator: MATADOR PRODUCTION COMPANY 5400 LBJ Freeway, Ste 1500	One Lincoln Centre Dallas, TX75240	OGRID: 228937	Action Number: 12662	Action Type: C-103A
OCD Reviewer pkautz	Condition None			